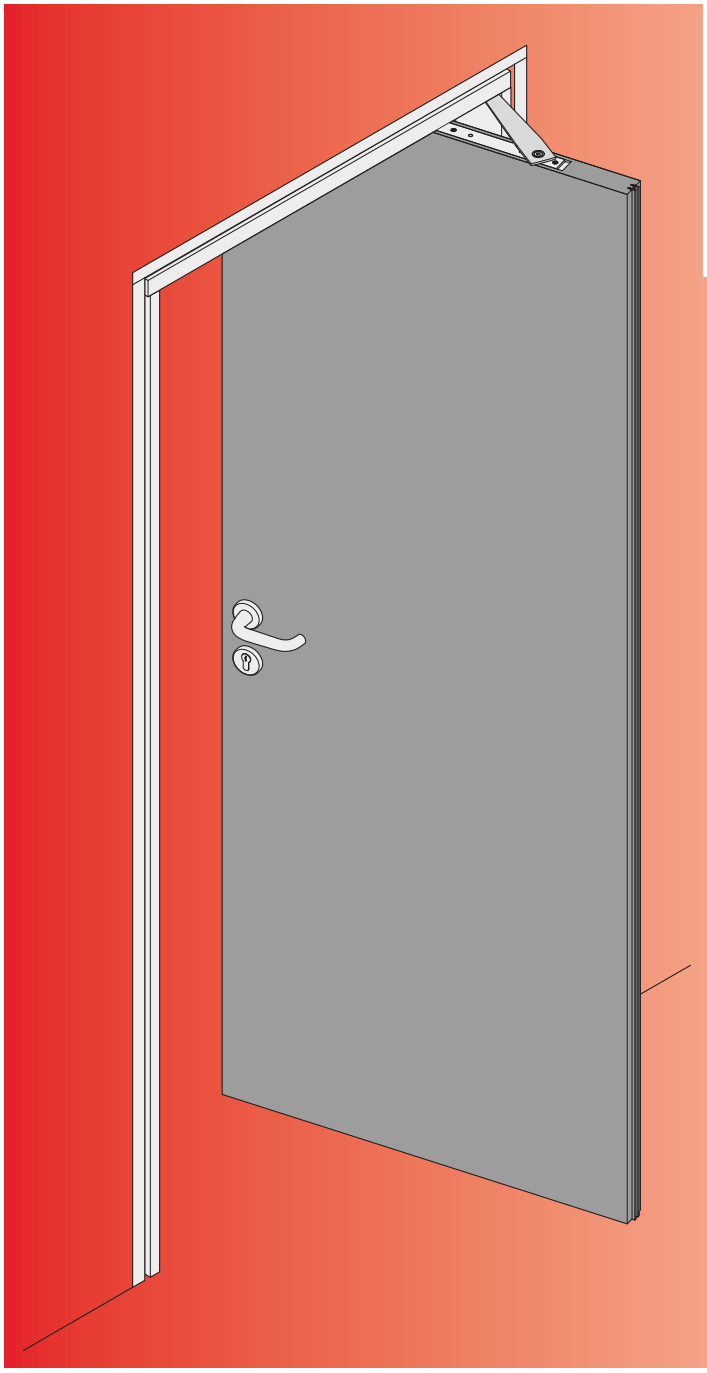
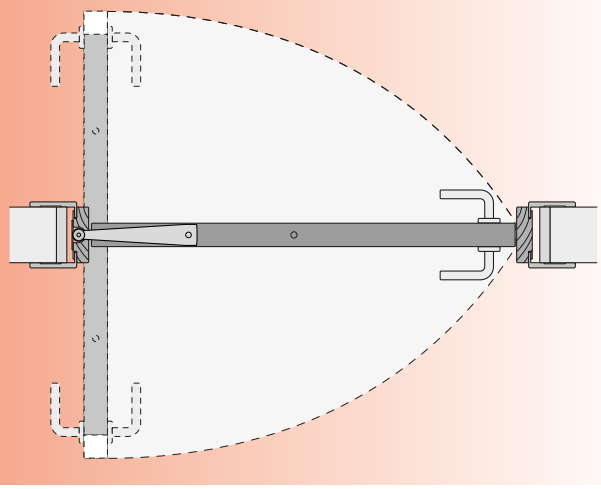
CELEGON
SMART OPENING SYSTEMS



ERGON® T.E.
LIVING SLIM



TECHNICAL MANUAL - CONSTRUCTION AND INSTALLATION

Swinging-sliding door with connecting rod on frame

JAMB THICKNESS 30/40 mm

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1. INTRODUCTION

The **Ergon Living T.E. SLIM** system retains the tried and tested features of **T.E.** version:

- Rotation rod within the frame;
- Door weight limit 70 kg;
- Minimum door thickness 35 mm;
- Possibility of applying the "Soft Opening" damper;
- Available in silver and black finishes;
- Three different arm sizes:
  - **"BASE"** particularly suitable for LFM (*Wall opening width*) from 800 to 1100 mm;
  - **"SMALL"** particularly suitable for LFM (*Wall opening width*) from 610 to 800 mm;
  - **"LARGE"** particularly suitable for LFM (*Wall opening width*) from 1100 to 1450 mm.

Differences from the **T.E.** version:

- the connecting rod does not require the aluminium upright, but is simply held in the guide by a small plastic component;
- the **T.E. SLIM** version allows the use of a flat frame of the thickness 30 to 40 mm;
- the use of doors in standard sizes with a false frame of standard size (e.g.: door L = 815 mm with wall opening width L = 900 mm) using a 30 mm thickness frame;
- we recommend the use of a magnetic lock.

Depending on the specific needs, with the **T.E. SLIM** hardware the door can be constructed in such a way that, compared to the wall thickness, the door can assume any position. There follow two limit positions, making use of terminologies which are then used in this manual:

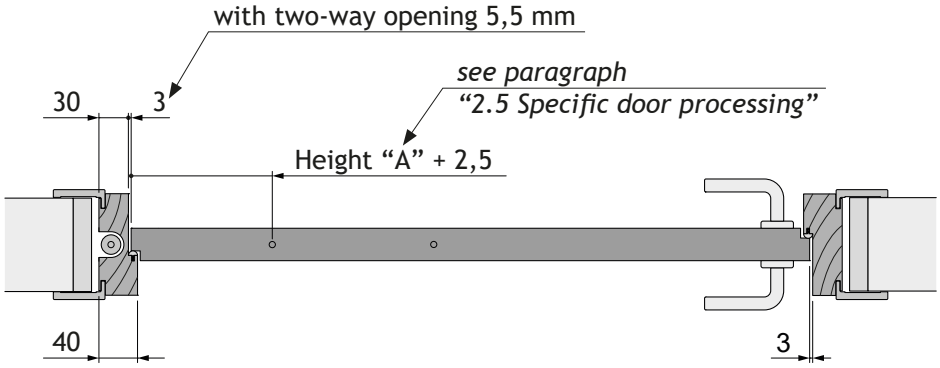
1. **"centred door"** *where the door is positioned at the centre of the wall*

2. **"oriented door"** *where the door is positioned close to one of the two edges of the wall*

The **Ergon Living T.E. SLIM** system is offered in various sizes of standard widths and heights.
It is also possible obtain intermediate measures in width by shortening the track and the track cover (see *"2.10 Track adjustment to the width of the door to be achieved"*), in height by purchasing the appropriate shortenable rod kit (see *"2.11 Shortenable connecting rod kit"*), or requesting the rod in a special measurement.

SWING DOORS WITH ONE DIRECTION OF OPENING

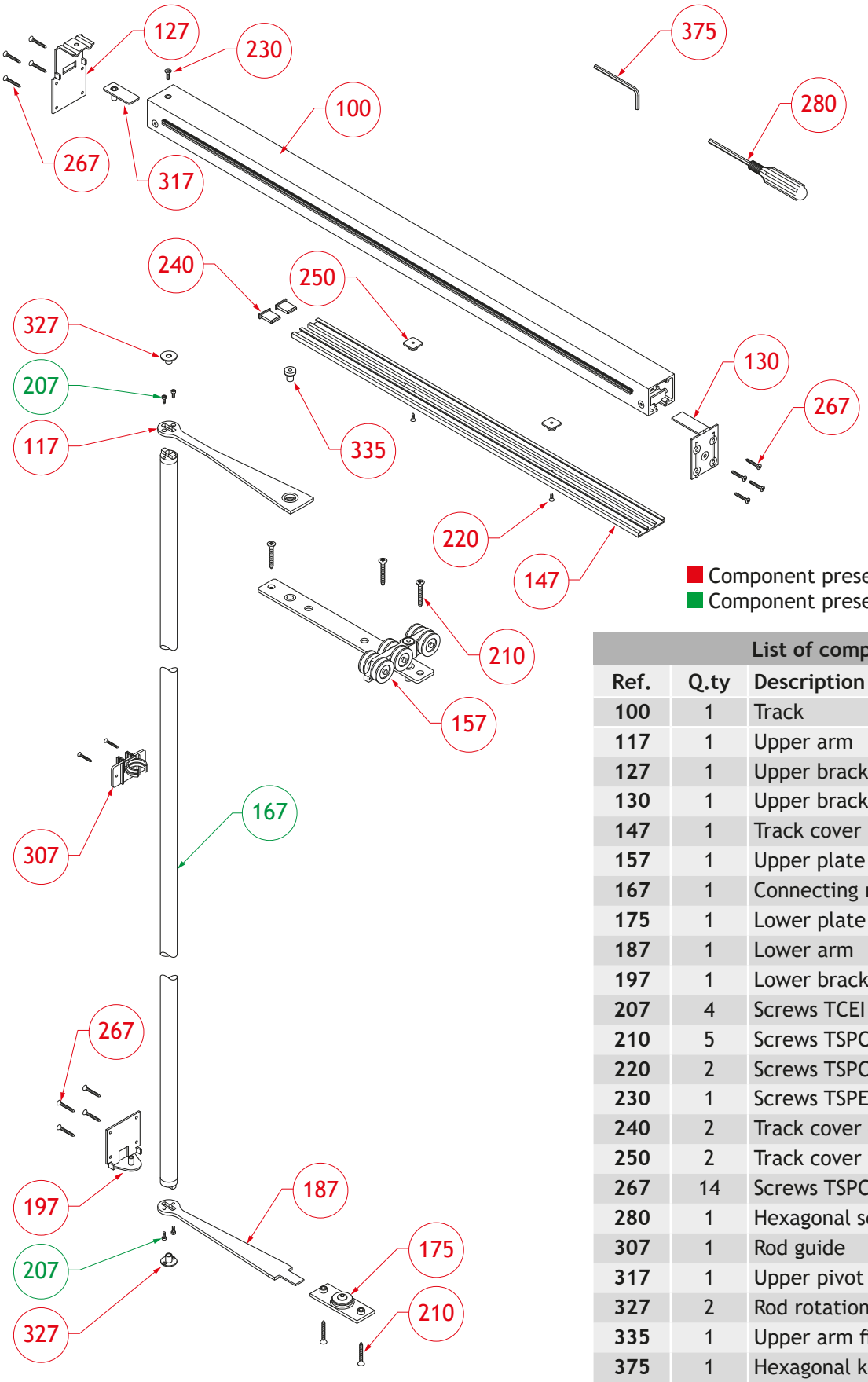
The **Ergon** kits for swing doors with one-way opening are the same as those used for doors with two-way opening; this is possible by simply creating the hinges in the vertical sides of the door. Here below is an example:



Caution: The door and frame hinges are mirrored.
It is also possible to construct doors without the hinge.

2. DESCRIPTION

2.1 Exploded hardware diagram

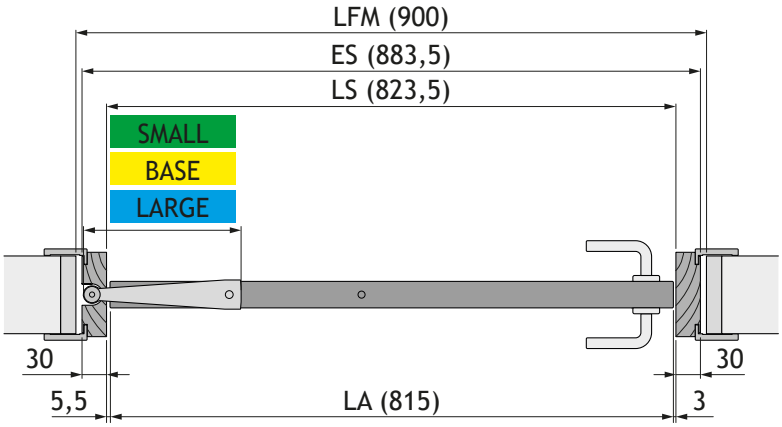


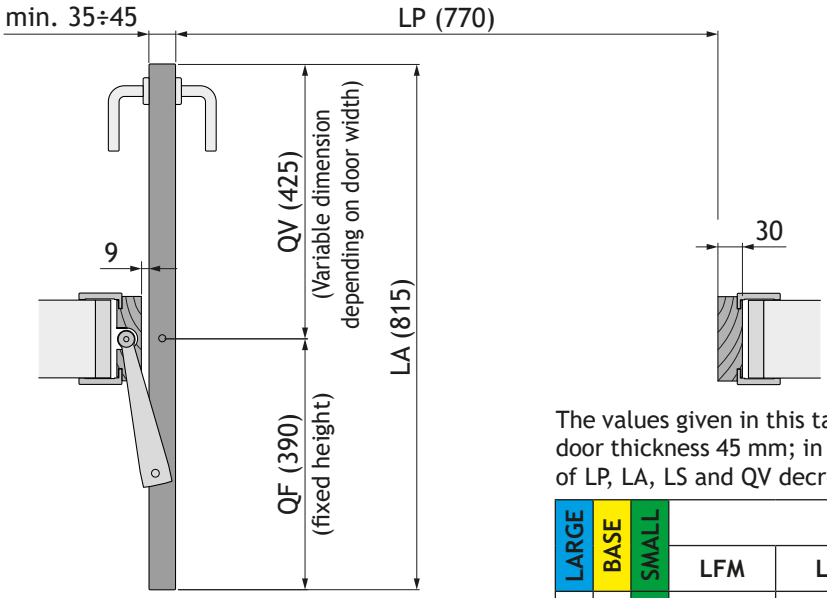
Component present in the track kit
Component present in the rod kit

List of components		
Ref.	**Q.ty**	**Description**
100	1	Track
117	1	Upper arm
127	1	Upper bracket arm side
130	1	Upper bracket lock side
147	1	Track cover profile
157	1	Upper plate with trolley
167	1	Connecting rod
175	1	Lower plate
187	1	Lower arm
197	1	Lower bracket
207	4	Screws TCEI M 3x6
210	5	Screws TSPCR ø 4x40
220	2	Screws TSPCR ø 3x10
230	1	Screws TSPEI M 5x12
240	2	Track cover caps
250	2	Track cover fixing insert
267	14	Screws TSPCR ø 3x25
280	1	Hexagonal screwdriver 2.5 mm
307	1	Rod guide
317	1	Upper pivot
327	2	Rod rotation bush
335	1	Upper arm fixing pin
375	1	Hexagonal key 2.5 mm

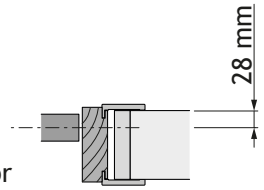
2.2 Horizontal dimensional drawing

Dimensional example





The door can be positioned oriented with respect to the thickness of the wall, respecting the limit shown in the diagram below.



Oriented door

For the management of wall thicknesses see *"2.3 Management of wall thicknesses"*.

The values given in this table refer to a door with frame thickness 30 mm and door thickness 45 mm; in case of using a frame of thickness 40 mm the values of LP, LA, LS and QV decrease by 20 mm.

LARGE	BASE	SMALL	WIDTH DIMENSIONS						
			LFM	LP	LA	QF		QV	
		●	610	480	525	290		235	
		●	650	520	565	290		275	
	●	●	700	570	615	390	290	225	325
	●	●	750	620	665	390	290	275	375
	◉	◉	800	670	715	390	290	325	425
	◉		850	720	765	390		375	
	◉		900	770	815	390		425	
	◉		950	820	865	390		475	
	◉		1000	870	915	390		525	
	◉		1050	920	965	390		575	
●	◉		1100	970	1015	615	390	400	625
●			1150	1020	1065	615		450	
●			1200	1070	1115	615		500	
●			1250	1120	1165	615		550	
◉			1300	1170	1215	615		600	
●			1350	1220	1265	615		650	
●			1400	1270	1315	615		700	
◉			1450	1320	1365	615		750	

Minimum size for "Soft Opening" arm SMALL

Minimum size for "Soft Opening" arm BASE

Minimum size for "Soft Opening" arm LARGE

LFM = Wall opening width
LP = Passage dimension (LFM - 130)
LA = Door width (LFM - 85)
LS = Jamb opening (LFM - 76,5)
ES = Exterior jambs (LFM - 16,5)
QF = Fixed dimension arms side
QV = Variable dimension handle side

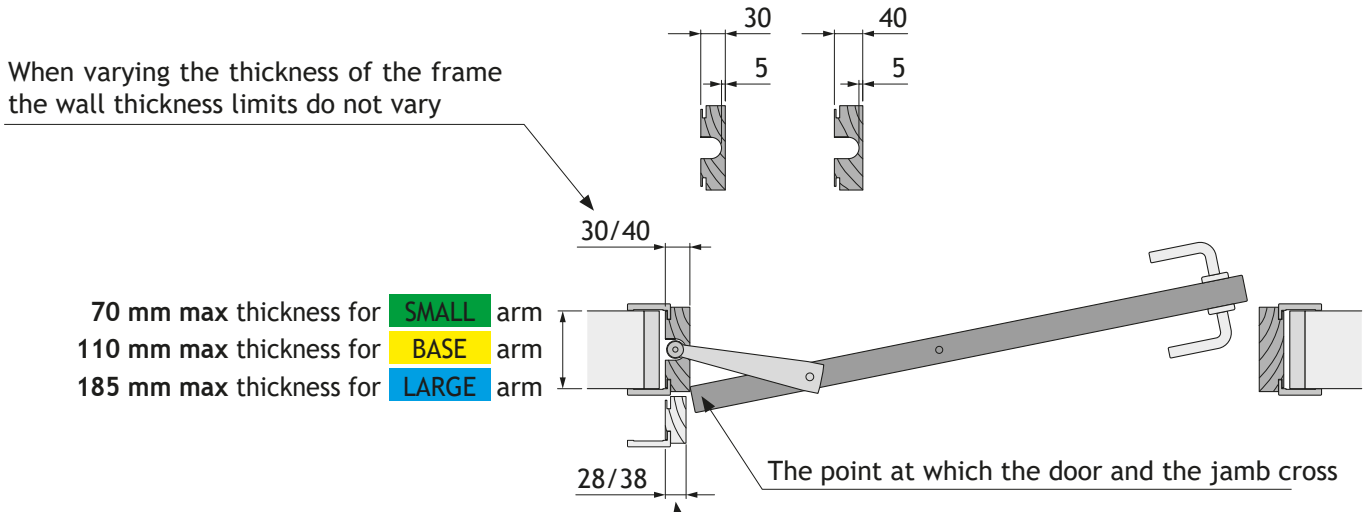
◉ = Standard Available sizes
● = Some examples of measurements obtainable by shortening the track, it is also possible to obtain other intermediate measurements

For other special measurements ask Celegon s.r.l. for feasibility

2.3 Management of wall thicknesses

During opening, the **Ergon** system forces the door to recede from the arms side. In this way, when there are wall thicknesses of certain dimensions, the door approaches the jamb to the point in which they cross (see design below), which prevents the door from opening completely. On this page are some solutions that can be adopted.

Centred door



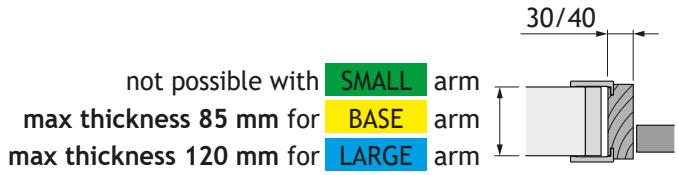
To increase the thickness of the wall you can add an item to the frame with a thickness less than that of the frame (e.g. Frame thickness 30 mm add spacer of thickness 25/20 mm).

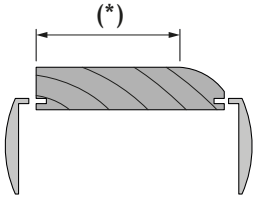
n this way you can increase the wall thickness by about 30mm every 2mm (e.g. Adding **an element** of 28 mm BASE arm wall thickness 140 mm; addition of **two elements** of 28 mm = BASE arm wall thickness 170 mm).

These values are valid for a door of thickness 45 mm.

Oriented door

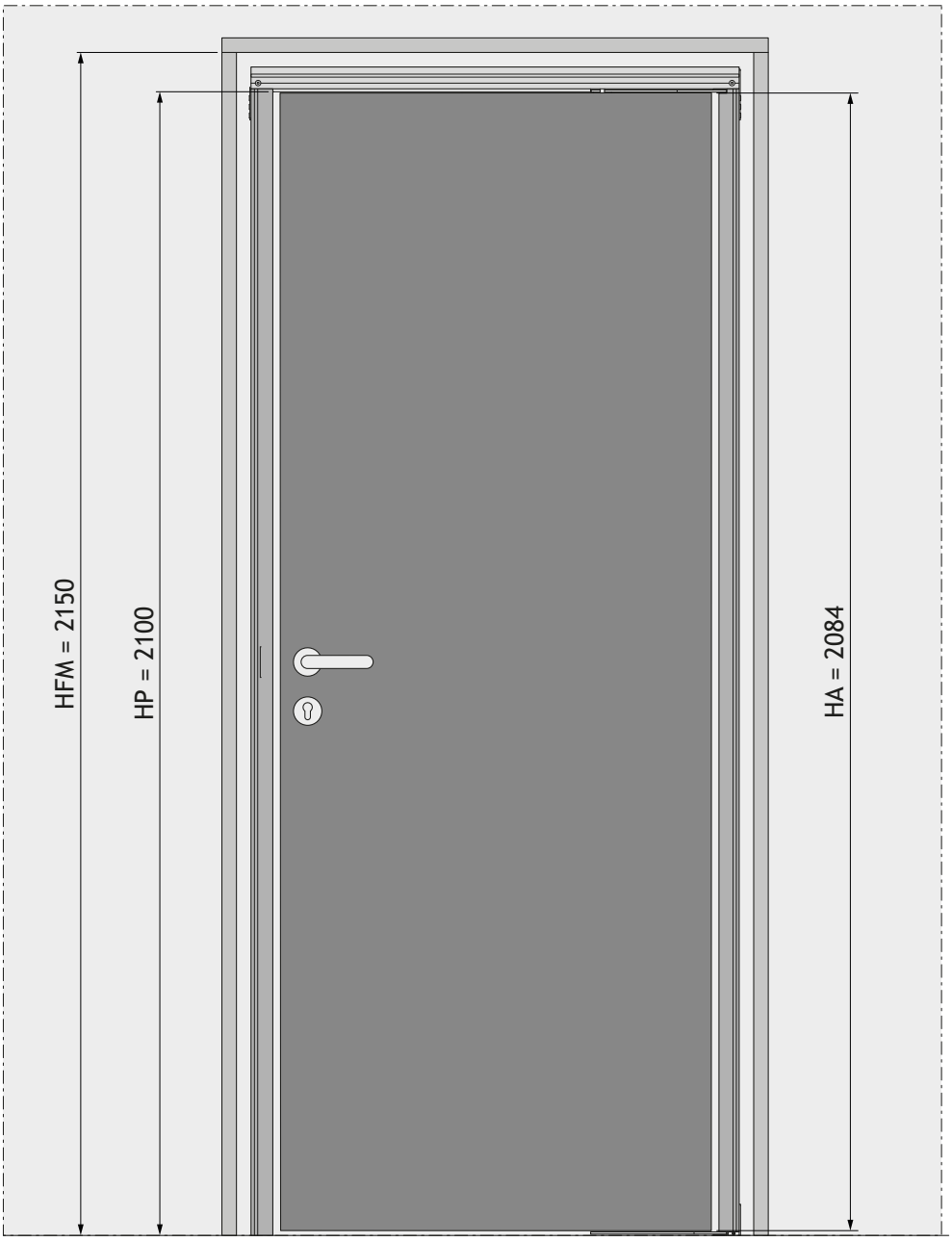
Caution: *Placing the oriented door from one side with respect to the wall decreases the thickness limit of the wall.*





(*) When using rounded jambs, the limit value is to be considered only on the flat surface of the jamb and not on the rounded part.

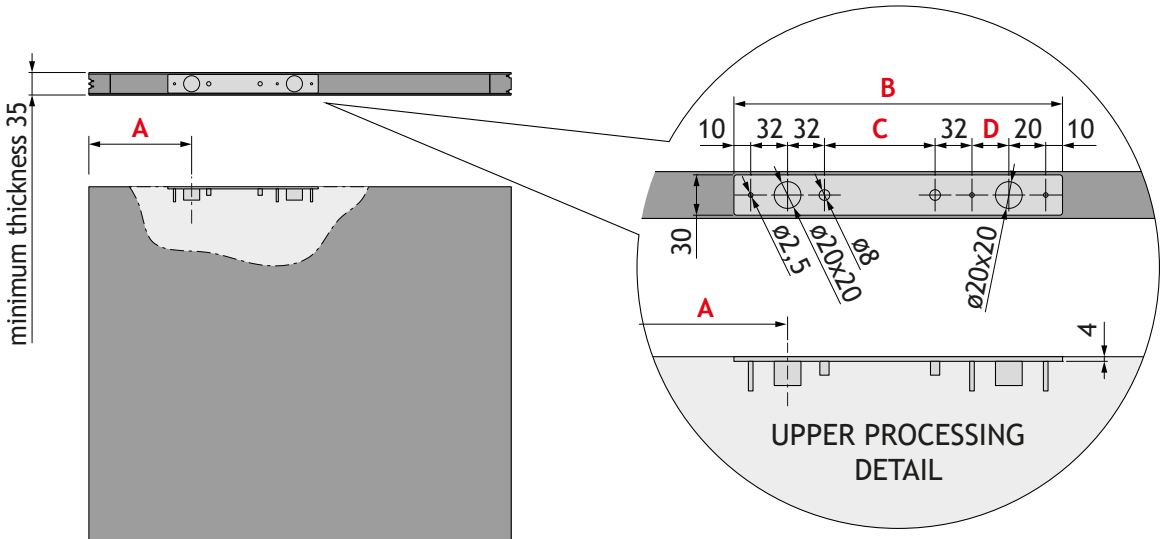
2.4 Vertical dimension drawing



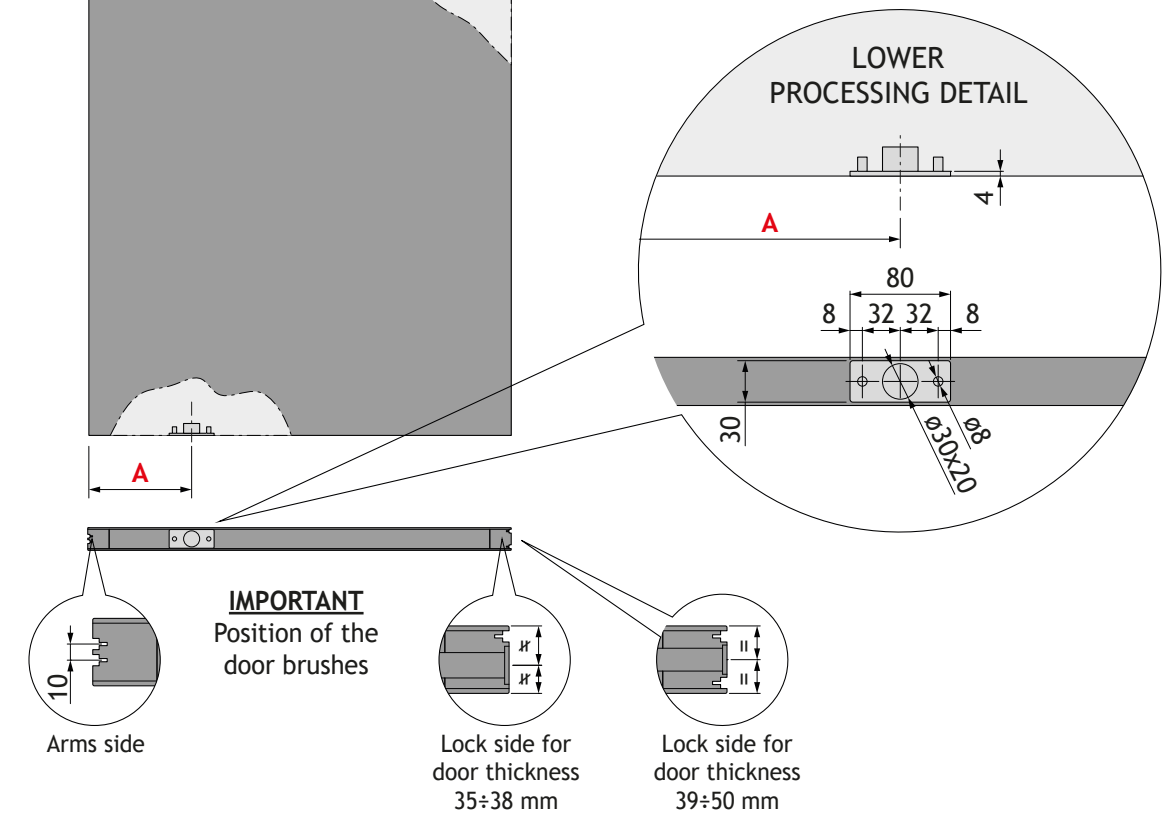
VERTICAL DIMENSIONS				
	HFM wall opening height	**HP** passage height	**HA** door leaf height	
*	1950	1900	1884	HP = (HFM - 50) HA = (HFM - 66)
*	2000	1950	1934	
*	2050	2000	1984	
*	2100	2050	2034	
*	2150	2100	2084	
*	2200	2150	2134	
*	2250	2200	2184	

* Standard Available sizes
Other measurements may be obtained by adjusting the connecting rod (see paragraph *"2.11 Shortenable connecting rod kit"*) of prepared oversized kits. For bespoke rods, ask Celegon s.r.l. for feasibility.

2.5 Specific door processing

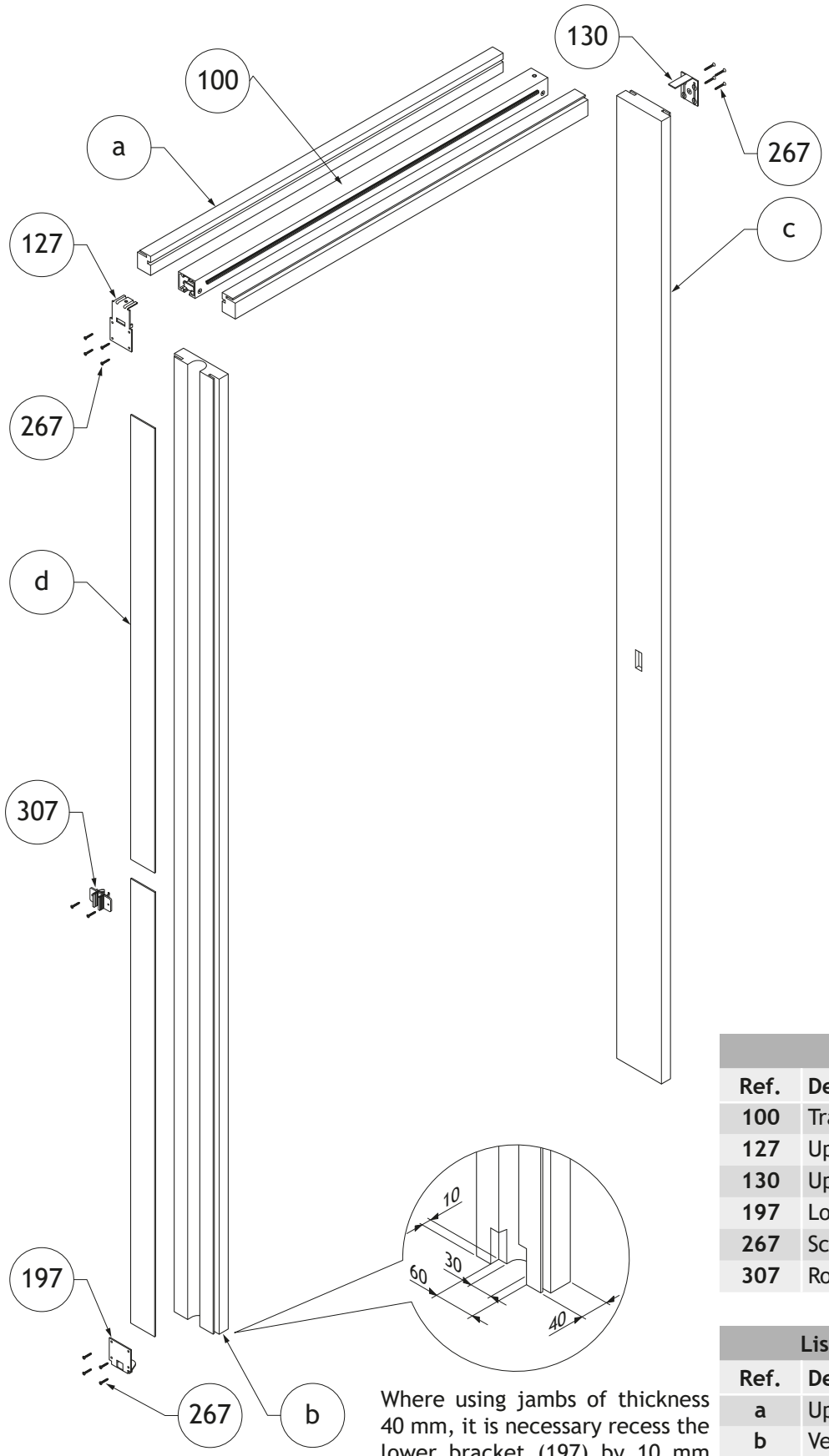


Variable heights based on the arm used				
	A	B	C	D
BASE arm	185,5	276	96	44
SMALL arm	136,5	225,2	45,2	44
LARGE arm	297,5	389,4	224	29



We recommend using a lock with the facing not exceeding 18 mm.

2.6 Exploded frame diagram (centred door)



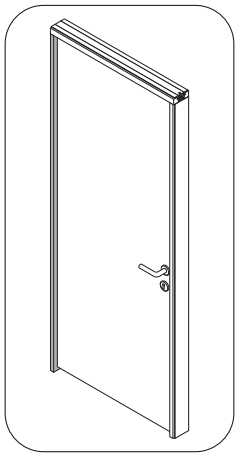
Where using jambs of thickness 40 mm, it is necessary recess the lower bracket (197) by 10 mm (*see drawing*).

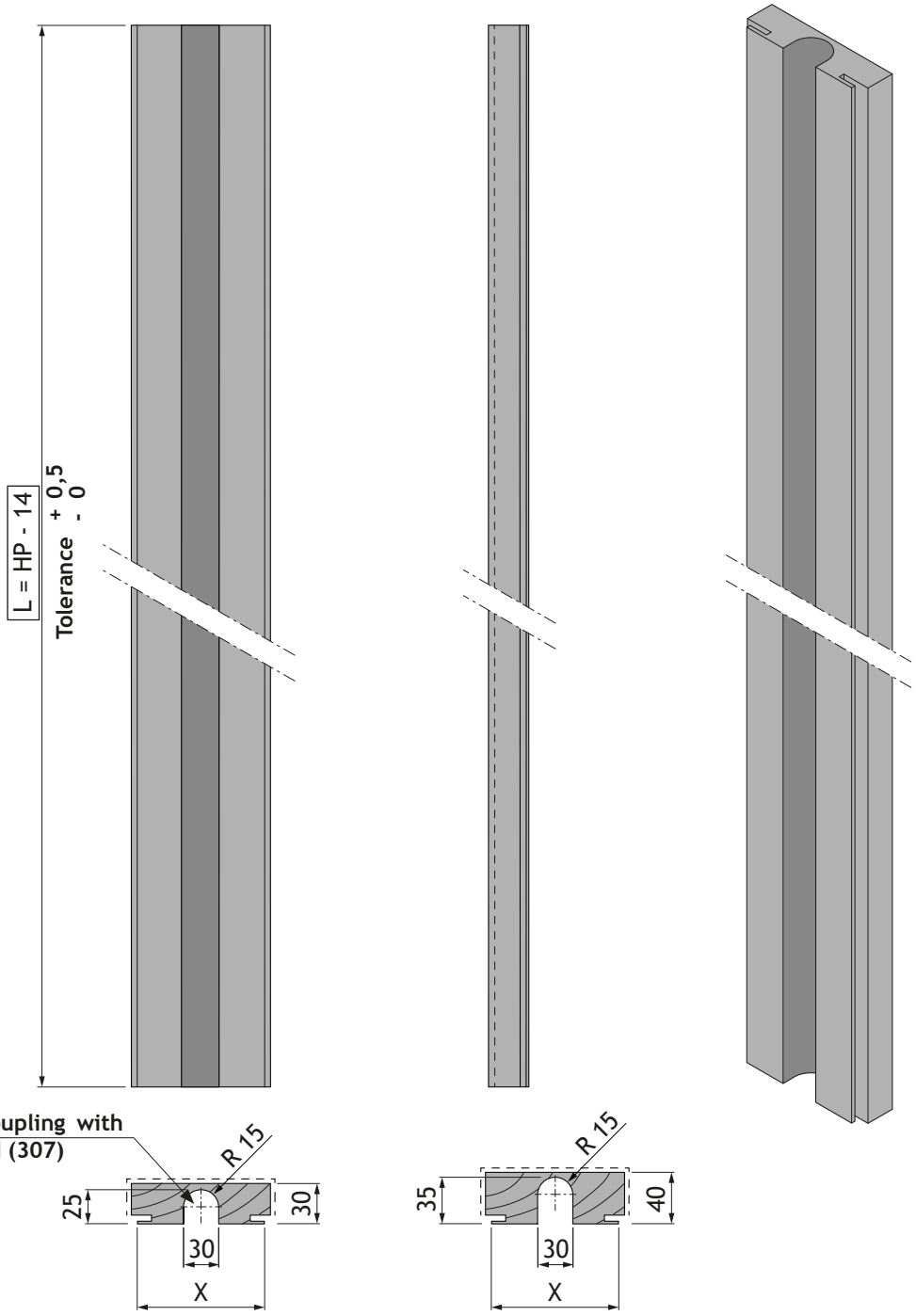
List of components	
Ref.	**Description**
100	Track
127	Upper bracket arm side
130	Upper bracket lock side
197	Lower bracket
267	Screws TSPCR ø 3x25
307	Rod guide

List of wooden components	
Ref.	**Description**
a	Upper crosspiece
b	Vertical jamb bracket side
c	Vertical jamb lock side
d	Infill strips

2.7 Construction details of the vertical frame arms side

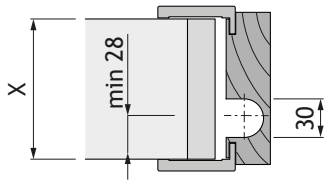
Jamb arms side



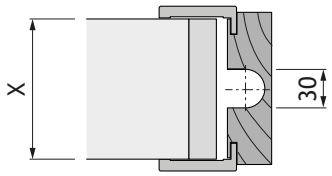


▭ DIMENSION TO BE RESPECTED X = WALL THICKNESS HP = PASSAGE HEIGHT - - - SIDE IN VIEW

oriented door

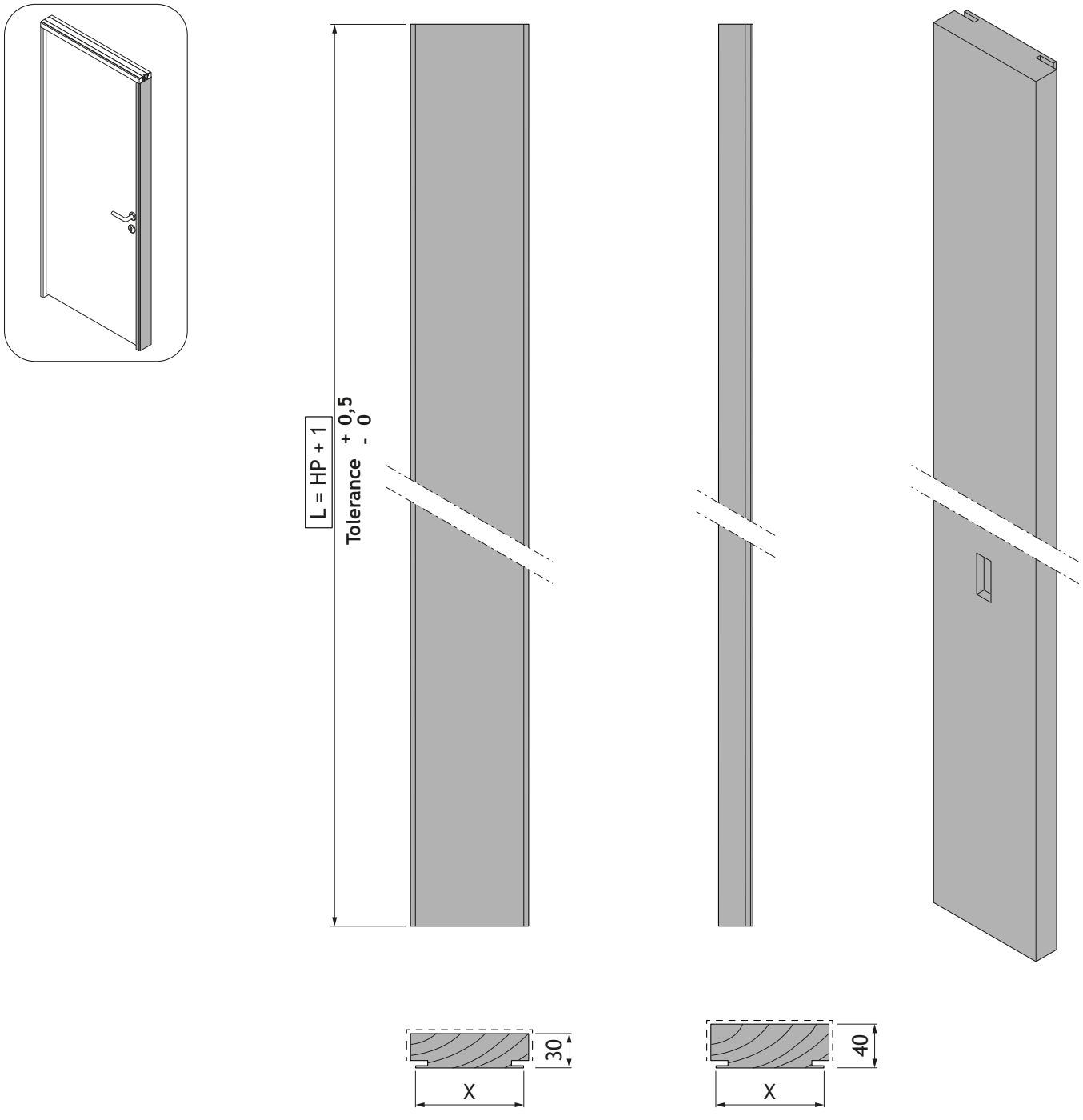


centred door



2.8 Construction details of the vertical frame lock side

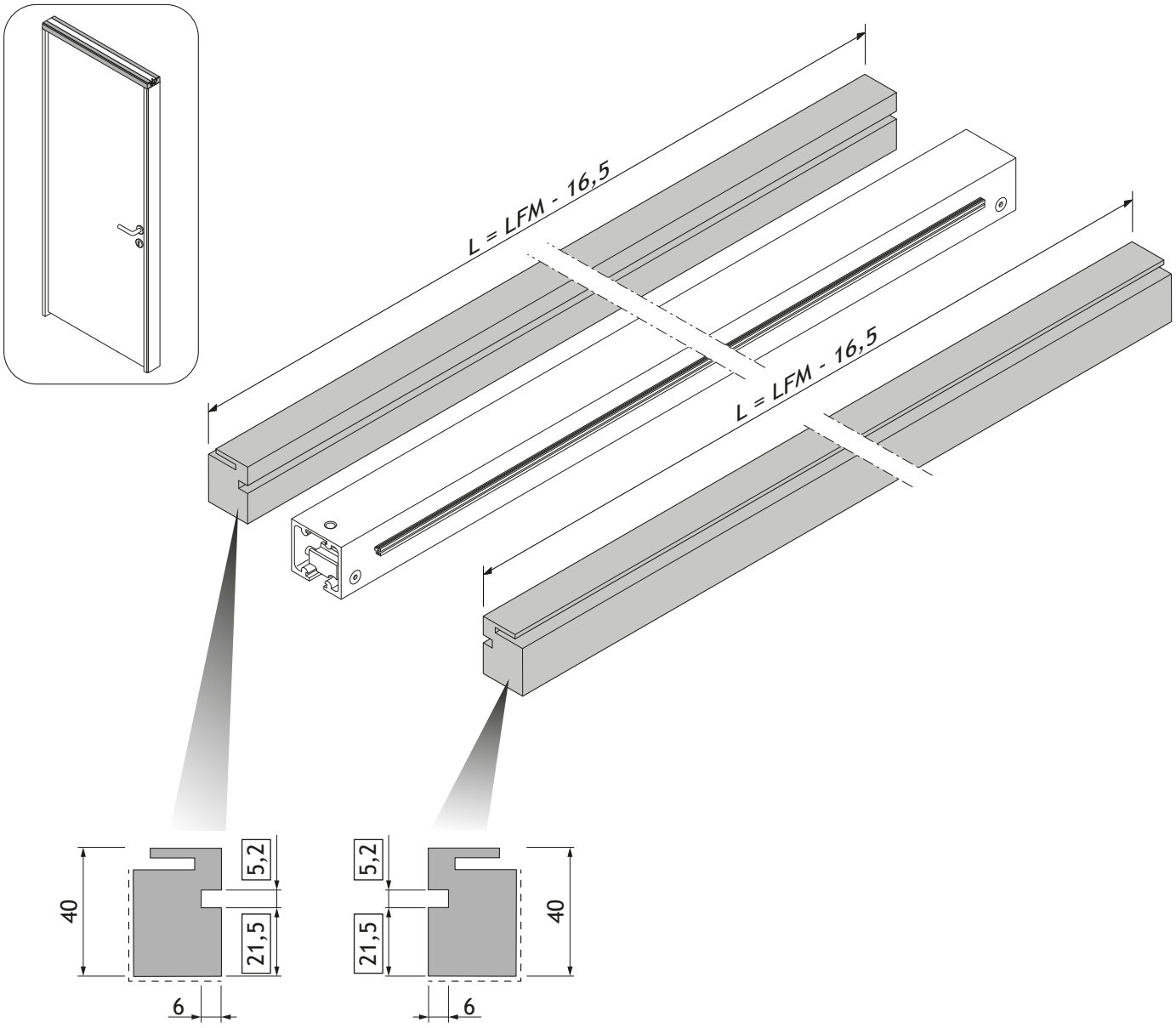
Jamb lock side



▭ DIMENSION TO BE RESPECTED X = WALL THICKNESS HP = PASSAGE HEIGHT - - - SIDE IN VIEW

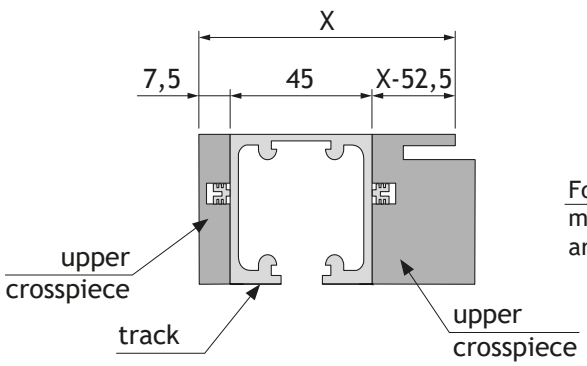
2.9 Construction details of the upper crosspiece

Valid for frame thickness 30 and 40 mm

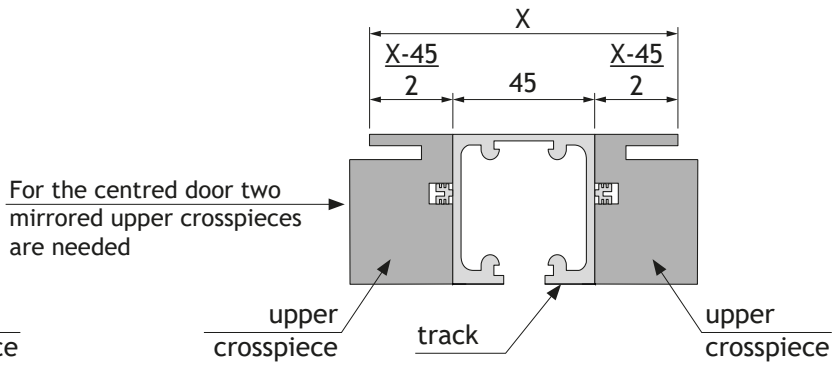


▭ DIMENSION TO BE RESPECTED X = WALL THICKNESS LFM = WALL OPENING WIDTH - - - SIDE IN VIEW

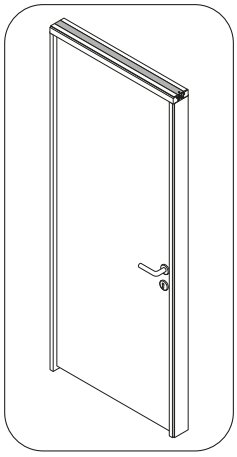
oriented door



centred door

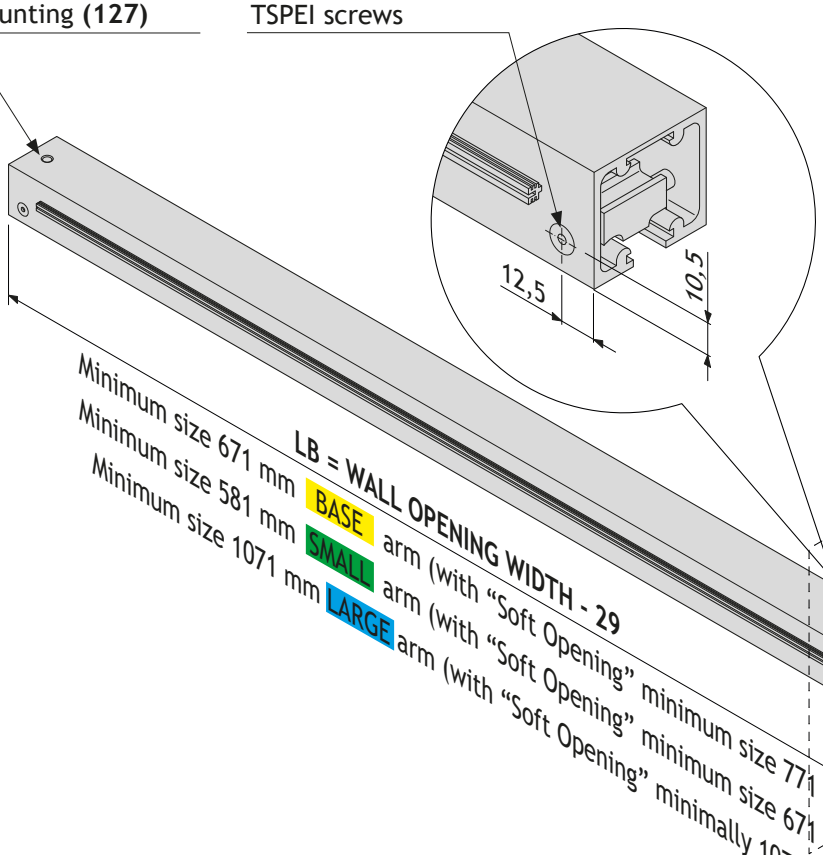


2.10 Track adjustment to the width of the door to be achieved



ARM SIDE with hole for bracket mounting **(127)**

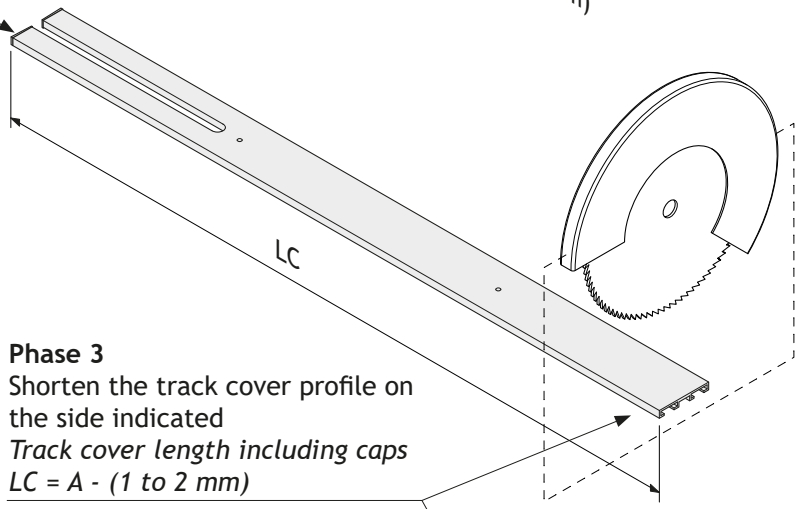
Phase 2
Drill flared hole ø5 on both sides for M5 TSPEI screws



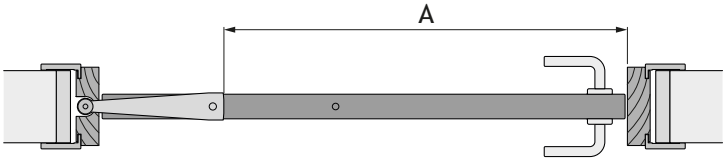
Phase 1
Cut the track on the side indicated

SIDE TO BE CUT

track cover caps



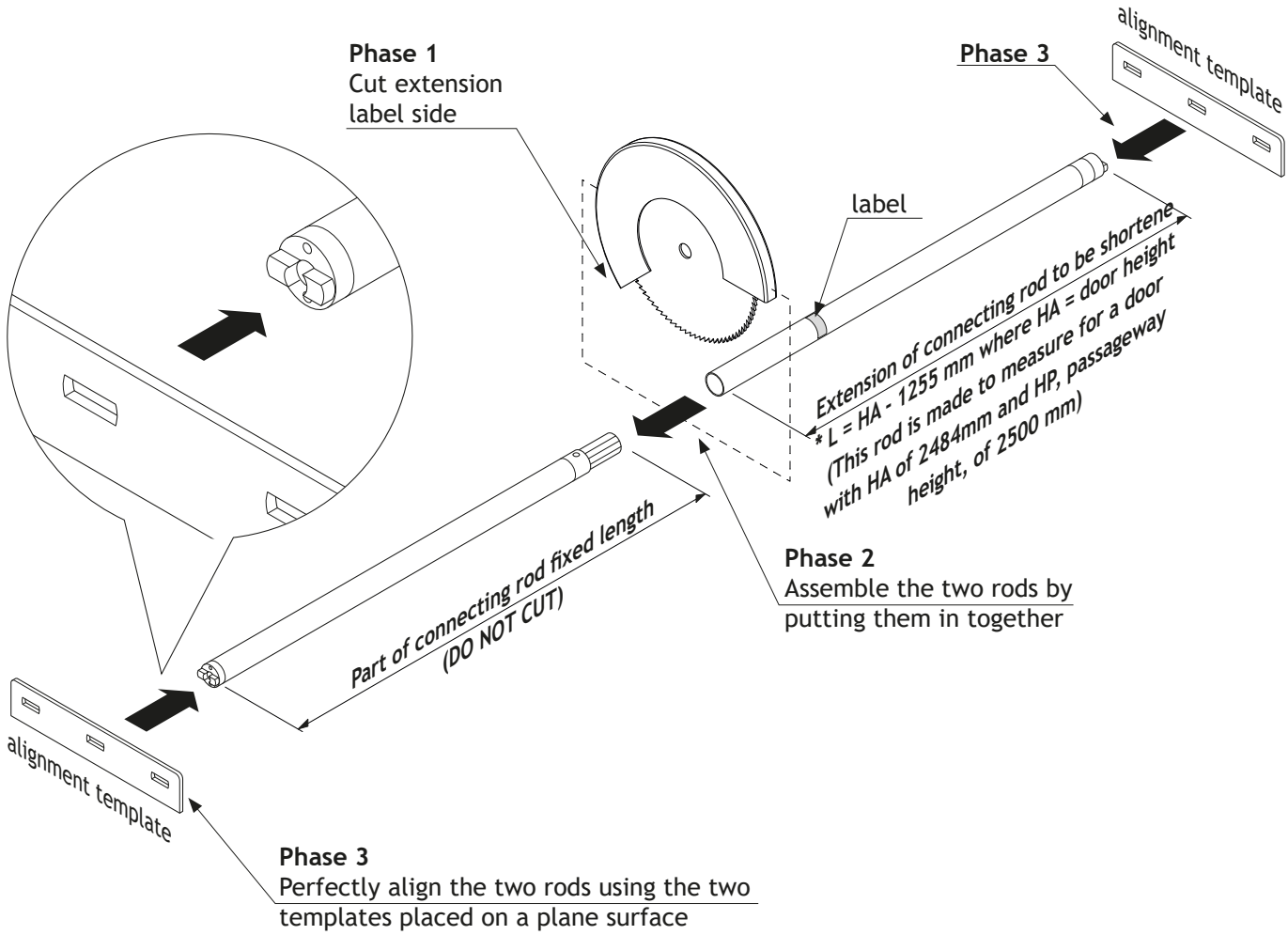
Phase 3
Shorten the track cover profile on the side indicated
Track cover length including caps
LC = A - (1 to 2 mm)

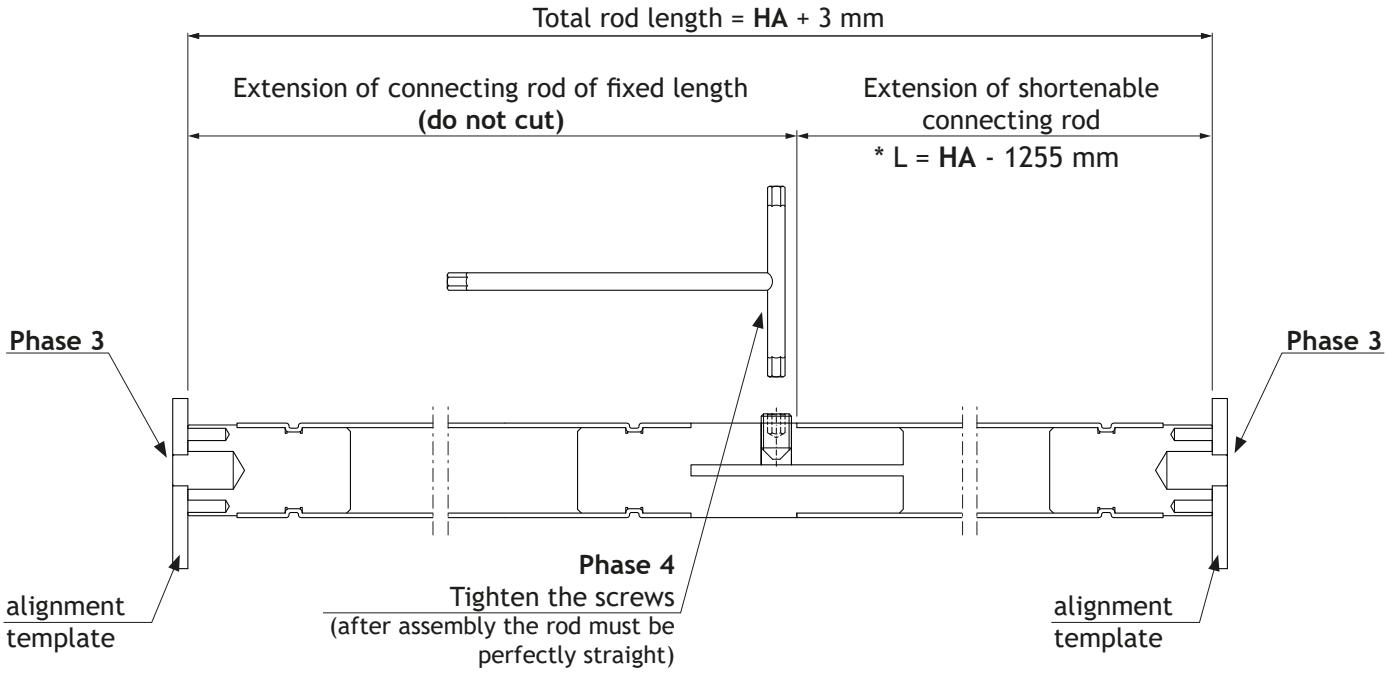


LFM Wall Opening Width	LB Track Width
700	671
725	696
750	721
775	746
825	796
875	846
925	896
975	946
LB = LFM - 29	

2.11 Shortenable connecting rod kit

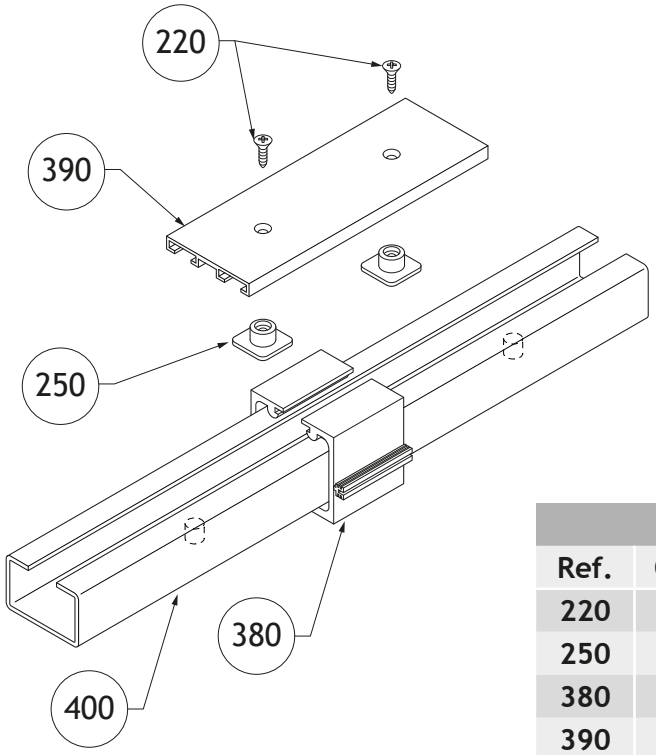
Connecting rod adjustment for non-standard heights





2.12 Track union kit for double door with ERGON LIVING system

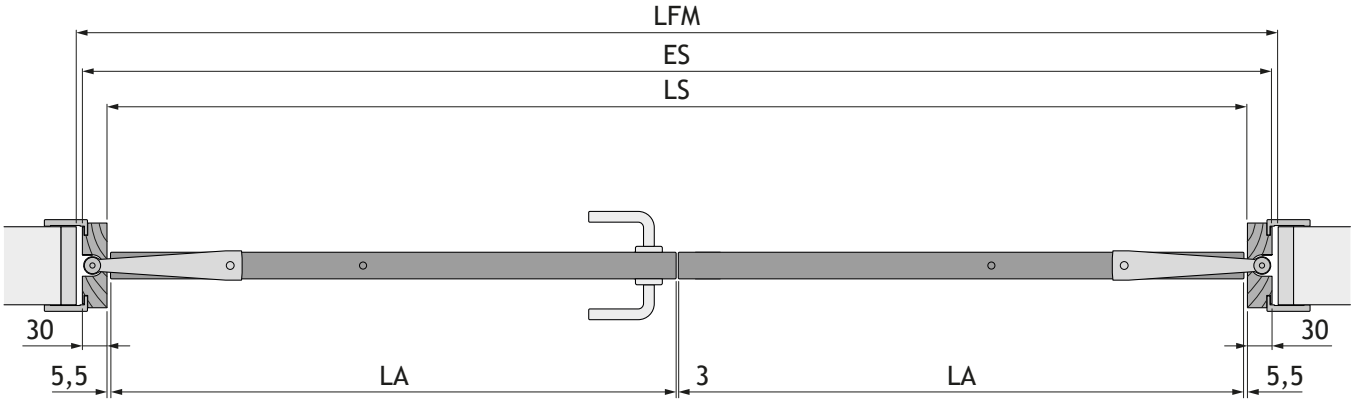
1



List of components		
Ref.	**Q.ty**	**Description**
220	2	Screws TSPCR ø 3x10
250	2	Track cover fixing insert
380	1	Track extension
390	1	Track extension covers
400	1	Track junction connector

2

The measurements refer to a jamb of thickness 30 mm.



*** N.B. For wall thickness limits see paragraph *"2.3 Management of wall thicknesses"* in this manual.**

LFM minimum 1600 mm BASE arm with "Soft Opening" **LFM** minimum 1700 mm

LFM minimum 1400 mm with SMALL arm with "Soft Opening" **LFM** minimum 1500 mm

LFM minimum 2300 mm with LARGE arm with "Soft Opening" **LFM** minimum 2300 mm

LP = Passage opening (LFM - 190)

LA = Door leaf width $\frac{(LFM - 94)}{2}$

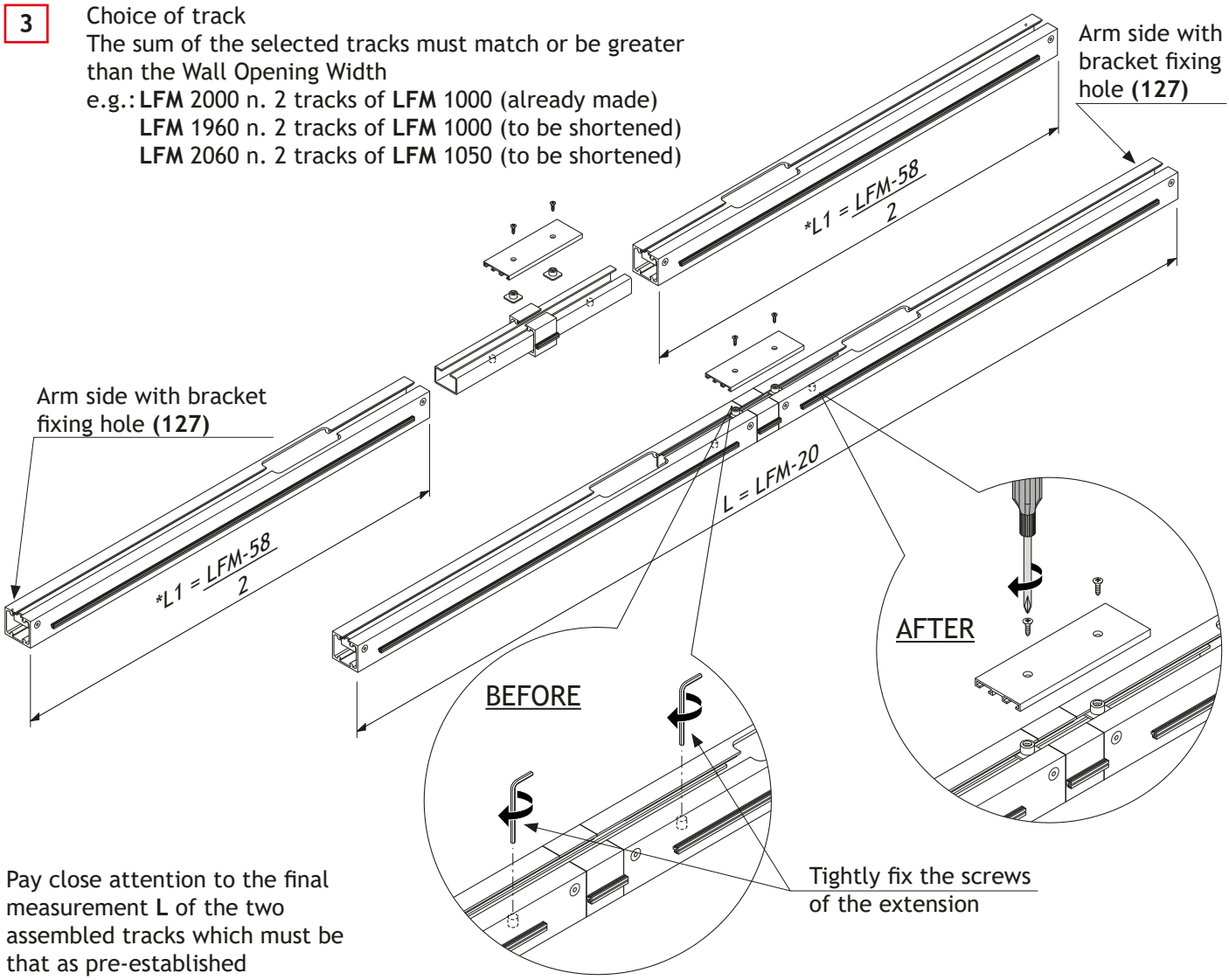
LS = Jamb opening (LFM - 80)

ES = Jamb exterior (LFM - 20 = track length and upper crosspiece)

LFM = Wall Opening Width

3

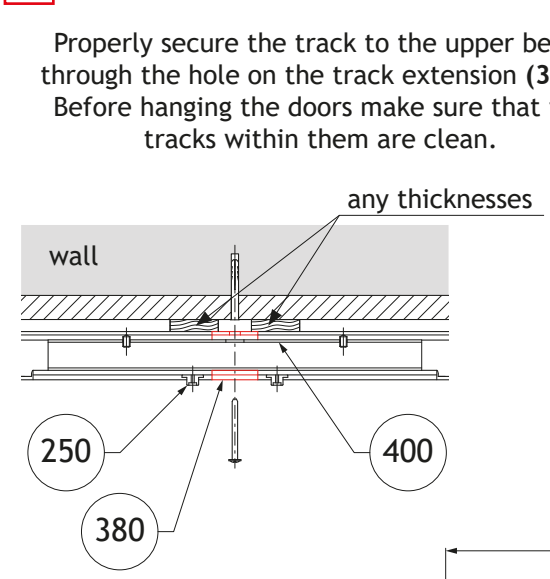
Choice of track
The sum of the selected tracks must match or be greater than the Wall Opening Width
e.g.: **LFM** 2000 n. 2 tracks of **LFM** 1000 (already made)
LFM 1960 n. 2 tracks of **LFM** 1000 (to be shortened)
LFM 2060 n. 2 tracks of **LFM** 1050 (to be shortened)

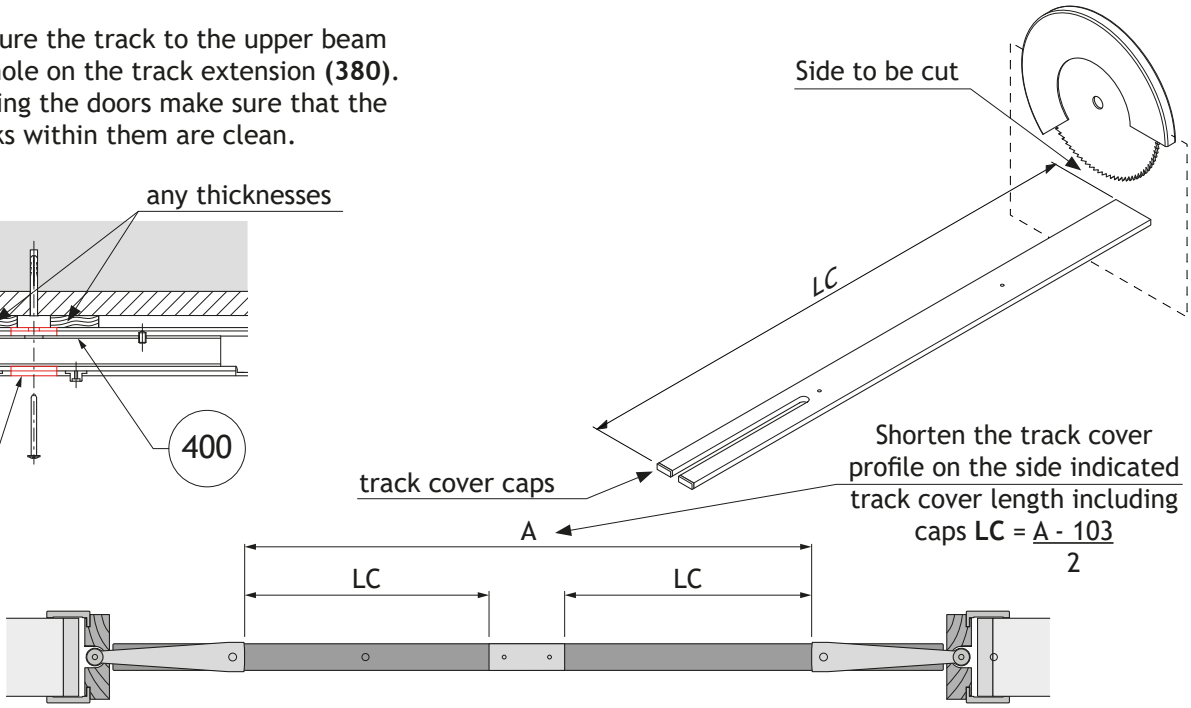


Pay close attention to the final measurement **L** of the two assembled tracks which must be that as pre-established

4

Properly secure the track to the upper beam through the hole on the track extension **(380)**. Before hanging the doors make sure that the tracks within them are clean.

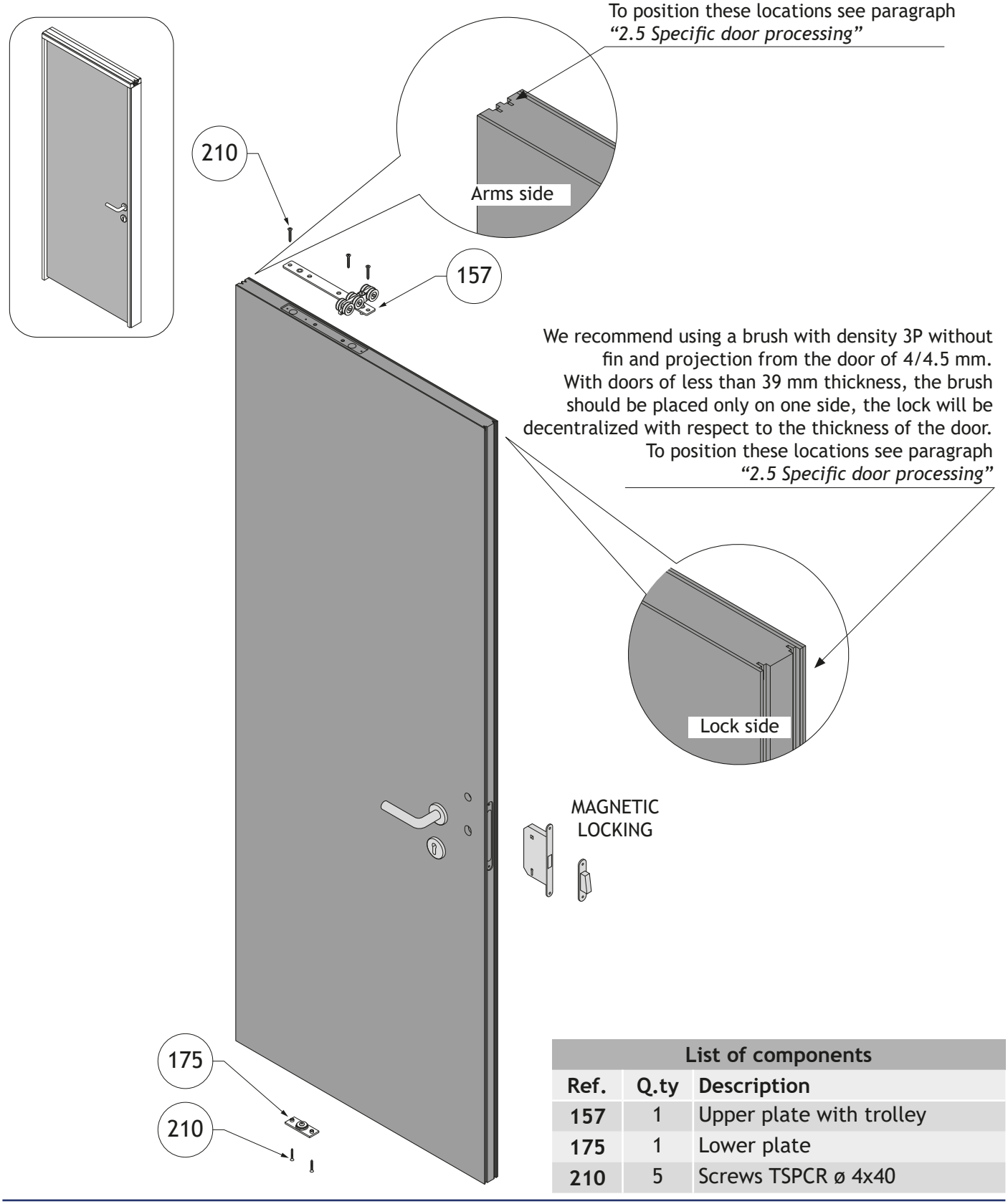




3. ASSEMBLY

3.1 Installation of hardware on the door leaf

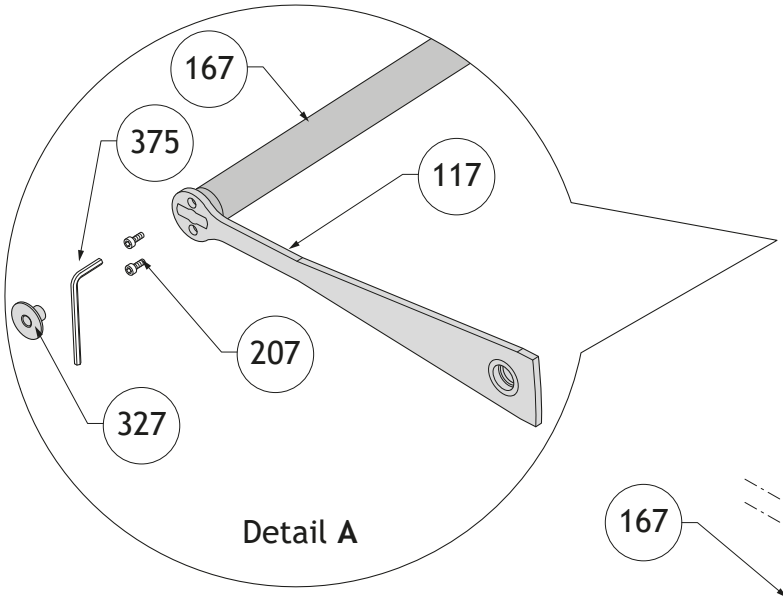
LOCATIONS FOR BRUSH (or seal)
We recommend using a brush with density 3P without fin and projection from the door of 6/6.5 mm.
To position these locations see paragraph *"2.5 Specific door processing"*



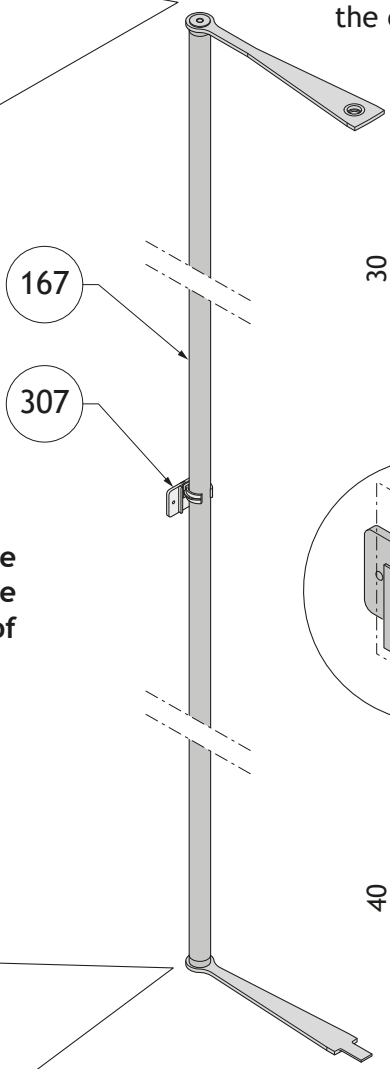
List of components		
Ref.	**Q.ty**	**Description**
157	1	Upper plate with trolley
175	1	Lower plate
210	5	Screws TSPCR ø 4x40

3.2 Connecting rod assembly with upper and lower arm

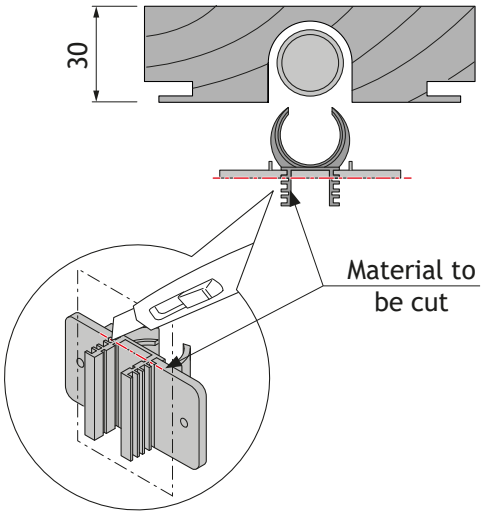
Mount the upper and lower arm on the rod. When inserting the bushing **(327)** pay attention to the pins on the same: they must fit into the hexagons present on the screw heads **(207)**.



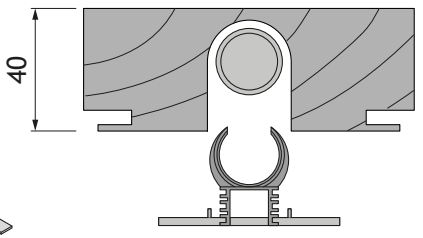
Assemble the guide rod **(307)** as shown in the following drawings, according to the thickness of jamb. In the case of using jambs of thickness **30 mm**, it is necessary to remove the excess material *(see drawing)*.



Jamb 30 mm

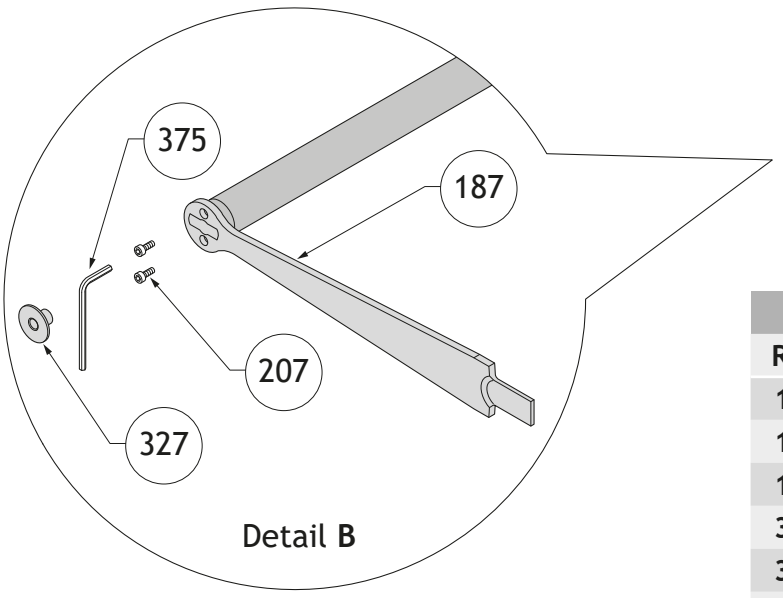


Jamb 40 mm



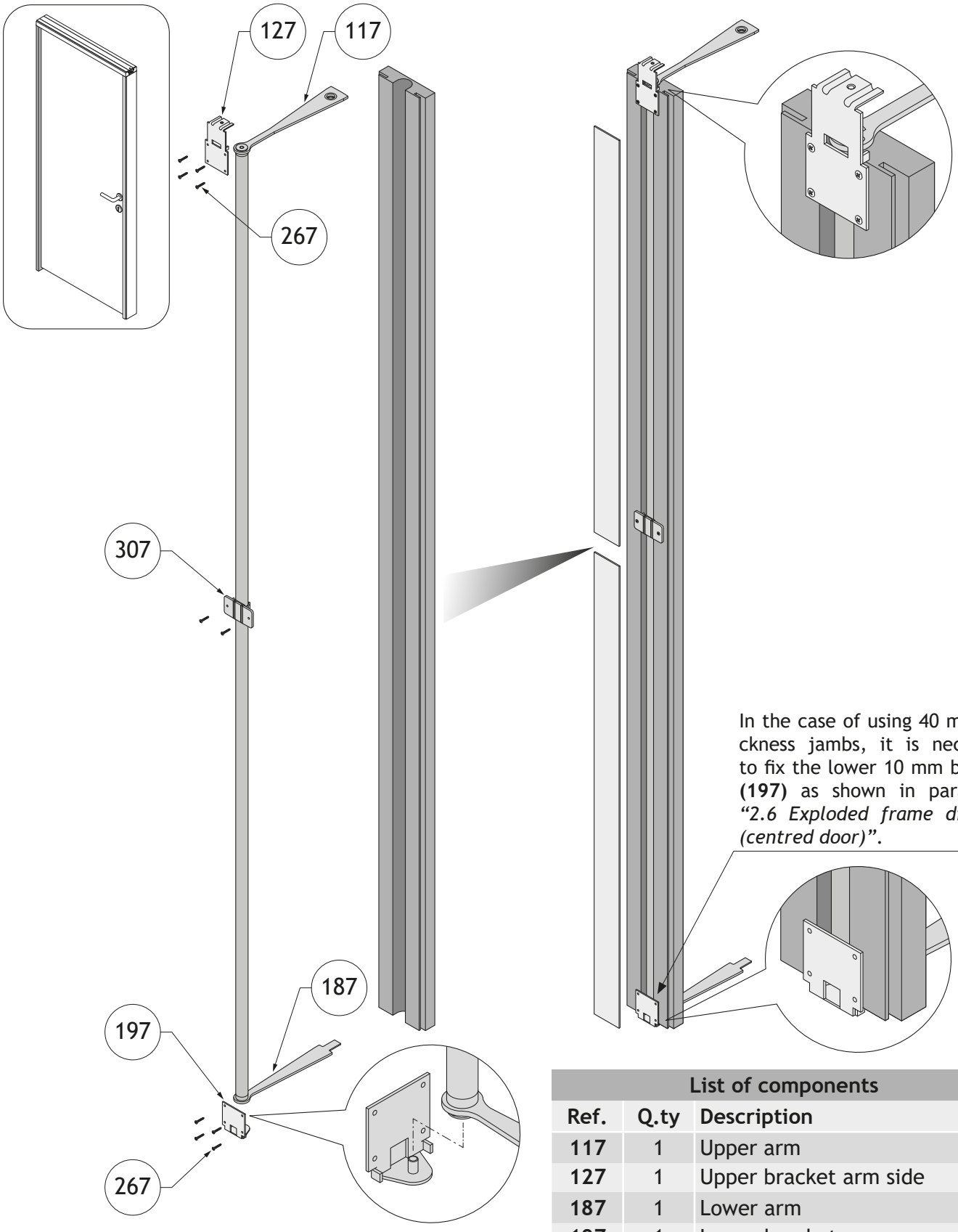
Caution!

Fasten the screws carefully (207) using the 2.5 mm hexagonal key (375) and make sure that the arm is attached to the pin plane of the connecting rod.



List of components		
Ref.	**Q.ty**	**Description**
117	1	Upper arm
167	1	Connecting rod
187	1	Lower arm
307	1	Rod guide
327	2	Rod rotation bush
207	4	Screws **TCEI** M 3x6
375	1	Hexagonal key 2.5 mm

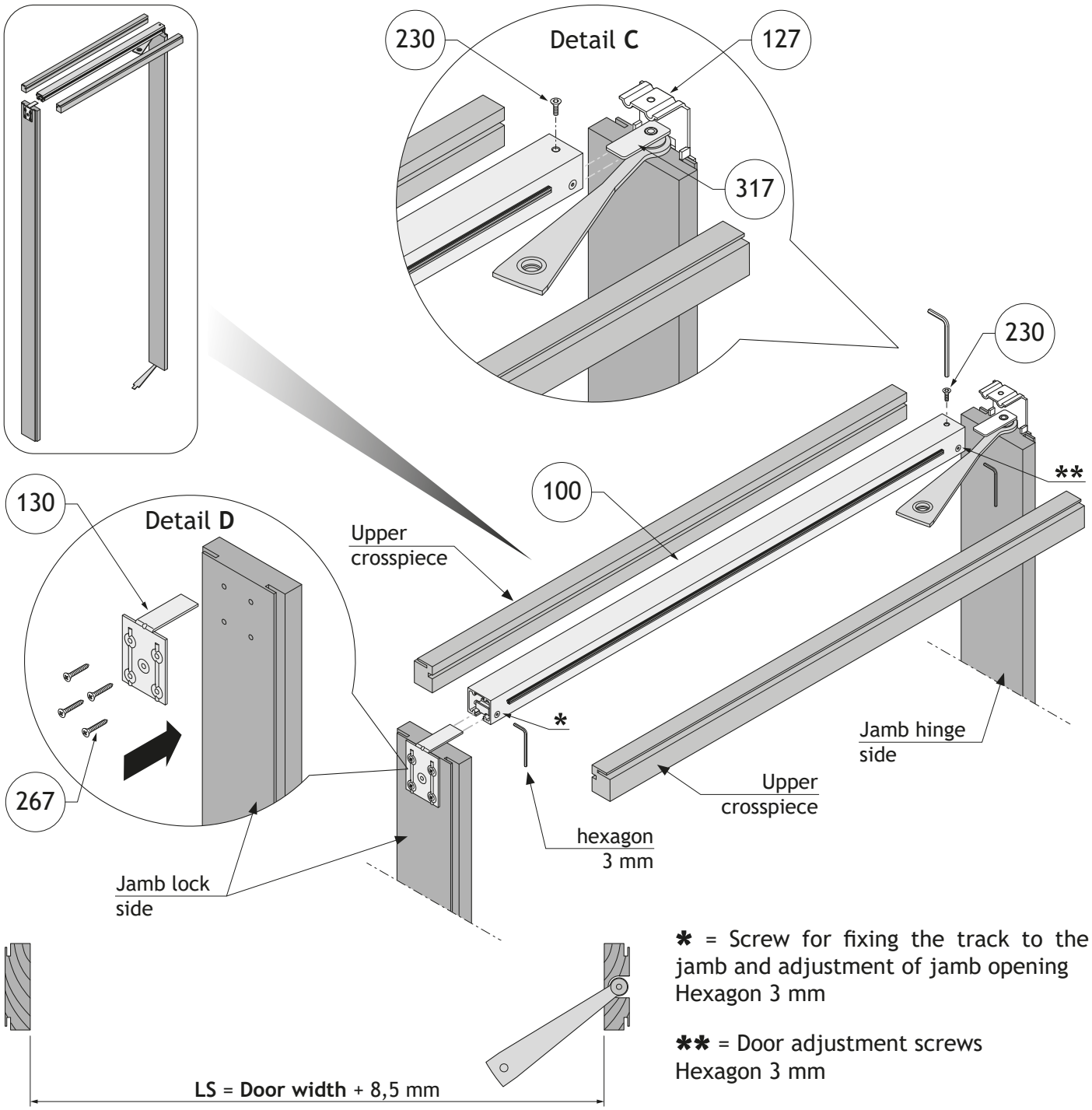
3.3 Assembly of hinge side jamb to the connecting rod



In the case of using 40 mm thickness jambs, it is necessary to fix the lower 10 mm bracket **(197)** as shown in paragraph *"2.6 Exploded frame diagram (centred door)"*.

List of components		
Ref.	**Q.ty**	**Description**
117	1	Upper arm
127	1	Upper bracket arm side
187	1	Lower arm
197	1	Lower bracket
267	10	Screws TSPCR ø 3x25
307	1	Rod guide

3.4 Assembly of frame and track



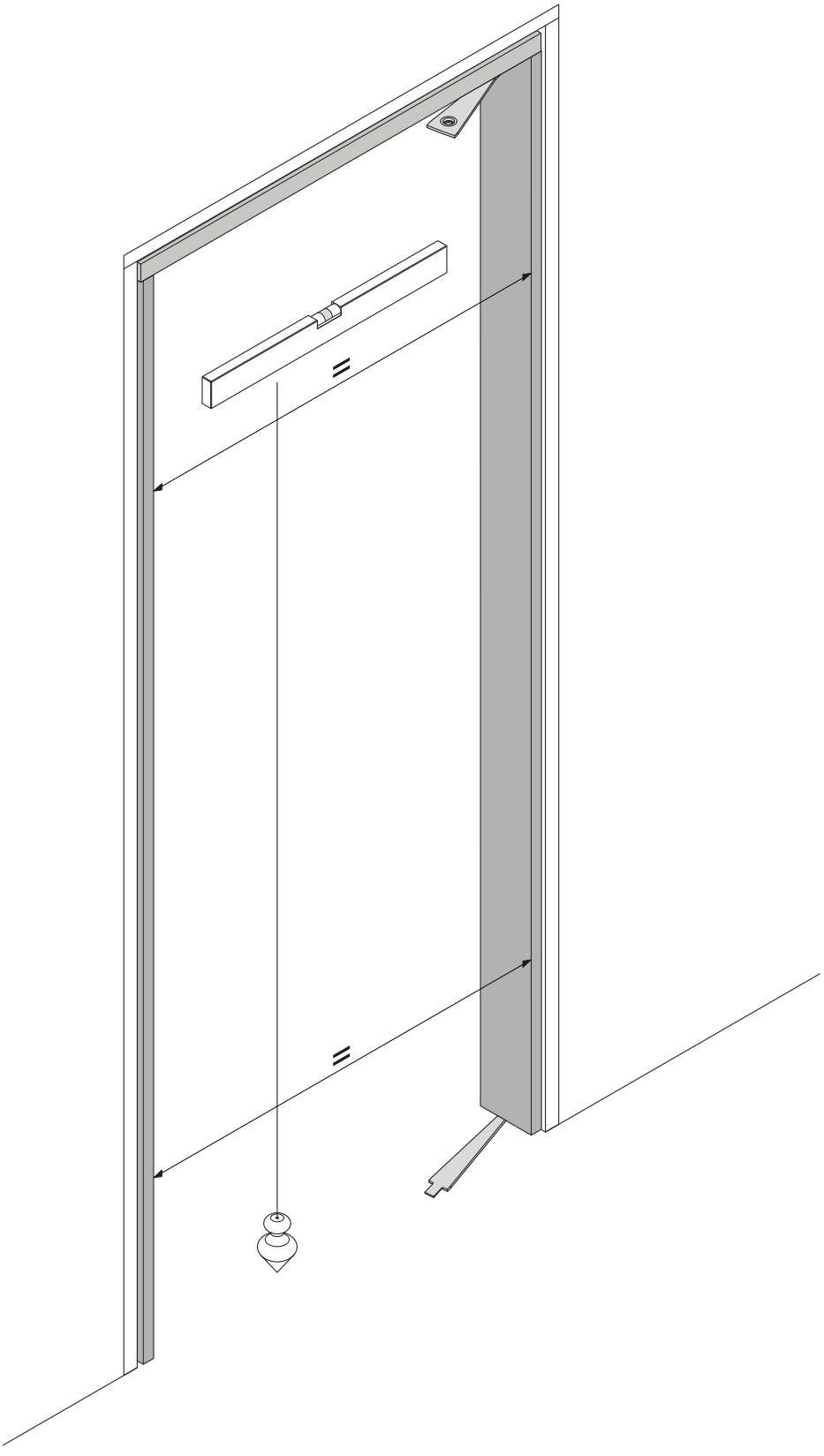
* = Screw for fixing the track to the jamb and adjustment of jamb opening Hexagon 3 mm

** = Door adjustment screws Hexagon 3 mm

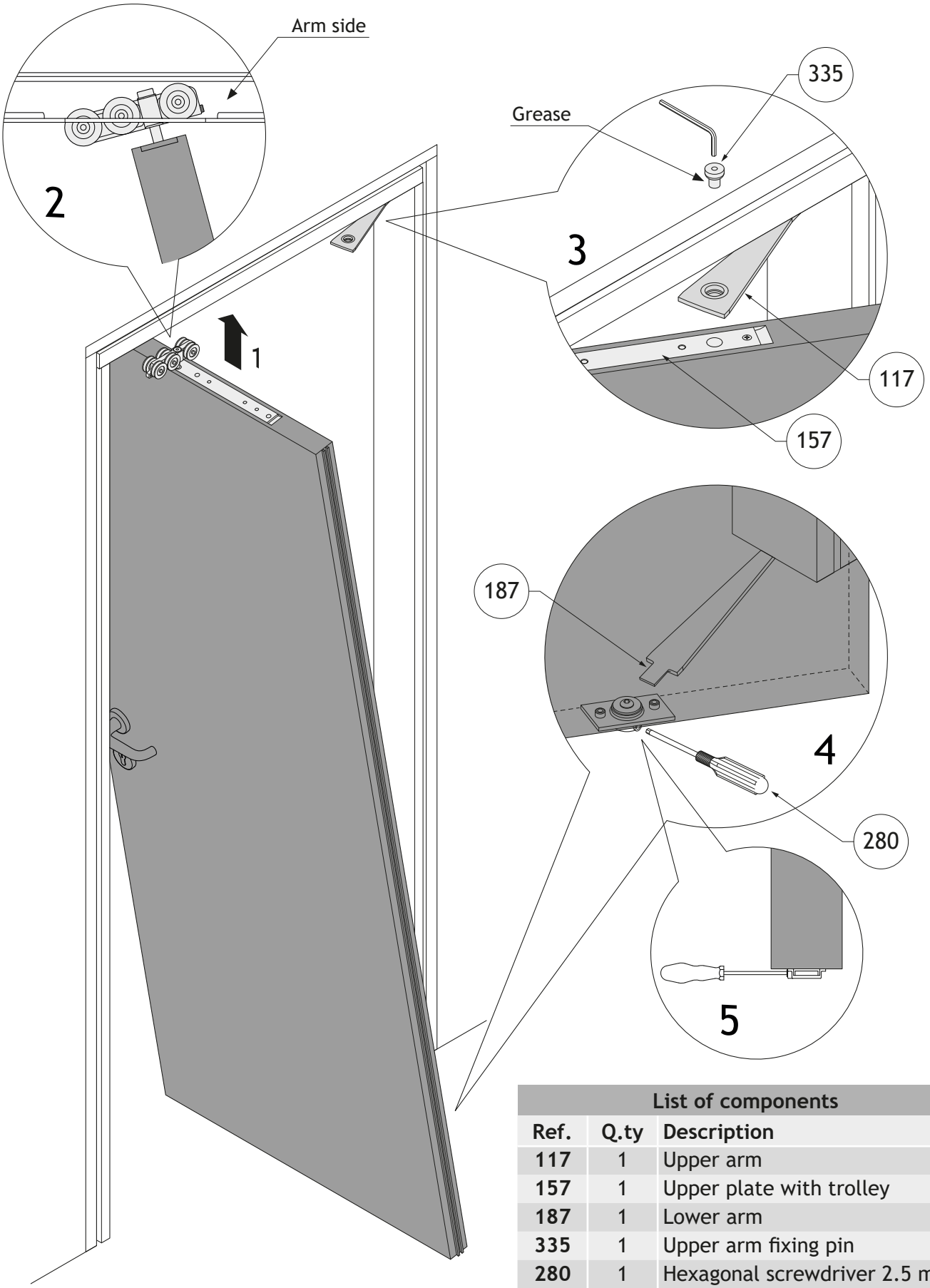
List of components		
Ref.	**Q.ty**	**Description**
100	1	Track
127	1	Upper bracket arm side
130	1	Upper bracket lock side
230	1	Screws TSPEI M 5x12
267	8	Screws TSPCR ø 3x25
317	1	Upper pivot

3.5 Installation of complete jamb

N.B.: Pay close attention to level of the track and the plumb line of the jambs

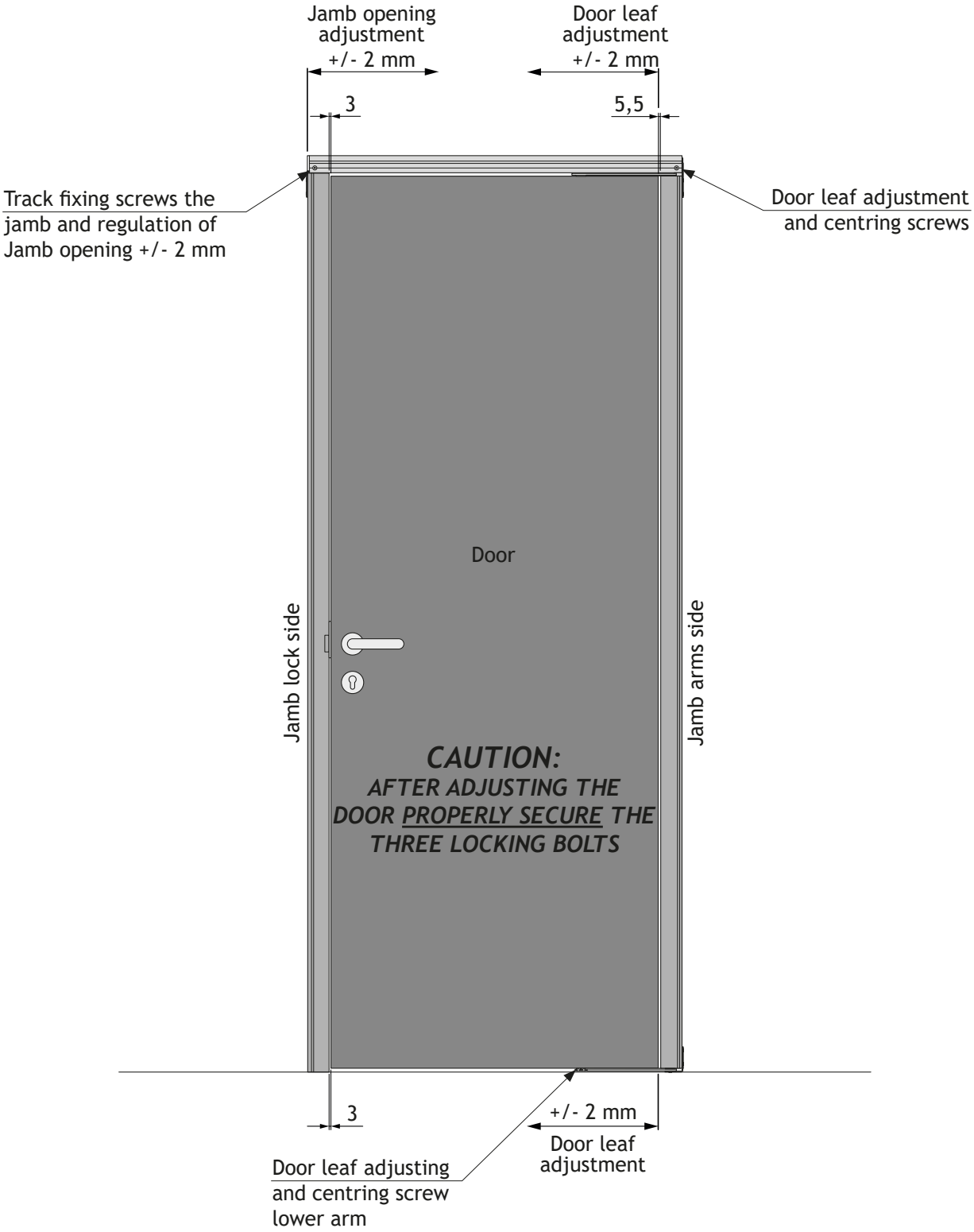


3.6 Door leaf installation

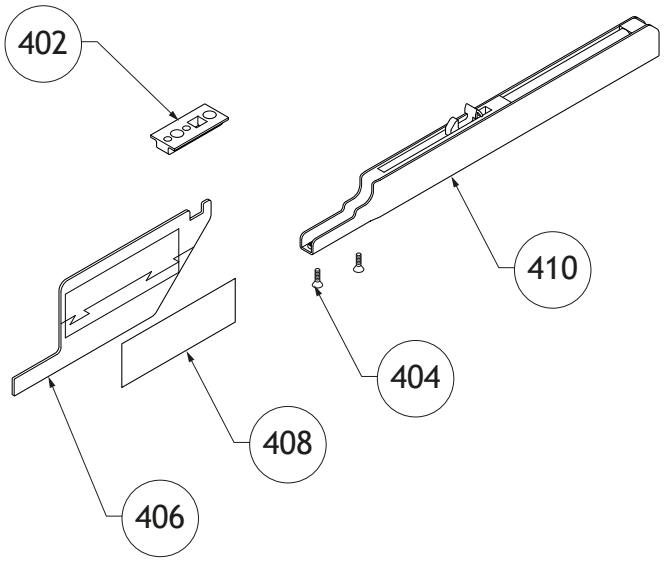


List of components		
Ref.	**Q.ty**	**Description**
117	1	Upper arm
157	1	Upper plate with trolley
187	1	Lower arm
335	1	Upper arm fixing pin
280	1	Hexagonal screwdriver 2.5 mm

3.7 Door leaf and frame adjustment



3.8 "Soft Opening" damper installation (Optional)

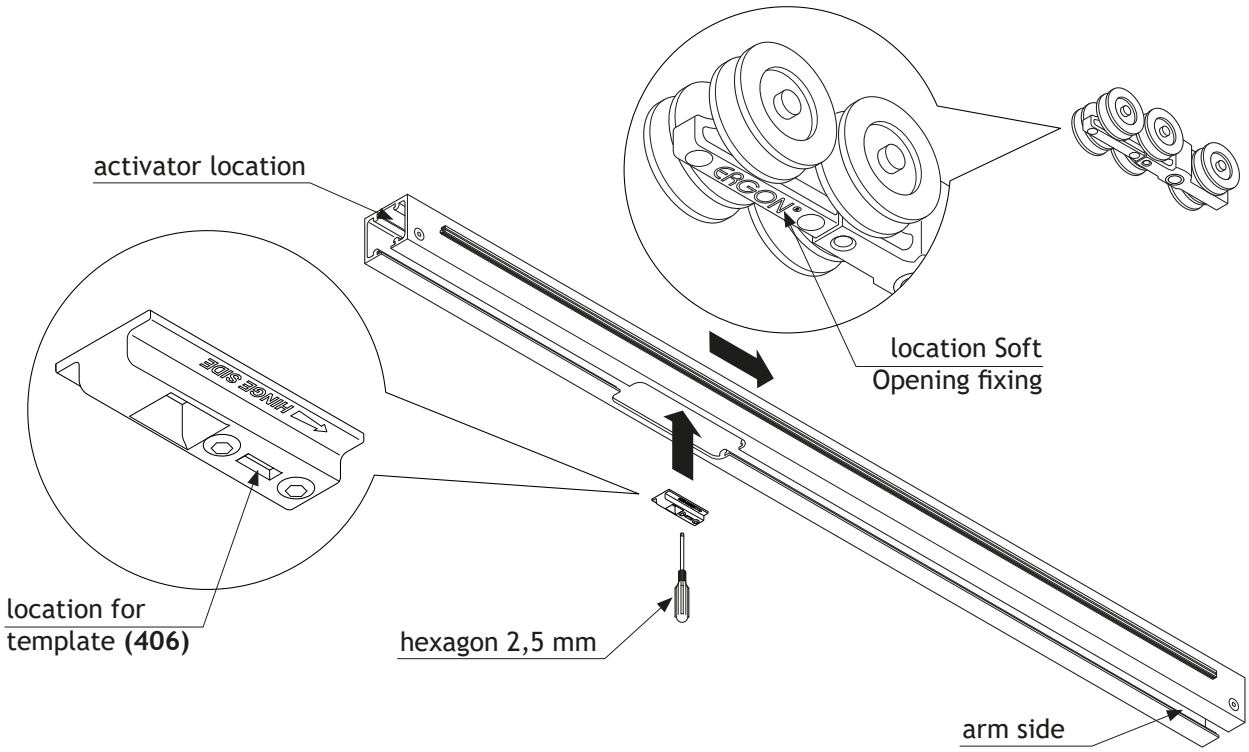


List of components		
Ref.	**Q.ty**	**Description**
402	1	Activator
404	2	Screws TSP+ M3x8
406	1	Activator positioning template
408	1	Sticker
410	1	Soft Opening

Phases of installation

1. Assemble and secure the jambs and track to the wall.

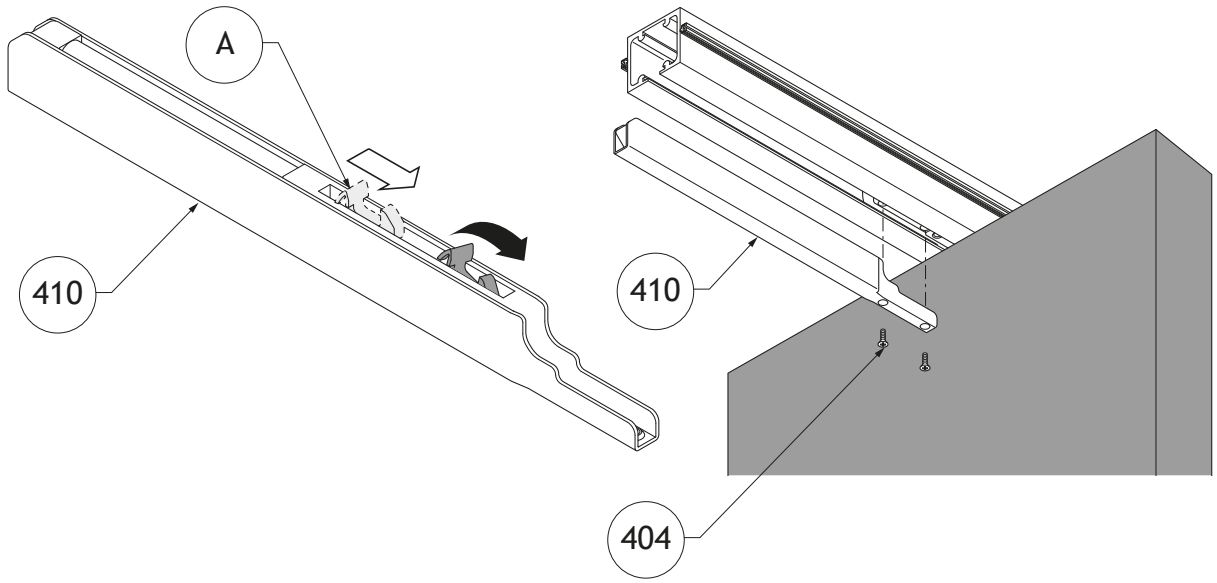
2. Check that the trolley provided has support for the attachment of the Soft Opening.



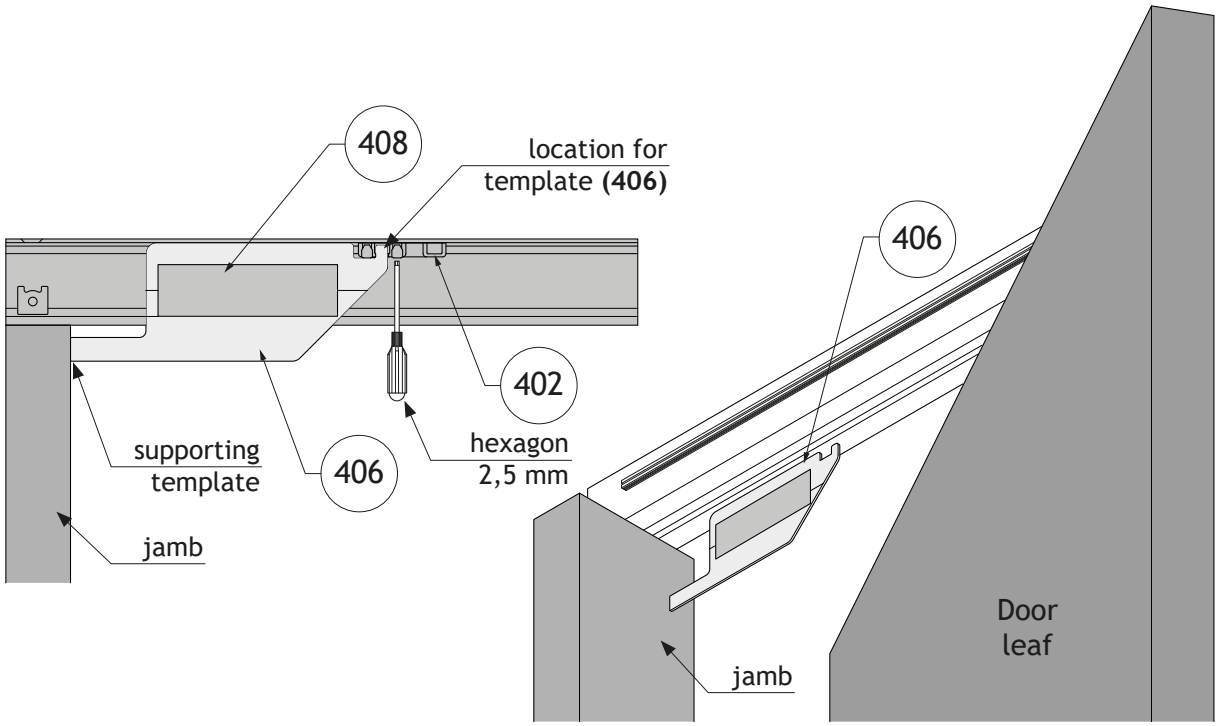
3. Slide the activator **(402)** into its location in the track paying attention to the instructions. The activator must be brought temporarily to the stop on the hinge part of the arm.

4. Attach the door leaf and secure the hinge arms. Follow the standard settings of the door and open the door leaf completely.

N.B. In the case of a door already installed insert the activator in the location of the track after having dismantled the track cover.



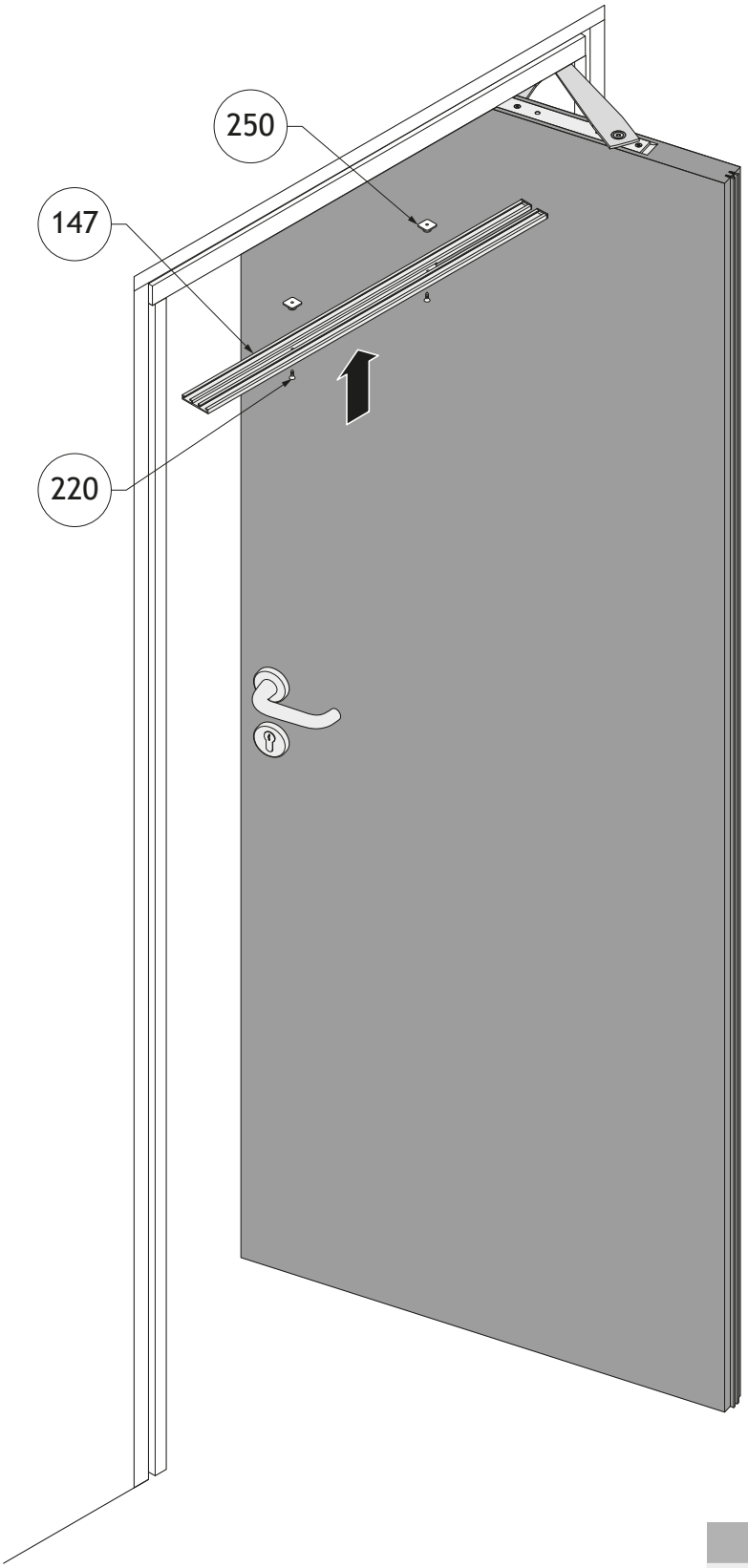
5. Push the hook (**A**) to load the Soft Opening **(410)** and secure it to the trolley with the screws **(404)** supplied.

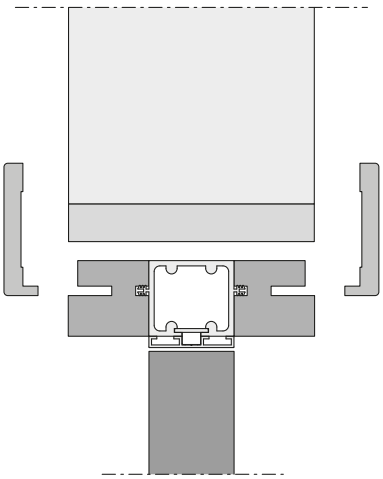


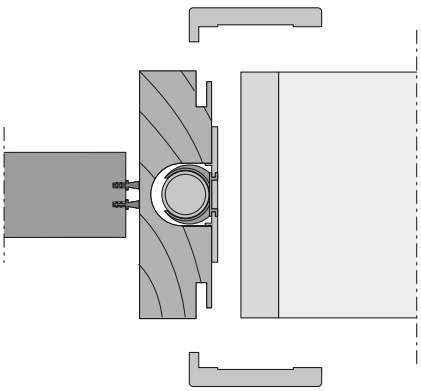
6. Join the two parts of the template **(406)** using the sticker **(408)**.
Take the door leaf to 45° and place the template **(406)** to the jamb dragging the activator **(402)** into the correct position, firmly attach the locking screws.

7. Check the correct operation of the Soft Opening.
Complete the installation of the door.

3.9 Mounting frames and track cover profiles







List of components		
Ref.	**Q.ty**	**Description**
147	1	Track cover profile
220	2	Screws TSPCR ø 3x10
250	2	Track cover fixing insert

NOTE

Composizione grafica: *Studio Gallo Design srl* - Camposampiero (PD)

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