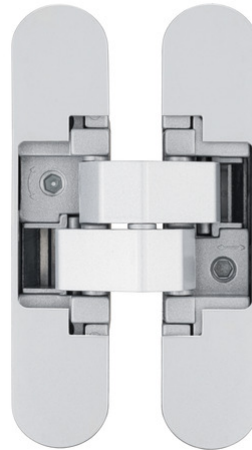


**ANSELMi - AN 160 3D**

## AN 160 3D

for unrebated residential doors up to 60 kg



### Product features

- completely concealed hinge system
- for timber and aluminium frames
- for unrebated residential doors
- 3D adjustment (side +/- 1,5 mm, height +/- 2,5 mm, compression +/- 1,0 mm)
- material zamak

### Technical data

Property	Value
Load capacity	60,0 kg
Overall length	110,0 mm
Width (door part)	24,0 mm
Width (frame part)	24,0 mm
Cutter diameter	16,0 mm
Collar ring diameter	27,0 mm
Opening angle	180°

### Notes

The load capacity mentioned above refers to the use

### Quality marks



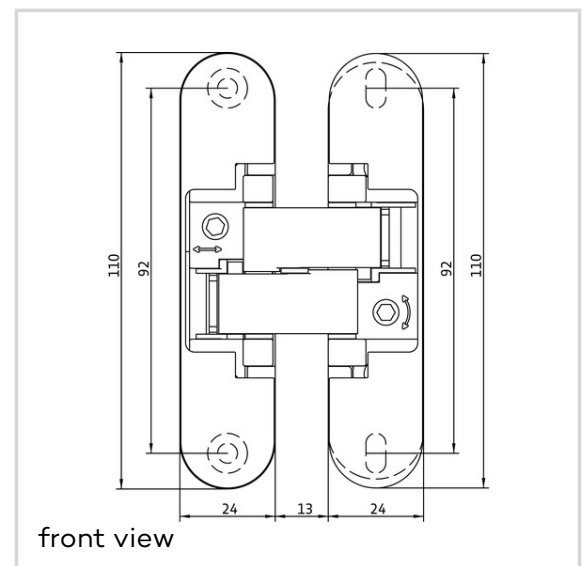
CE certification



IFT certification



UL certification



## ANSELMI - AN 160 3D

of 2 hinges per door leaf (900 x 2100 mm).

Suggested screws: Frame side: Countersunk head screws DIN 7505 A, Diameter 4,5 mm Door side: Pan head screws DIN 7505 B, Diameter 4,5 mm

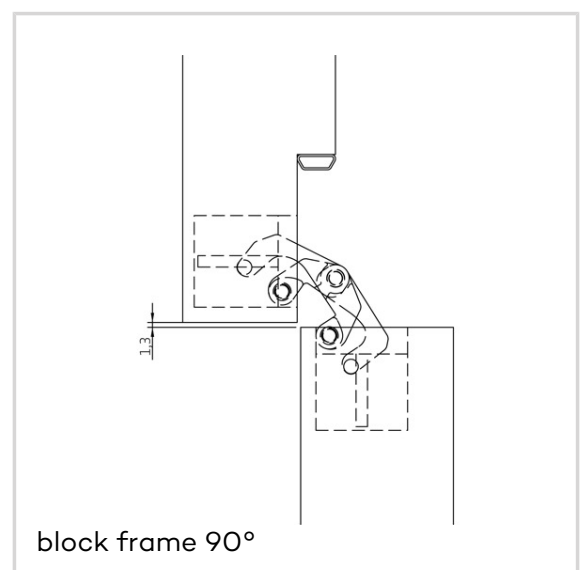
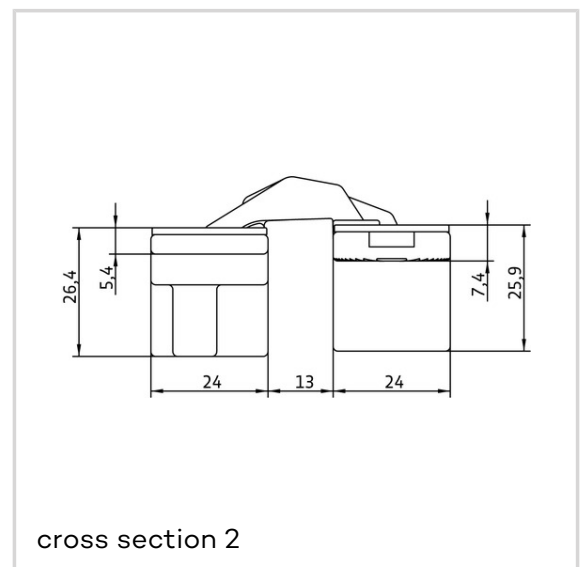
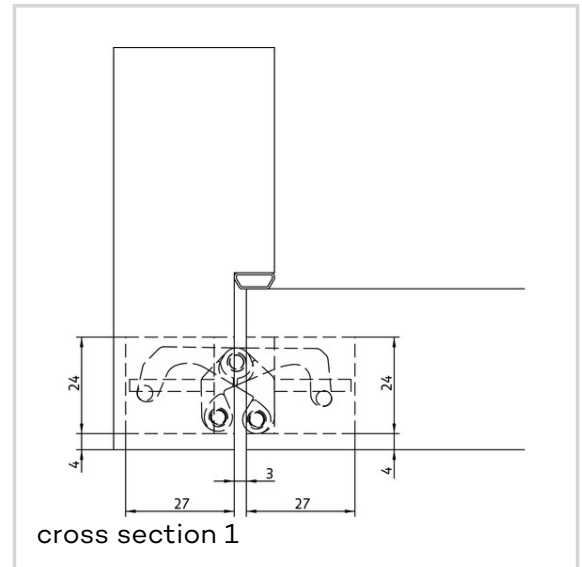
Alternatively, the routing can be carried out with a cutter diameter of 14,0 mm and a collar ring diameter of 25,0 mm.

### Combinations

AN 107 3D C40  
AN 107 3D C60  
AN 108 3D SC45  
AN 140 3D FZ

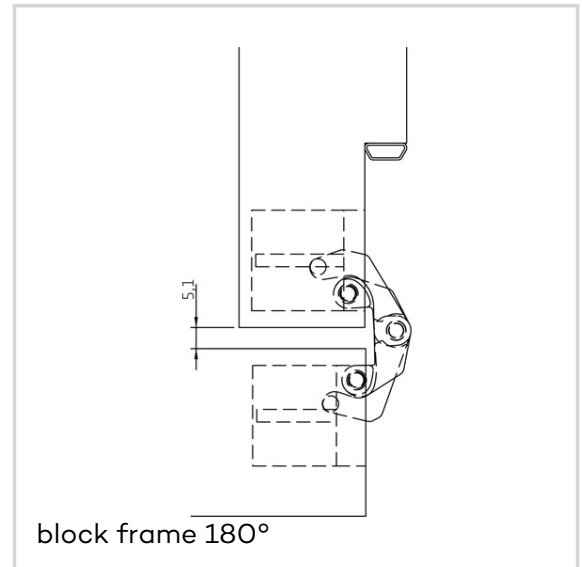
### Item versions

Finish	Rustic Umber (AN 012)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707733
Finish	Satin Chrome (AN 014)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707740
Finish	Light Bronze (AN 016)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707764
Finish	Black (AN 018)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707788
Finish	Antique Bronze (AN 035)
VPE	pack of 2
DIN	DIN right and left hand



**ANSELMI - AN 160 3D**

EAN	8054608707795
Finish	Aluminium Chrome (AN 036)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707801
Finish	Polished Brass (AN 037)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707818
Finish	Polished Chrome (AN 039)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707825
Finish	Satin Nickel (AN 044)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707832
Finish	RAL 9016 Traffic White (AN 049)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608707849
Finish	Anthracite (AN 050)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608708969
Finish	Medium Bronze (AN 051)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608708976
Finish	Copper (AN 052)
VPE	pack of 2
DIN	DIN right and left hand
EAN	8054608708983



# GENERAL INFORMATION

Regarding hinge load values  
Reference value **60 kg**

## Overview of load values for hinges

For medium duty applications where hinges are installed on doors in housing, other living areas and in buildings where there is a medium frequency of use by people with some incentive to exercise care and with some chance of accidents occurring or of misuse. This description represents the typical "residential door" for which Anselmi hinges have been developed.

An example of a door leaf with dimensions of 900 x 2100 mm (W x H), the use of 2 hinges is recommended and a hinge gap of 1700 mm, the permissible load values change with different width and height ratios.

The following table provides an overview of the maximum load value for the individual hinge type, taking the interaction of width and height of the door as well as the hinge gap into account.

**Blue** load value = reference value.      **Green** load value < reference value.

Door height mm	Hinge gap mm								
2800	2400	60	60	60	60	60	60	60	60
2700	2300	60	60	60	60	60	60	60	60
2600	2200	60	60	60	60	60	60	60	60
2500	2100	60	60	60	60	60	60	60	60
2400	2000	60	60	60	60	60	60	55	55
2300	1900	60	60	60	60	60	58	52	52
2200	1800	60	60	60	60	60	55	49	49
2100	1700	60	60	60	60	57	51	48	48
2000	1400	60	60	60	59	54	48	45	45
		600	750	800	900	1000	1100	1200	

l → Leaf width in mm

The use of a third hinge positioned in the middle of the door leaf has no influence on the load capacity of the hinge system. However, in case of particularly high doors (above 2200 mm), doors positioned in rooms with high levels of humidity (i.e. bathrooms) or doors between rooms with different temperatures (i.e. stairwell) and doors produced with light material (i.e. honeycomb) the use of more than two hinges is suggested in order to prevent the door from warping.

The specifications above are guidelines. Especially in the case of borderline load requirements, please approach us.

## LOAD VALUES FOR HINGES

An accurate, professional fitting in accordance with the Anselmi installation instructions is always a prerequisite.

Installation site (residential building, public building, school, administration, barracks, kindergarten etc.)
Type of material of the element
Frequency of operation
Door dimensions (e.g. excess widths)
Positioning of hinges
Assembly of hinges
Outward opening doors (porch)
Door stop
Door closer
Swing-door operator
Wall soffits
Closing sequence control systems, etc.

When selecting or deciding on a hinge, the loading (stress factor) is often viewed as being identical to the weight of the door. However, the actual hinge loading can often be several times the door weight, caused by various influential factors.

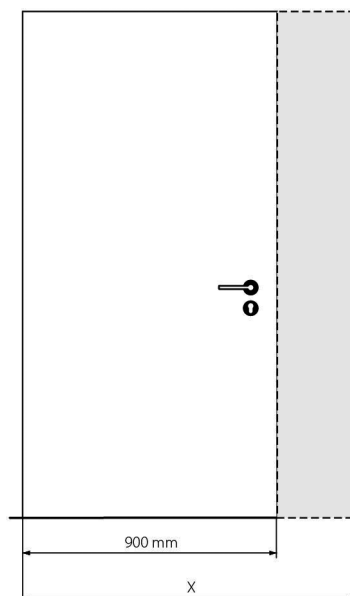
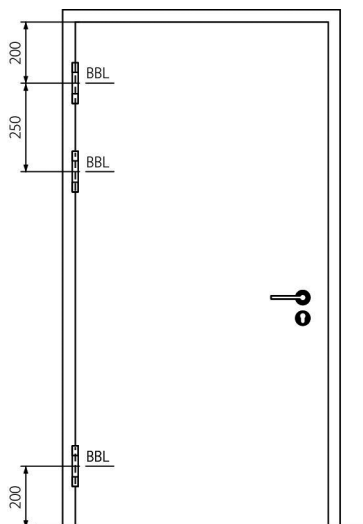
Even taking these variations of criteria into account, an additional margin of reserve should always be included when selecting the hinge. In buildings where extra loads are incurred due to the high opening frequency and stress which is not always calculable i.e kindergarten, hospitals etc, sufficiently dimensioned hinges should be used even if this would not have been necessary merely based on the door weight. Our technicians are at your disposal to help identify the appropriate hinge system for your application.

### Reference details

The load specifications for Anselmi hinges are based on a maximum door weight. Additionally, the listed influential factors must also be taken into account for actual hinge loads.

### All indications are based on the following references:

Door leaf dimensions	900 x 2100 mm
Use of	2 hinges
Hinge distance	1700 mm



### Third hinge position on extra wide doors

In addition to the factors mentioned above the use of a third hinge can have a significant impact on the load capacity. In practice often a third hinge is located in the middle of the door in order to meet the optical demands and to minimize warping in the centre of the door.

Under certain circumstances however it may be useful or even necessary to additionally support the upper hinge which takes most of the major tractive forces - this could be true, for instance, in the case of extra-wide doors ( $\geq 900$  mm), where additional forces occur due to the lever action. For these applications the third hinge has to be located in the upper third of the door for the load capacity of the hinge to be positively influenced. In case of door widths equal or above 900 mm Anselmi suggests the use of a third hinge at 250 mm from the top hinge (centre to centre).

### Door closers

Several models of Anselmi hinges have been tested in combination with door closers. When door closers are used, Anselmi recommends the use of a third hinge in the upper third of the door. The correct adjustment of the closer is a fundamental requirement for a long-lasting, problem-free function. It is recommended to get in touch with Anselmi to obtain the correct technical specifications.

### Wall openings, door stoppers

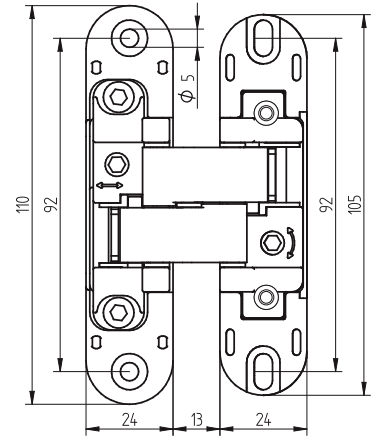
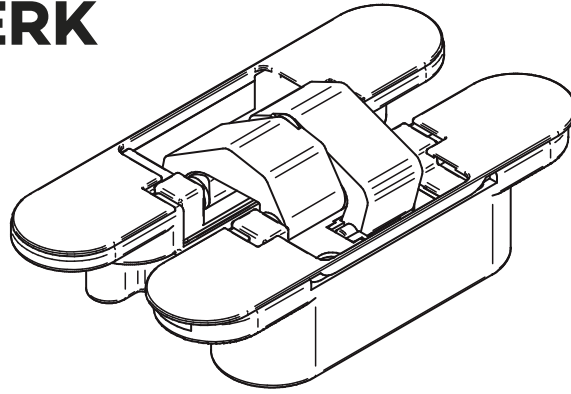
Factors such as door stops, projecting walls or similar cannot be measured or estimated and need to be considered individually, due to the lever action and cantilever forces that may occur if the door is opened too far resp. beyond a defined level. As a result of the doors' masses/weights, this can quickly lead to damage to the fixings, the hinges or similar. If it is necessary to use a door stop, this should either be mounted on the wall or, instead, on the floor placed at 75% of the door's width away from the hinge axis in the direction of the lock.

### Miscellaneous

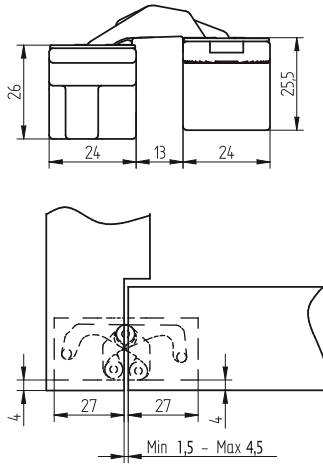
The points given here are simply guidelines. In practice, it may make sense, depending on the door's composition, usage levels, location, etc., to take the above factors into account even for door widths  $\leq 900$  mm. This needs to be decided on a case-by-case basis. Care must be taken to ensure that the hinges are of a sufficient size to be able to cover the demanding factors.

# SIMONSWERK

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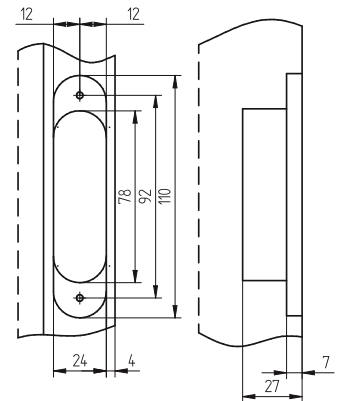
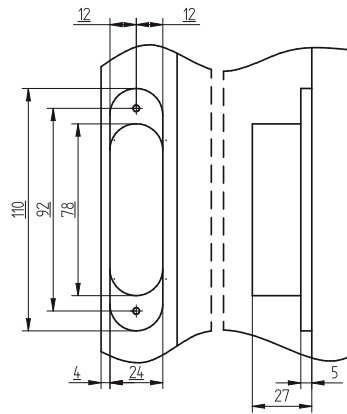
AN 140 3D / AN 160 3D / AN 180 3D DIT\_SP\_002 rev.5 13/09/2023



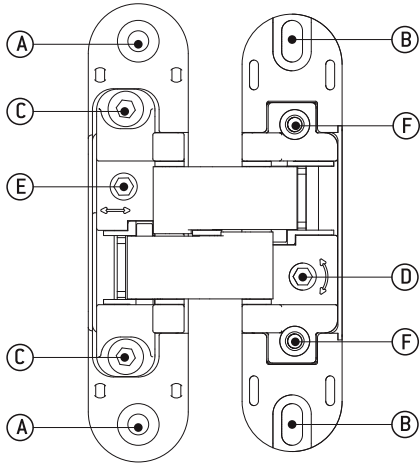
## FRESATURE MILLING

Stipite Frame

Porta Door



## ISTRUZIONI REGOLAZIONE Adjustment Instructions



**A** Foro viti di fissaggio della cerniera allo stipite.  
Fixing hole for the hinge to the frame.

**B** Fori asolati per regolazione verticale e fissaggio alla porta.  
Oval holes for vertical adjustment and fixing to the door.

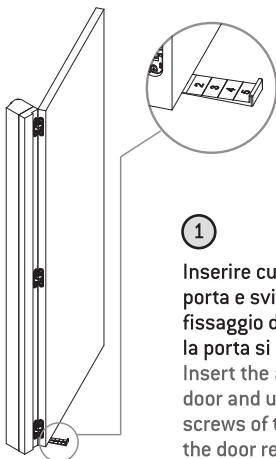
**C** Vite di fissaggio regolazione profondità.  
Fixing screw of depth adjustment.

**D** Vite autobloccante per regolazione laterale.  
Self-locking screw for lateral adjustment.

**E** Eccentrico per regolazione profondità.  
Excentric system for depth adjustment.

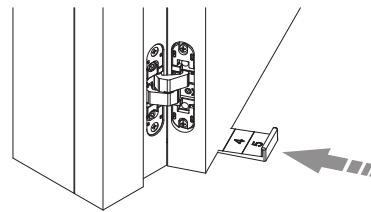
**F** Vite opzionale D.3,5 mm per fissaggio verticale porta.  
Optional D.3,5 mm screw for vertical fixing of the door.

## Regolazione Altezza Height Adjustment



1

Inserire cuneo di regolazione sotto la porta e svitare di un giro le viti di fissaggio della cerniera sulla porta; la porta si appoggia sul cuneo.  
Insert the adjustment wedge under the door and unscrew one turn the fixing screws of the hinge on the door; the door rests on the wedge.



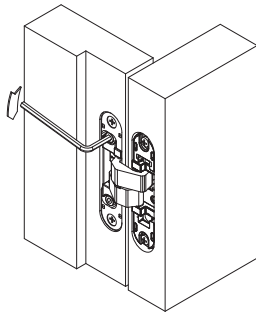
2

Spingere il cuneo sotto la porta sino a raggiungere la luce da terra desiderata; bloccare nuovamente le viti.  
Slide the wedge under the door until achieve the desired measure from the ground; re-lock the screws.

## Opzionale Optional

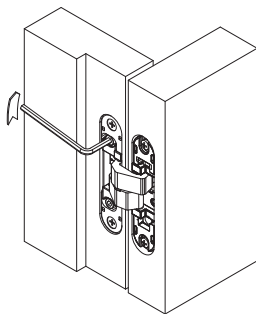
Avvitare la vite aggiuntiva D. 3,5 mm per bloccaggio verticale fino al fermo ed estrarre il cuneo di regolazione.  
Screw in the optional screw D. 3.5 mm for vertical fixing up to the stopper and pull the adjustment wedge.

## Regolazione Profondità Depth Adjustment



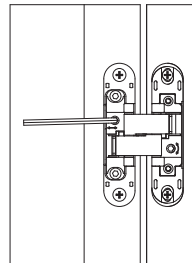
1

Svitare le viti C di un giro.  
Unscrew the C screws one turn.



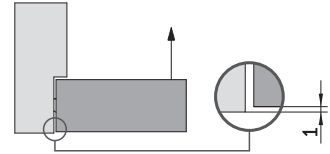
3

Fissare entrambe le viti C.  
Fix the two C screws.



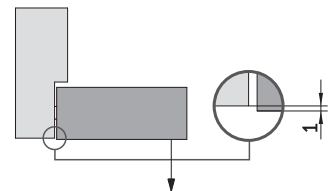
2

Agendo sull'eccentrico E in senso orario la porta trasla di - 1 mm.  
Acting on the eccentric E clockwise the door moves to - 1 mm.



2

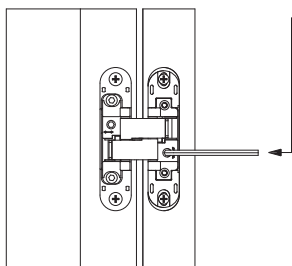
Agendo sull'eccentrico E in senso antiorario la porta trasla di + 1 mm.  
Acting on the eccentric E counterclockwise the door moves to + 1 mm.



## Regolazione Laterale Side Adjustment

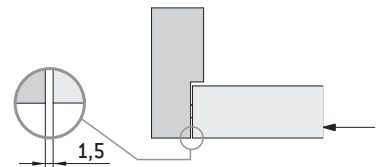
1

Agire sulla vite D.  
Act on D screw.



2

Agendo sulla vite D in senso orario la porta trasla di - 1,5 mm.  
Acting on the D screw clockwise the door moves to - 1,5 mm.



2

Agendo sulla vite D in senso antiorario la porta trasla di + 1,5 mm.  
Acting on the D screw counterclockwise the door moves to + 1,5 mm.

