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TEST REPORT

Unit	BUILDING ENVELOPE & FINISHING - EF	Oure references	DE-EF-0030 EF-24-041-02
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Requested by	REYNAERS ALUMINIUM NV OUDE LIERSEBAAN 266 BE-2570 DUFFEL TEL.: 015/30.85.00 - FAX: 015/30.86.00		
Date of the order	05/02/2024	Samples registration	In situ
Date of the test	13/03/2024	Date of reception of samples	In situ
Location of tests	Reynaers Aluminium, Duffel		
Date of the report	01/04/2025 Cancels and replaces our report EF-24-041-01		
Test carried out	Burglar Resistance Test on a MASTERLINE 8-Fu AP RC 3 inward single door (1435 mm x 2727 mm)		
References	NBN EN 1627 to 1630 (June 2021)		

Disclaimer

Buildwise is not responsible for the accuracy and completeness of the information provided by the customer and taken over in this report. The sampling was not carried out by Buildwise and thus the results of this report apply only to the sample as received by Buildwise of the requestor.

This test report contains 60 pages and 2 appendix(es). This test report may only be reproduced in its entirety.

- ☐ No sample
☒ Sample(s) subjected to destructive test
☐ Sample(s) to be removed from our laboratories 30 calendar days after sending of the report, save in the case of a further written request.



Erik Kinnaert ing.
R&D Expert

AUTHORISED BY:



Digitally signed by
Vincent Detremmerie
(Signature)
Date: 2025.05.09
10:01:56 +02'00'

Vincent Detremmerie ir.
R&D Program Lead



1 Introduction

At request of Reynaers Aluminium NV, represented by Mr Dries Berghmans, Buildwise supervised (static and dynamic tests) and carried out (manual tests) in order to determine the burglar resistance of an aluminium inward single door in accordance with EN 1627 to 1630 (June 2021). The results of these tests are given in the report with reference "EF-24-041-01".

2 Normative references

- [1] EN 1627 «Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Requirements and classification»
June 2021
- [2] EN 1628 «Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under static loading»
June 2021
- [3] EN 1629 «Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance under dynamic loading»
June 2021
- [4] EN 1630 «Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance to manual burglary attempts»
June 2021

3 Description of the test pieces

The test piece was installed on the test frame of Reynaers Aluminium NV in Duffel on March 13, 2024. It concerns an aluminum inward single door (MASTERLINE 8-Fu AP RC 3) from which the composition and the dimensions are given hereunder.

3.1 Schematic representation of the test piece

The schematic representation of the test piece is shown on Figure 1.

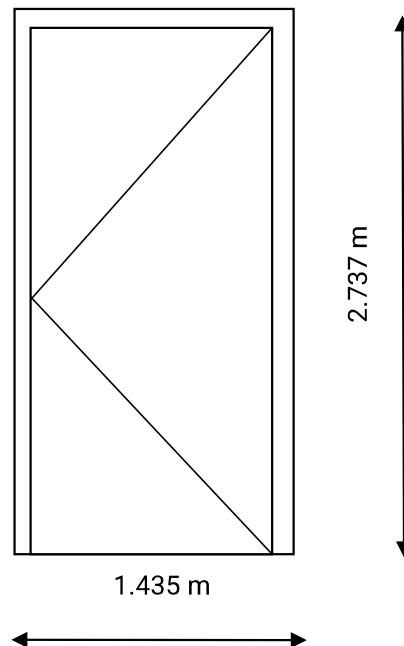


Figure 1: Schematic representation of the test piece (view from the outside)

3.2 Dimensions of the test piece

Total dimensions:

- Width: 1,435 m
- Height: 2,737 m

3.3 Description of the test piece

The characteristics of the elements constituting the test piece are given by the applicant and are described here under (* eventual additional observation by the laboratory):

- **Type of element:** Single inward opening door
- **System of element:** Masterline 8 -Fu AP TC 3
- **Material of the element:** Aluminium with thermal break PA6.6
- **Filling:** 44.6/12/44.6, 32 mm, P5A
- **Hardware:** See Appendix 2
- **Drawings:** The sections and detail drawings of the element are given in Appendix 2
- **Mounting instruction:** Mounting of the element in a steel test sub-frame performed by the requester

3.4 Intended resistance class

The intended burglar resistance class for this element is class RC 3. The various tests were thus carried out in accordance with the prescription applicable to this class.

4 Results of the tests

4.1 Introduction

All tests were carried out in accordance with the sequence described in design standard EN 1627 (June 2021). The standards EN 1628, EN 1629 and EN 1630 (June 2021) are respectively applicable to static, dynamic and manual tests. The description of the various tests is given in Appendix 1.

Test date:	2024.03.13		
Circumstances of the test:	Temperature:	18,7°C	
	Relative humidity:	51,2%	

Comment

- Verification of the conformity of the specimen with the drawings.

4.2 Static tests

The various load points are shown on *Figure 2*.

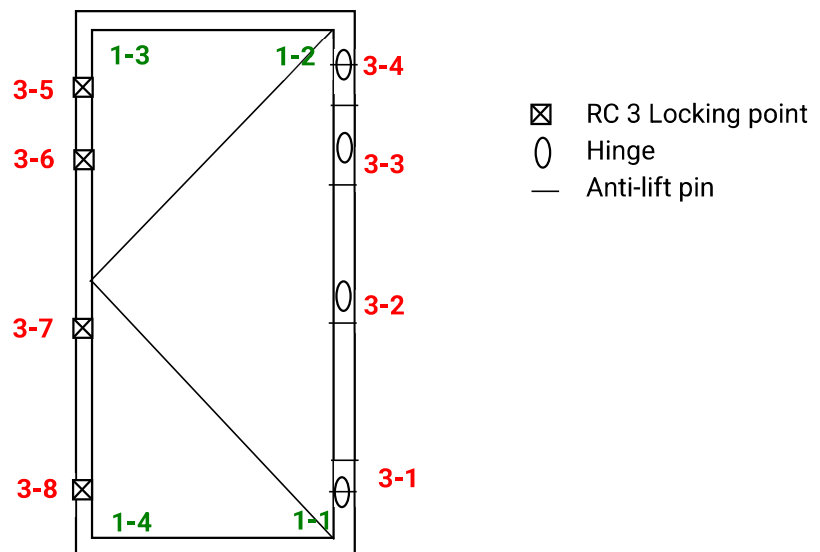


Figure 2: Location of the load points (seen from the outside)

The results of the static tests are given in Table 1.

Load (kN)		Gap gauge ¹	Application point	Special comments
F1	6	B	Corner of infilling	OK, no special comment
F2	3	B	Leaf and casement corners	Not applicable (see Appendix 1)
F3	6	A	Locking and suspension points	Big displacement in 3-4, 3-5 and 3-8 but OK

Table 1: results of the static tests

The gap gauges A & B cannot pass through any aperture in the test specimen when applying the loads F3 and F1. The test specimen thus succeeded the tests for the determination of the resistance under class RC 3 static load.

The element used for the static test (EN 1628) can be used again for the dynamic test (EN 1629) as the damage caused during the static test will not affect the result of the dynamic test.

4.3 Dynamic tests

Preliminary comment

- Inspection of the element before the dynamic test.

The results of the dynamic tests are shown in Table 2.

Shock	Impact point	Drop height (mm)	Observations
1	Lower right corner of the leaf	750	OK, no special comments
2	Lower left corner of the leaf		
3	Upper left corner of the leaf		
4	Upper right corner of the leaf		
5	In the centre of the leaf		Some cracks in the external glass panes but OK
6	In the centre of the leaf		
7	In the centre of the leaf		

Table 2: Observations during the dynamic tests

The gap gauge C cannot pass through any aperture realized in the test specimen during the test. The test specimen thus succeeded the tests for the determination of the resistance under class RC 3 dynamic load according to the EN 1629.

The element used for the dynamic test can be used again for the preliminary manual test (EN 1630) as the damage caused during the dynamic test will not affect the result of the preliminary manual test.

¹ See Appendix 1

4.4 Manual tests

4.4.1 Preliminary manual test

Comment

- The element used for the static and dynamic tests was reused for the preliminary manual tests.

The different potential attack points are shown in Figure 3

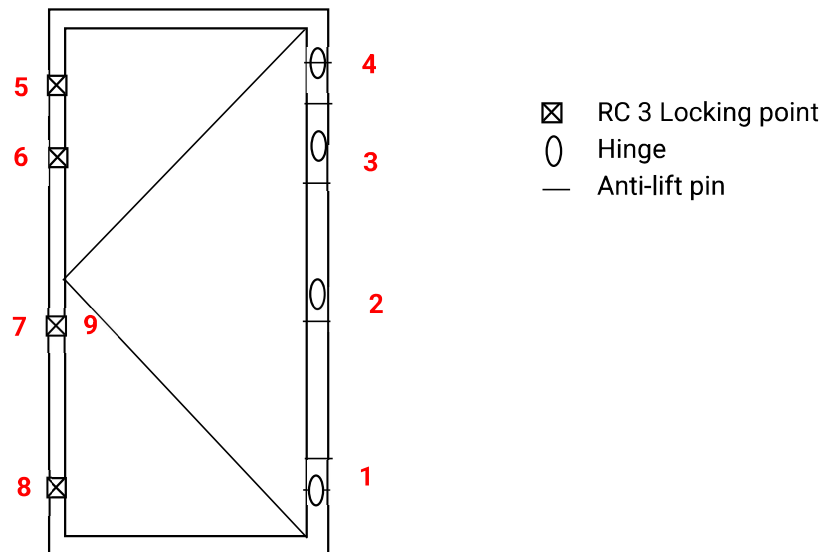


Figure 3: Points of application for the manual tests (seen from outside)

The results of the preliminary manual test are shown in Table 3 below.

Attack points	Tools	Observations
Locking points 5 to 8	Wedges, gripping pliers, screwdrivers, crow bar	Trying to force an opening by attacking the locking points - With the gripping pliers and the screwdrivers, open the leaf profile - Removing of the joint - With the crow bar and the wedges, trying to attack the locking points: - Locking point 1 is out in 7'30" - Locking points 2 and 3 are out after 11'15" The door is opened after 11'15".
Suspension points 1 to 4		The suspension points are from type Rollenband from Sobinco. As this type of hinges and their fixation system have already been validated for other RC 3 tests on doors, these suspensions points have not been tested (by extrapolation).
Cylinder 9		Trying to force an opening by attacking the cylinder. Impossible to force an opening after more than 5 minutes.
Glazing beads		As the glazing is bonded according to an already validated method for RC 3 test, the retention system has not been tested (by extrapolation).

Table 3: Results of the preliminary manual test



After the preliminary manual test, the following attack sequence and tools were retained for the main manual test:

- Attack sequence: Trying to force an opening by attacking the locking points
- Tools: wedges, gripping pliers, screwdrivers and crow bar

4.4.2 Main manual test

For the main manual test, a new element was used.

The attack sequence is as defined after the preliminary manual test (see here above paragraph 4.4.1).

The results of the main manual test are shown in Table 4 below.

Attack points	Tools	Observations
Locking points 5 to 8	Wedges, gripping pliers, screwdrivers	Trying to force an opening via the locking points with the wedges, gripping pliers, screwdrivers, crow bar. Impossible to force an opening after less than 5 minutes. The test is stopped after 5'06"

Table 4: Results of the main manual test

Total resistance time: > 5'

Total test time : < 20'

The resistance time is greater than the one recommended for the intended burglar resistance class RC 3 and no gap gauge (defined in Appendix 1) can pass through any aperture realized in the test specimen. The specimen thus complies with the requirements of the manual test for the intended burglar resistance class RC 3.

4.5 Summary of the performances

The test part successfully completes all the tests prescribed in the standards EN 1627 to 1630 for the intended burglar resistance class EN 1627 RC 3.

5 List with annexes

Appendix 1: Description of the tests

Appendix 2: Sections and detail drawings of the sample



Appendix 1: Description of the tests

1. Introduction

In order to carry out the tests to determine the burglar resistance, the test piece is placed in a rectangular wooden frame minimum 100 mm x 50 mm or in a rectangular metal tube minimum 120 mm x 120 mm x 5 mm barring any other contrary indication.

All the tests are listed in Table 5 and are carried out in accordance with the sequence described in the standard EN 1627 (June 2021). The applicable standards for the static, dynamic and manual tests are respectively EN 1628, EN 1629 and EN 1630 (June 2021).

During the various tests the test piece was closed and locked. The tests are carried out on the outside (area of action) of the test piece.

The classification of the test piece, after the tests for the determination of the burglar resistance, is realised in accordance with the requirements of EN 1627 (June 2021). This classification can be extrapolated to any element of an identical composition and with dimensions varying within the limits specified hereunder. In the other cases, a written full technical justification will have to be supplied by the test laboratory:

- For the doors: width and height variations wrt the tested element from -50% to +20%. The number of locking points may be reduced only if the distances between the locking points are not greater than on the tested size.
- For the sashes: surface variation wrt the tested element between -25% and +25%. The distance between the locking points and between the corners of the leaf and the nearest locking point can vary between respectively -30 and +5% and between -20 and +5%.

Testing sequence	Type of test	Classification	Description of the test
1	Static test	EN 1627	EN 1628
2	Dynamic test	EN 1627	EN 1629
3	Preliminary manual test	EN 1627	EN 1630
4	Main manual test	EN 1627	EN 1630

Table 5: Test sequence and standards

2. STATIC TESTS

The tests to determine the burglar resistance under static load are carried out in accordance with the standard EN 1628 (June 2021).

These tests are carried out by using a servo-hydraulic jack with a capacity of 25 kN (F1, F2 and F3) that applies a specific pressure on the test piece via an ad hoc pressure pad. The loads F3.a (only for elements from group 1 of resistance class RC 1N) are applied with a strap.

The different loads to be applied per resistance class are defined in *Table 6* hereafter, where

- F1 is applied on each corner of the infilling, perpendicular to the surface of the element in order to loosen the infilling.



- F2 is applied on each leaf and casement corner (if the distance between the 2 nearest locking – or hanging points is > 350 mm) and perpendicular to the surface of the element in order to open the leaf. Once the distance between the 2 nearest closing points is <400 mm, F2 should not be exercised.
- F3 is applied on each locking point². If the distance between 2 adjacent locking points is less than 200 mm, then a single loading point shall be used located at the midpoint between the 2 locking points.
- F3.a is applied on each locking point². Application of the load to the leaf and, where necessary, to the frame, in a direction to disengage the associated locking point. Load only applied in association with F3.

	Resistance class (RC)											
	1/1N, 2/2N			3			4			5, 6		
	Test Load	Gap gauge	Pressure Pad	Test Load	Gap gauge	Pressure Pad	Test Load	Gap gauge	Pressure Pad	Test Load	Gap gauge	Pressure Pad
Loading points	kN		Type	kN		Type	kN		Type	kN		Type
F1 Corner of infilling	3	B	1	6	B	1	10	B	1	15	B	1
F2 Leaf and casement corners	1,5	B	1 or 2	3	B	1/2	6	B	1 or 2	10	B	1 or 2
F3 Locking points	3	A	1 or 2	6	A	1/2	10	A	1 or 2	15	A	1 or 2
F3.a Group 1³ products^a Locking points (additional loading)	1,5	A	-									
F3.a Group 2⁴ products Locking points Lift up (additional loading)	3	A	1 or 2	6	A	1 or 2	10	A	1 or 2	15	A	1 or 2
^a Resistance class RC 1N product only												

Table 6: Static loading of group 1 and group 2 products

A visual inspection of the element is carried out before and after the test.

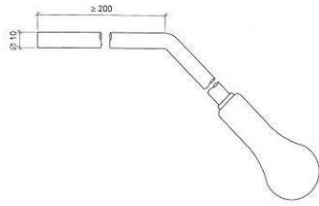
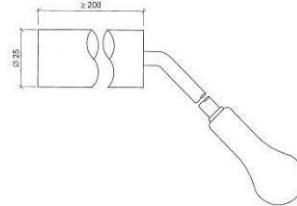
The evaluation of the deformation of the leaf is done with gap gauges. For a given burglar resistance class, the ad hoc gap gauge (see *Table 6*) cannot pass through any aperture realized in the test specimen during or not the application of the loads:

- For F1 and F2: gap gauge type B (Figure 2).
- For F3: gap gauge type A (Figure 1).

² This term includes all the connecting points between the opening and the fixed elements (locking points, hinges, etc.).

³ Group 1 product : product that has a solid and rigid leaf or opening element and the principal movement to open is turning the element

⁴ Group 2 product : product that has a solid and rigid leaf or opening element and the principal movement to open is sliding


Figure 1: Gap Gauge type A

Figure 2: Gap Gauge type B

3. DYNAMIC TESTS

The tests for the determination of the burglar resistance under dynamic load are carried out in accordance with the standard EN 1629 (June 2021). These tests are only carried out for elements of classes RC 1N to RC 3.

The pendulum impactor is described in the NBN EN 12600. It consists of 2 pneumatic tyres inflated to a pressure of $0.35 \text{ MPa} \pm 0.02 \text{ MPa}$. The tyres shall be fitted to the rims of wheels that carry 2 steel weights of equal mass. The weights shall be dimensioned so that the total mass of the impactor is $50 \text{ kg} \pm 0.1 \text{ kg}$ and the weights do not have any contact with the test specimen during the impact.

The drop height (vertical height difference between the horizontal axis of the shock body at the time of release and the vertical resting point measured at the gravity centre) varies in function of the intended resistance class. This is specified in *Table 7* below.

Resistance class (RC)	Mass of the impactor (kg)	Drop height (mm)
1/1N	50	450
2/2N	50	450
3	50	750

Table 7: Drop height for the dynamic test

Barring contrary indication, the test is carried out with the infilling and the glazing intended for the application. Consequently, a replacement is not permitted. Due to the test requirements, the laminated glass is placed on the side of impact.

The test piece used for the static test (EN 1628), may also be used for the dynamic test as any damage caused during the static test does not influence the result of the dynamic test.

Let the shock body drop on the following different points of the element:

- 3 impacts in the centre of the leaf and/or the infilling and one impact on each corner.
- Direction of the impact: always perpendicular to the side of impact.
- Special conditions:
 - The test cannot be carried out on an infilling that is less than 150 mm wide.
 - If the distance between 2 impact points is $\leq 300 \text{ mm}$, an impact is only carried out on the middle point between these 2 points.

A visual inspection of the element is carried out before and after the test.

The product shall be deemed to have succeeded if the gap gauge C (Figure 3) cannot pass through any aperture in the product (applying a force of 200 N at any point of the test specimen).

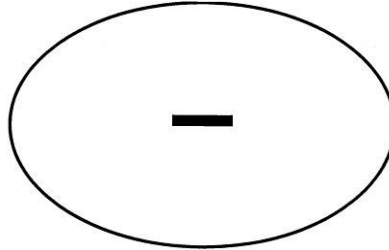


Figure 3: Gap gauge type C (250mm x 150mm)

4. MANUAL TESTS

The tests for the determination of the resistance against manual burglar attempts are carried out in accordance with the standard EN 1630 (June 2021). These tests are only carried out for the elements of classes RC 2 to RC 6.

Depending on the level of the intended class the element must be worked using tools for a specific duration (resistance time and total test time) as specified in EN 1627 and in *Table 8* below.

The sequence of the manual attack must be carried out on at least 2 test pieces: one for the preliminary test and one for the main test. The test piece that was used for the static (EN 1628) and dynamic (EN 1629) tests, may also be used for the preliminary test if any damage caused during these 2 first tests will not influence the result of the preliminary manual test.

Resistance Class (RC) EN 1627	Type of attack		Stat. test EN 1628	Dynam. test EN 1629	Manual test EN 1630			
	Burglar	Means			Test	Tool set	Resistance time (min)	Maximum total test time (min)
1/1N	Casual	Physical violence	X	X	-	A1	-	-
2/2N	Casual	Simple tools (screwdrivers, plier, wedge, ...)	X	X	X	A2	3'	15'
3	Medium	Screwdrivers, crow bar	X	X	X	A3	5'	20'
4	Practised	Idem + saws, hammer, axe, chisels, bolt cutter, plate shears, electric drill	X	-	X	A4	10'	30'
5	Experienced	Idem + electric tools (drills, jig- and sabre saw)	X	-	X	A5	15'	40'
6	Experienced	Idem + powerful electric tools (electric drill, angle grinder)	X	-	X	A6	20'	50'

Table 8: Set of tools and resistance time per resistance class

If the glazing is in accordance with the recommendations of EN 1627 (see *Table 9*), the attack must not be carried out on the glass but exclusively on the system holding the glass.



Resistance class	Resistance class of glazing according to EN 356
RC 1 N	No requirements ⁵
RC 2 N	No requirements ⁵
RC 2	P4 A
RC 3	P5 A
RC 4	P6 B
RC 5	P7 B
RC 6	P8 B

Table 9: Recommended resistance classes for glazing

The aim of the preliminary test is to identify the weakest and most vulnerable areas of the element. Each locking point is then submitted to attack for at least 25% of the resistance time of the intended class. The efficiency of all the tools specified for this class can be evaluated in this way for each attack point.

During the main test, the technician attempts to open the test piece or to make a sufficiently large opening using the defined set of tools during the resistance time and the total test time as recommended in EN 1627 for the intended resistance class. The attacks are carried out on the weakest and most vulnerable areas identified during the previous test using the most efficient tools or a combination thereof.

The test for the determination of the resistance against manual burglar attempts shall be considered as successful for the intended class if none of the following gap gauges can go through any, sufficiently large opening in the test piece:

- A rectangle of 400 mm x 250 mm;
- A rectangle of 150 mm x 660 mm (only for tests on sidepanels and/or overpanels to assess accessible openings by removing infillings or glazing by overcoming the infilling-/glass retention system or for tests on top/vent lights and top hung windows by opening the leaf);
- An oval of 400 mm x 300 mm;
- A circle with a diameter of 350 mm.

⁵ In these resistance classes, national provisions may be followed



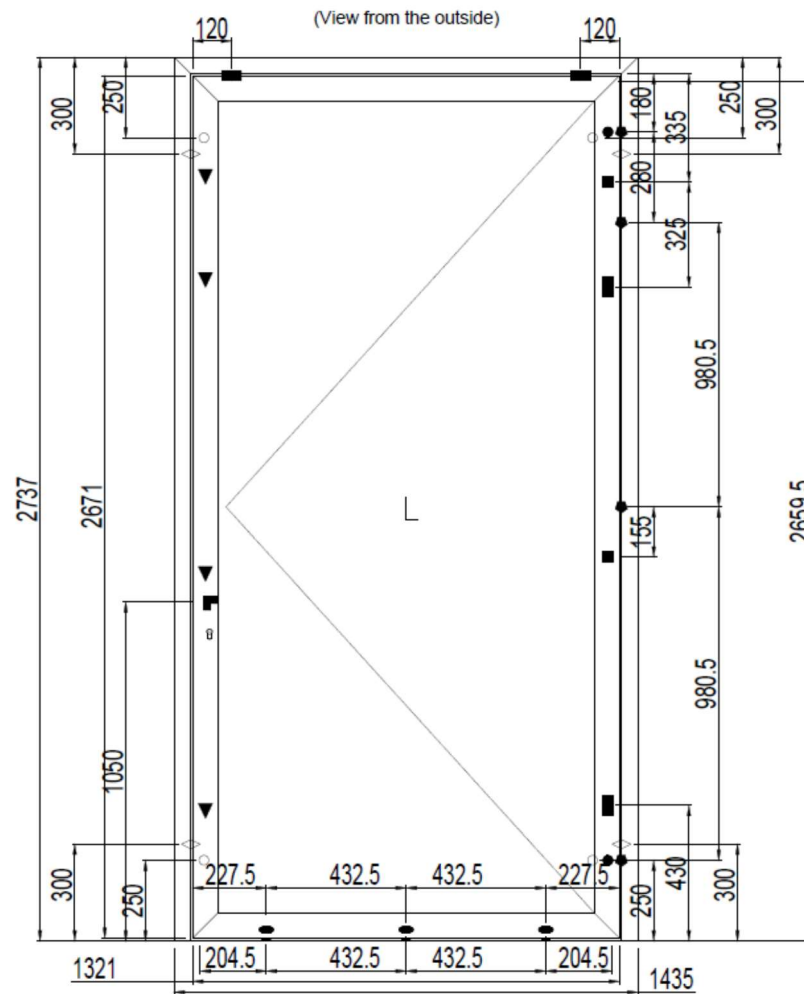
Appendix 2: Sections and detail drawings of the sample

MASTERLINE 8-Fu AP RC 3

Front View

Führ 836 lock - Single door with pull handle - SKG ** cilinder

FRONT VIEW



- Decompression vent profile Ø5mm
- ◇ Decompression frame
- Invisible drainage vent Ø5x20mm
- Drainage floor profile Ø5x25mm
- ▼ Locking points
- Handle
- Hinges
- 65.6581.-- (Anti-lift pin)
- 65.6584.-- (Anti-lift pin + fill block)
- 65.6584.-- (Anti-lift pin + fill block)
- 060.7831.17 (Fill block)

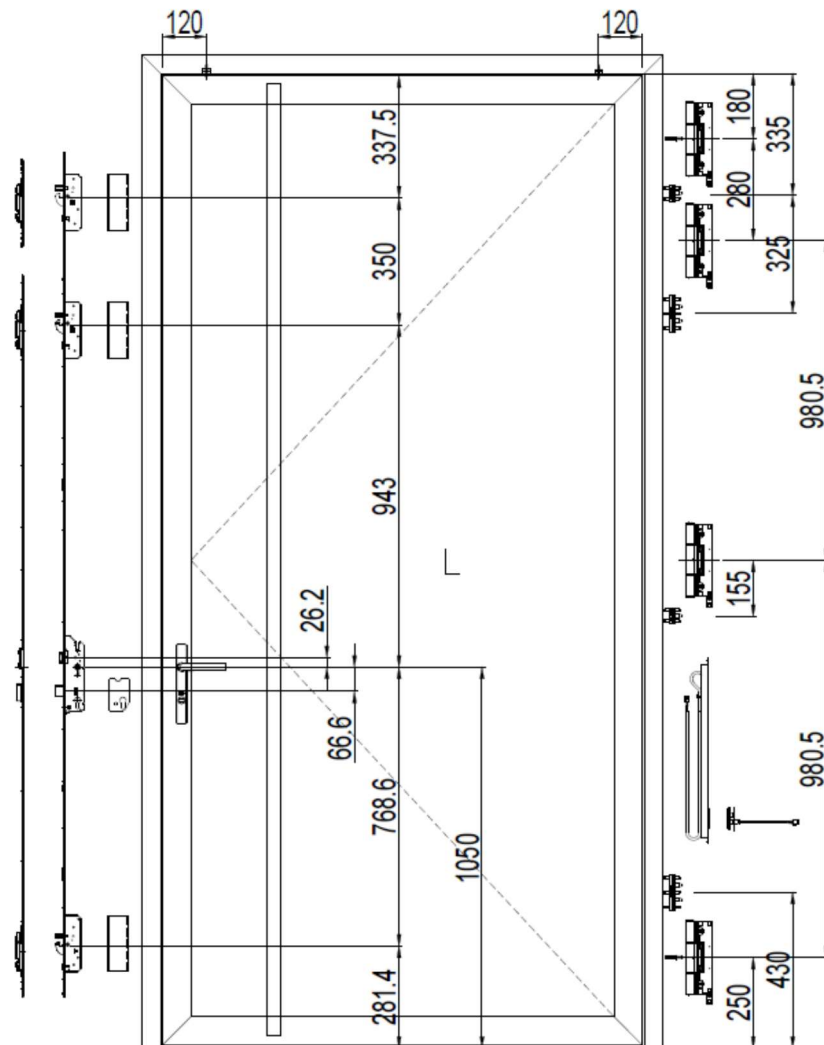
Glass type: P5A/SPS10 - 44.6/12/44.6 (32.5mm) - 2500 x 1150 mm

Mark/Type accessories: Sobinco / Führ

Front view (cont'd)

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
FRONT VIEW



065.6565.XX		HINGE
065.6581.--		ANTI LIFT PIN
065.6584.--		ANTI LIFT PIN + FILL BLOCK
060.7831.17		FILL BLOCK
061.9150.--		EXTENSION
061.8775.--		RECEIVER
061.8784.--		RECEIVER
061.9103.ZC		5P LOCK
061.9100.--		MOTOR
069.6536.00		DRILL PLATE



Test element cross section

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cylinder
Test element cross section



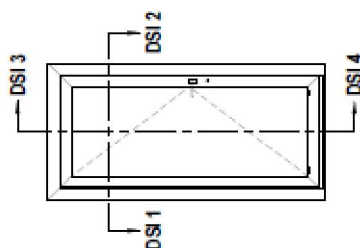
		#
	168.7073.00	6
	168.8074.00	6
	160.8750.--	4
	169.8718.04	4
	069.8373.04	1
	052.5313.--	4
	052.5316.--	16
	052.5317.--	5
	069.8360.04	1
	069.8426.04	2
	069.8427.04	4
	080.9078.04	15290mm
	080.9091.04	4
	080.9320.04	1310mm
	080.9240.04	1360mm
	180.9366.04	7370mm
	180.9114.SY	7360mm
	065.6565.XX	4
	065.6572.--	4
	065.6581.--	2
	065.6584.--	1
	060.7831.17	2
	061.8061.--	1
	061.9150.--	1
	061.8775.--	1
	061.8784.--	1
	061.8790.04	2
	061.9103.ZC	1
	061.9100.--	1
	061.8383.--	1
	069.6536.00	2
	061.6347.XX	1
	HANDLE 16MM	1
	050.5123.--	3

	#	Ln
408.0598.XX	1	1435
	1	2737
	1	2737
408.0026.XX	2	2671
	2	1321
130.3653.XX	2	2468
	2	1168
108.0080.XX	1	1284
108.1873.XX	1	1274

b = 1150
h = 2500

RC3
EN 356 : PSA

050.5387.--	36
050.5073.--	36
052.5331.--	8
052.5314.--	2
061.7093.--	1
061.7078.--	1
061.8413.--	1
062.8613.--	1
161.7501.XX	1
161.7503.XX	1



schaal - échelle
scale - Maßstab
1/1



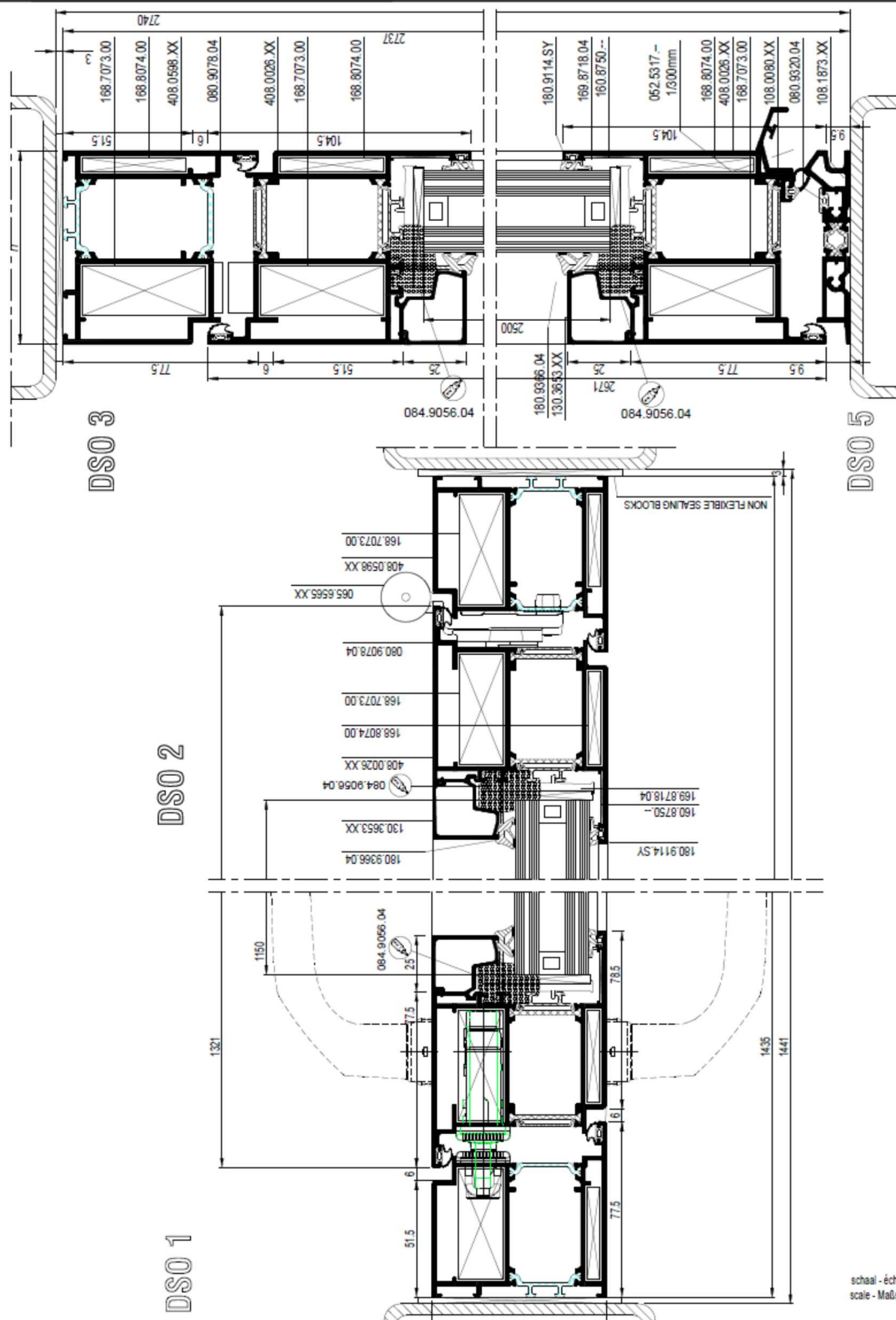
Test element cross section (cont'd)

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Test element cross section



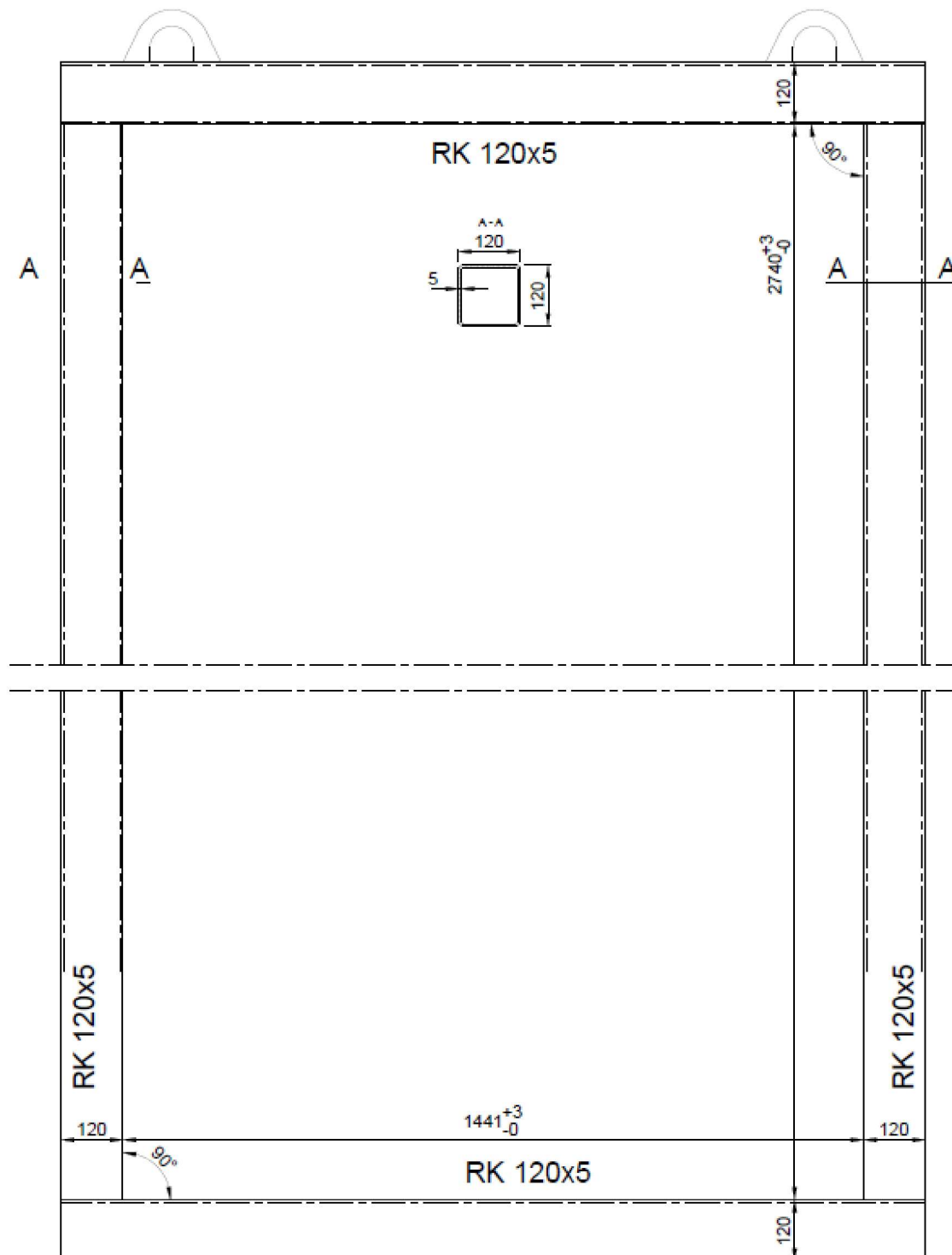
MASTERLINE 8-Fu AP RC 3



**Steel frame****MASTERLINE 8-Fu
AP RC 3**

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Steel frame

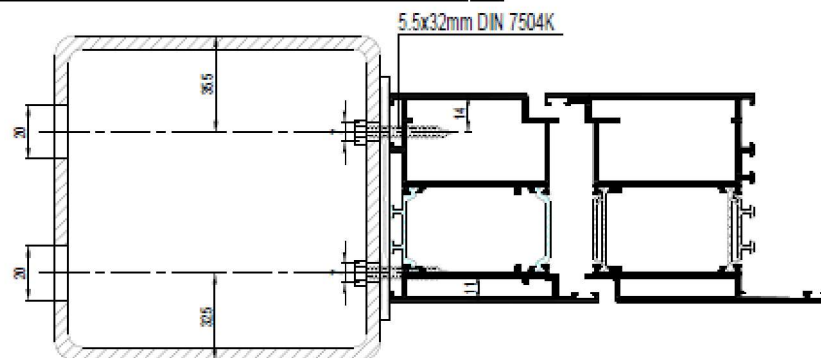
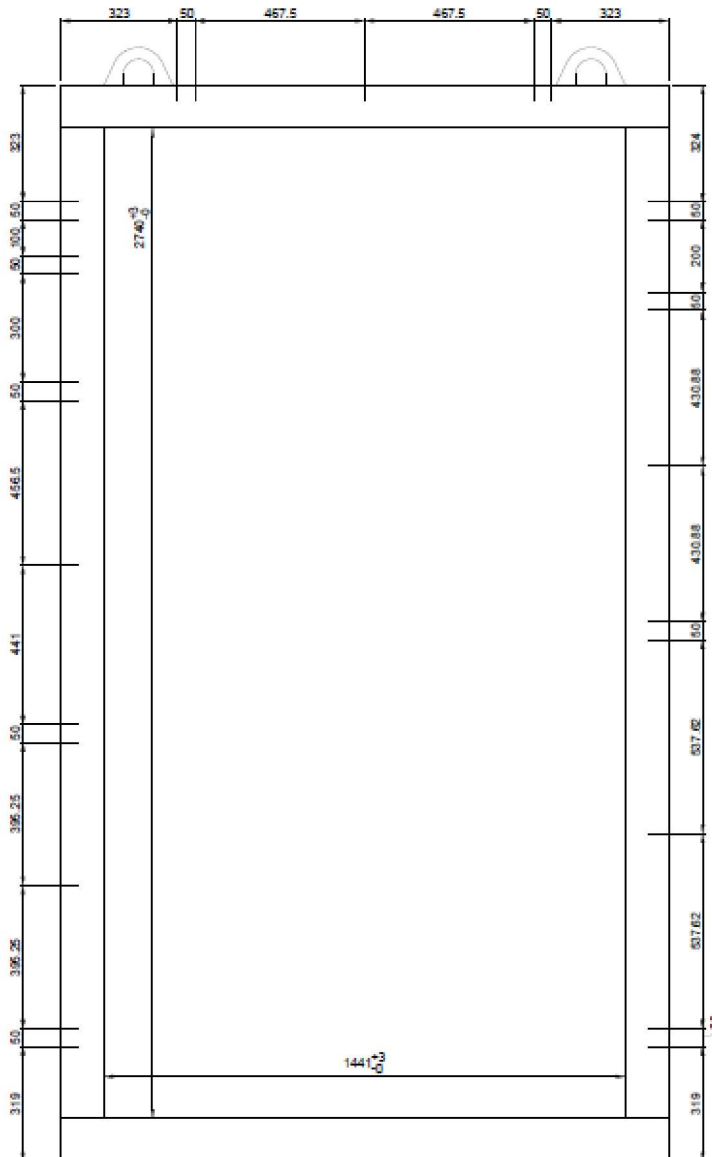




Steel frame (cont'd)

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cylinder
Steel frame



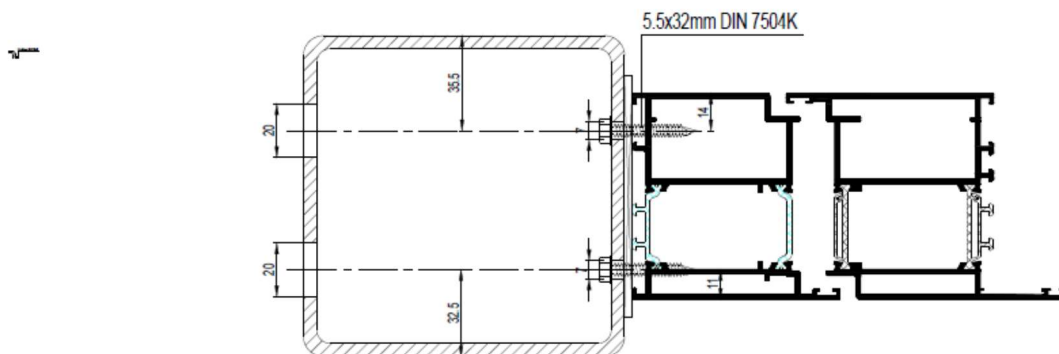
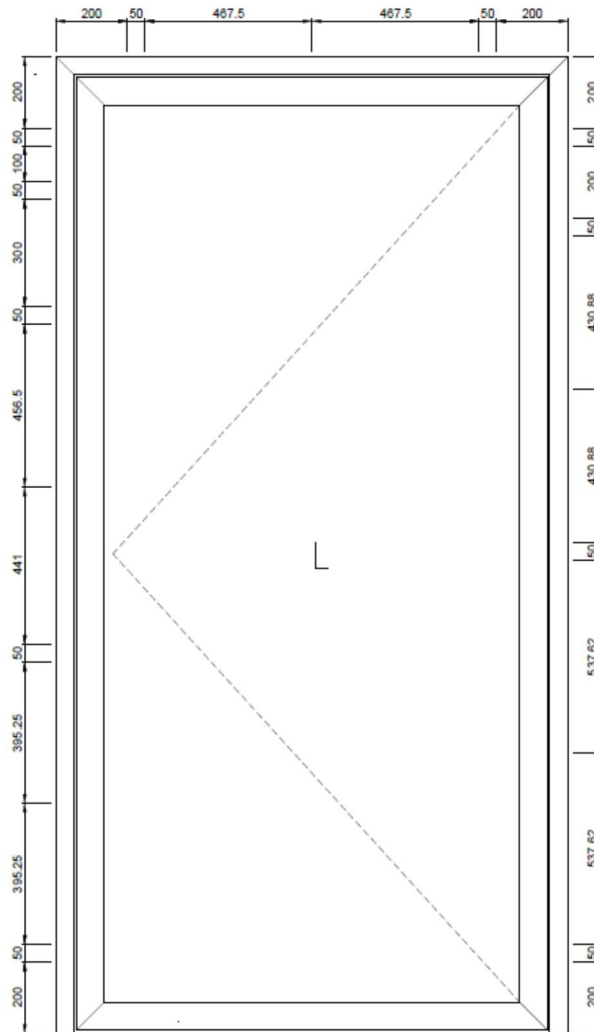


MASTERLINE 8-Fu AP RC 3

Steel frame (cont'd)

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

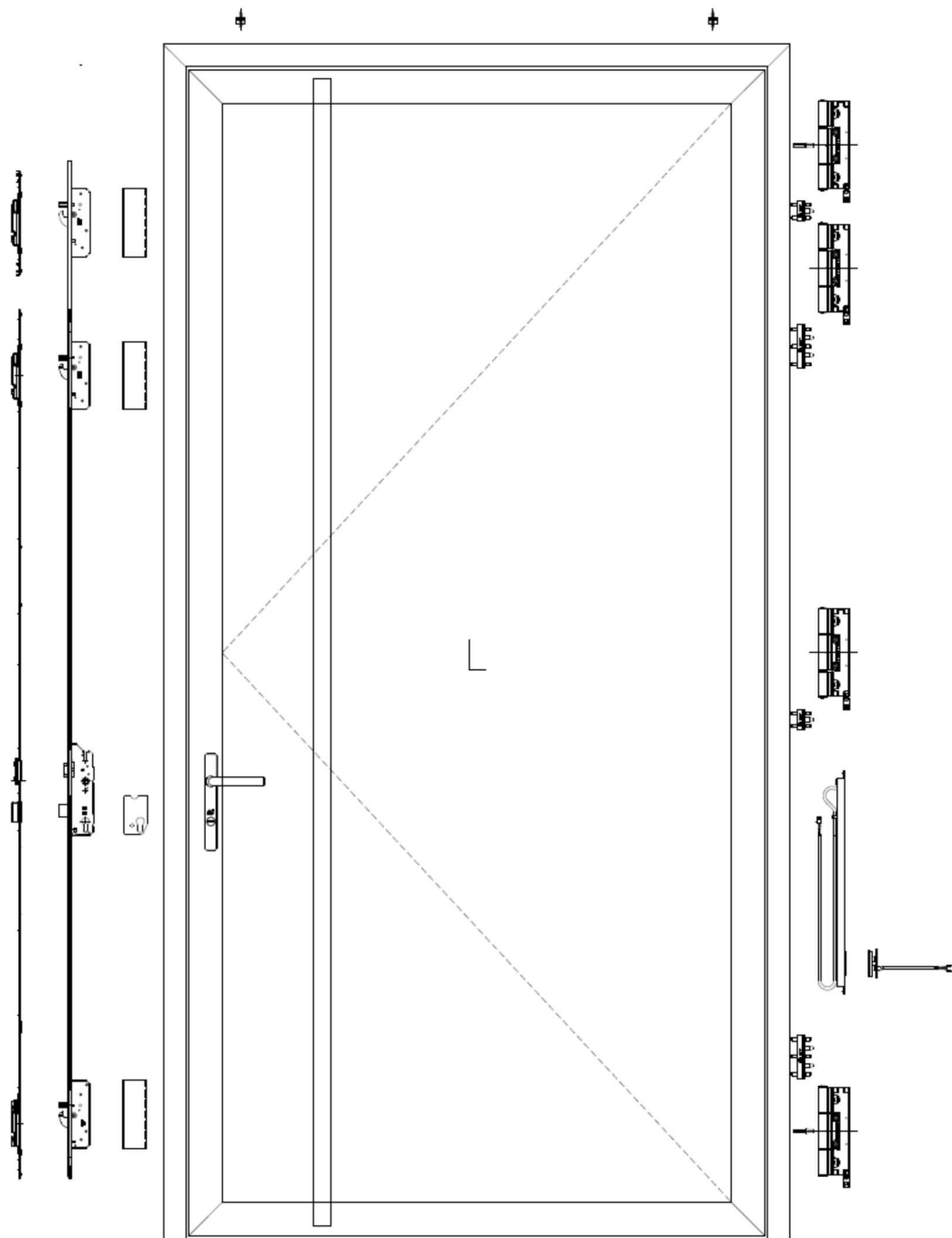
Steel frame



Assembly

**MASTERLINE 8-Fu
AP RC 3**

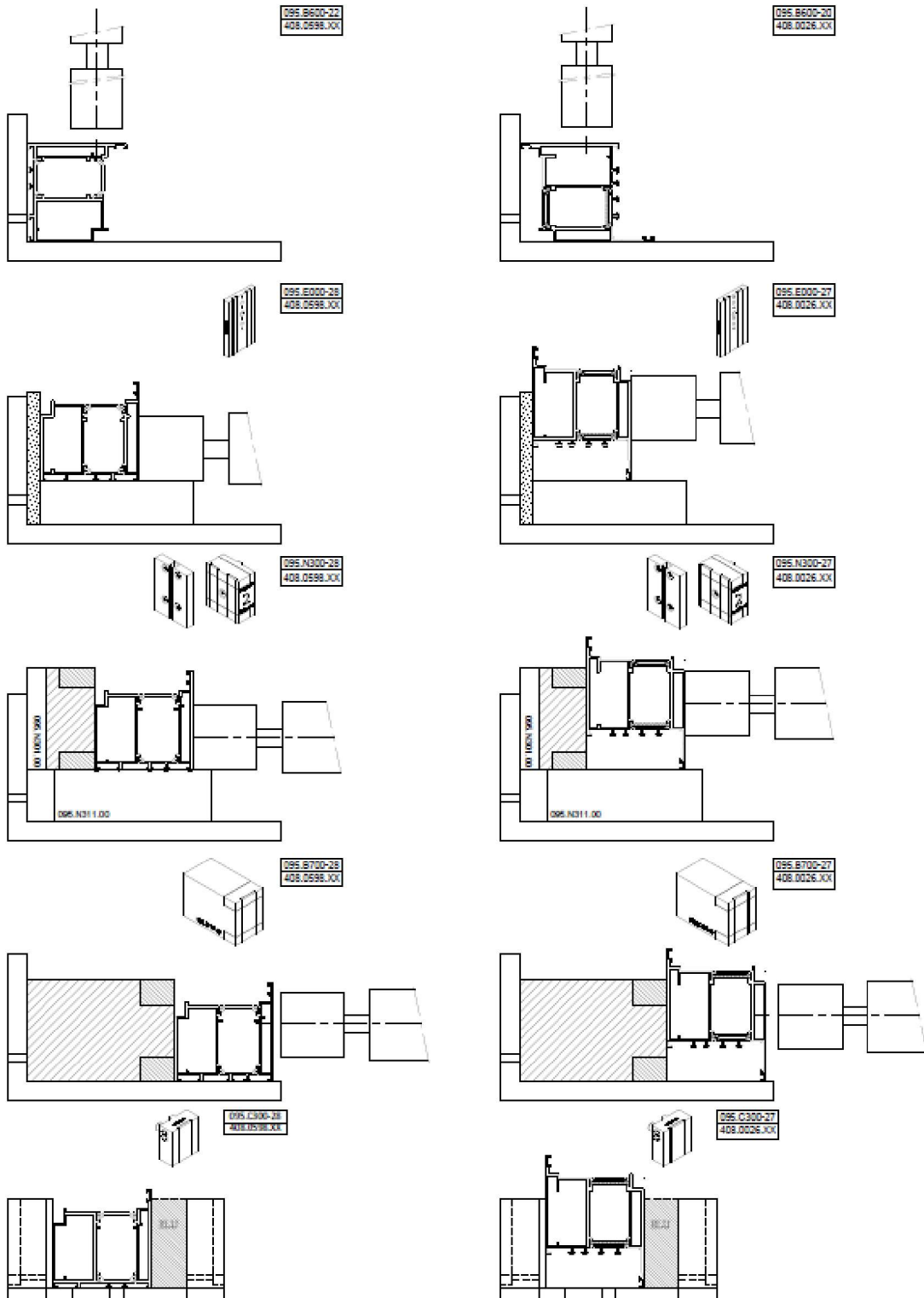
Fuhr 836 lock - Single door with pull handle - SKG TM cilinder
Assembly



Clamp block saw

**MASTERLINE 8-Fu
AP RC 3**

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Clamp block saw





Drainage vent

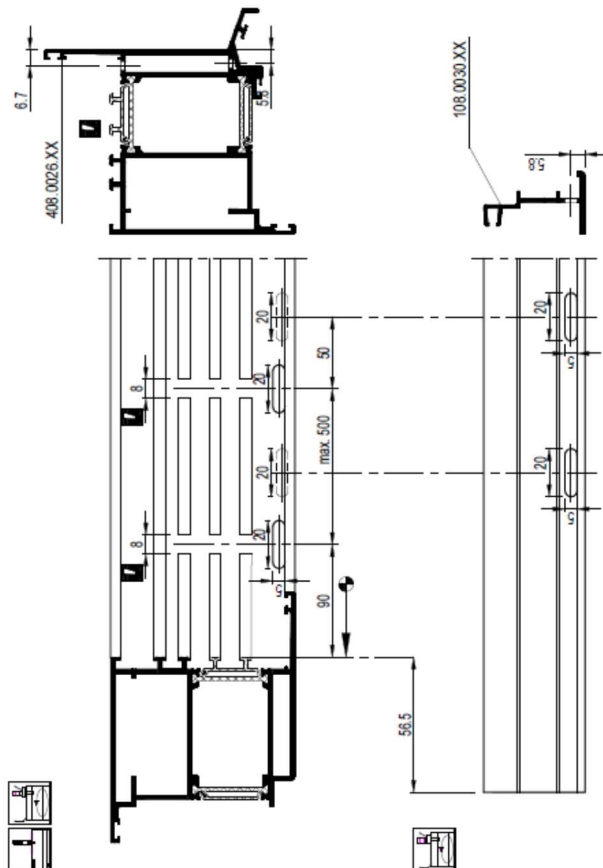
MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Drainage vent



DICHTINGSMODEL
MATERE DETANCHÉITE
SEALING AGENT
ABDICHTUNG



				
				
	095. E000.00 or 095. N300.00 or 095. B700.00 or 095. C300.00			
	095 B300.00			
				

	108.0030.XX			
				
				
			095.B300.00	
				

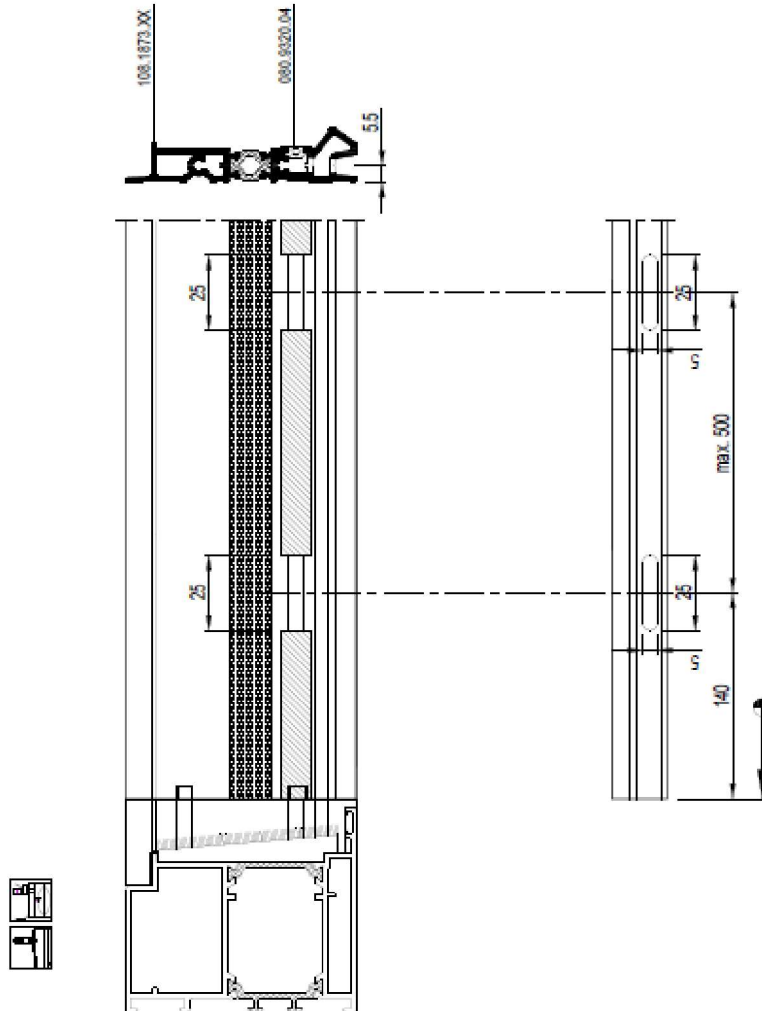


Drainage floor profile

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Drainage floor profile

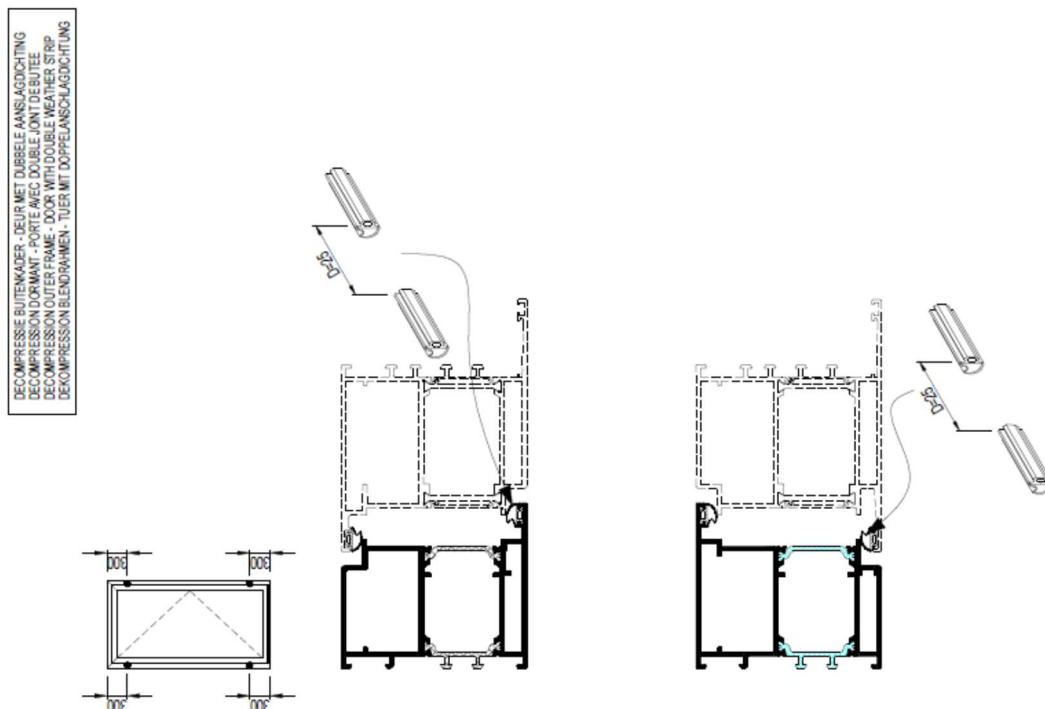
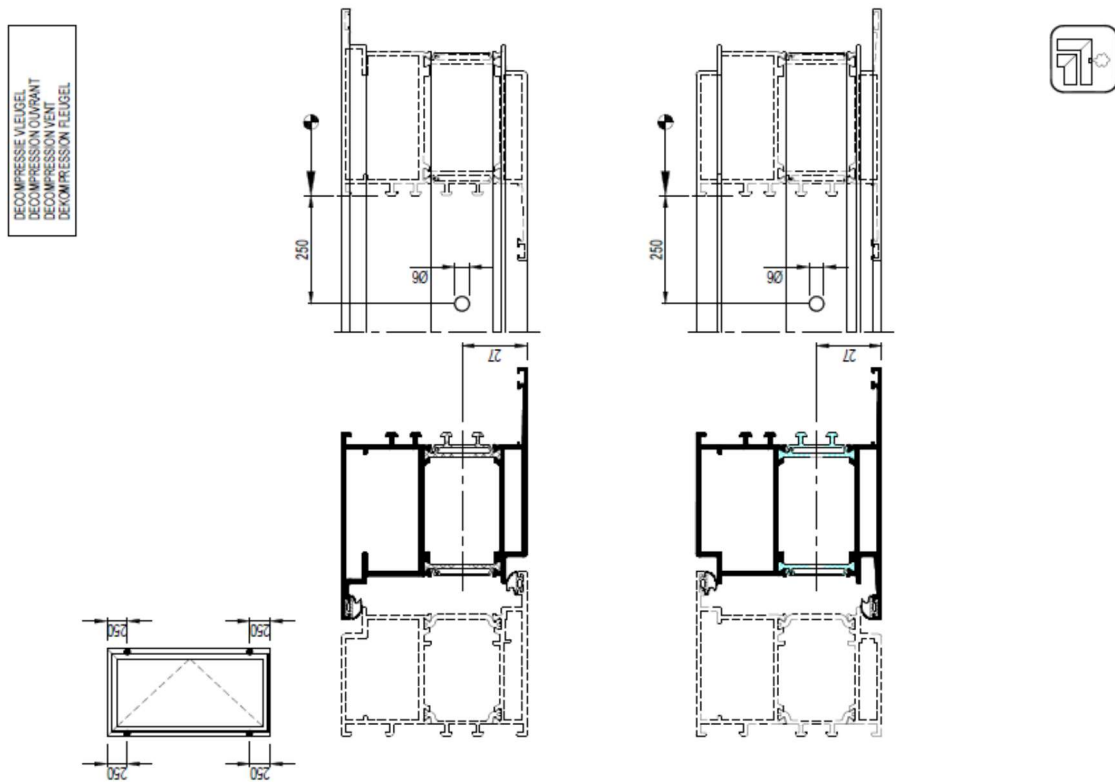


108.1873.XX			
	-	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00	
		095.B300.00	

Decompression

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Decompression





Positioning of corner cleats

**MASTERLINE 8-Fu
AP RC 3**

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Positioning of corner cleats

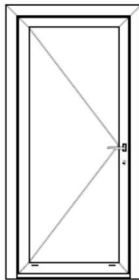


HOEKVERBINDERS
EQUERRES
CORNER CLEATS
ECKVERBINDERS

168.7073.00 (7073)

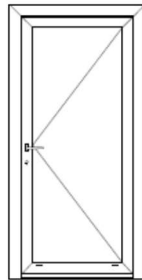
168.8074.00 (8074)

7073 7073
8074 8074



7073 7073
8074 8074

7073 7073
8074 8074



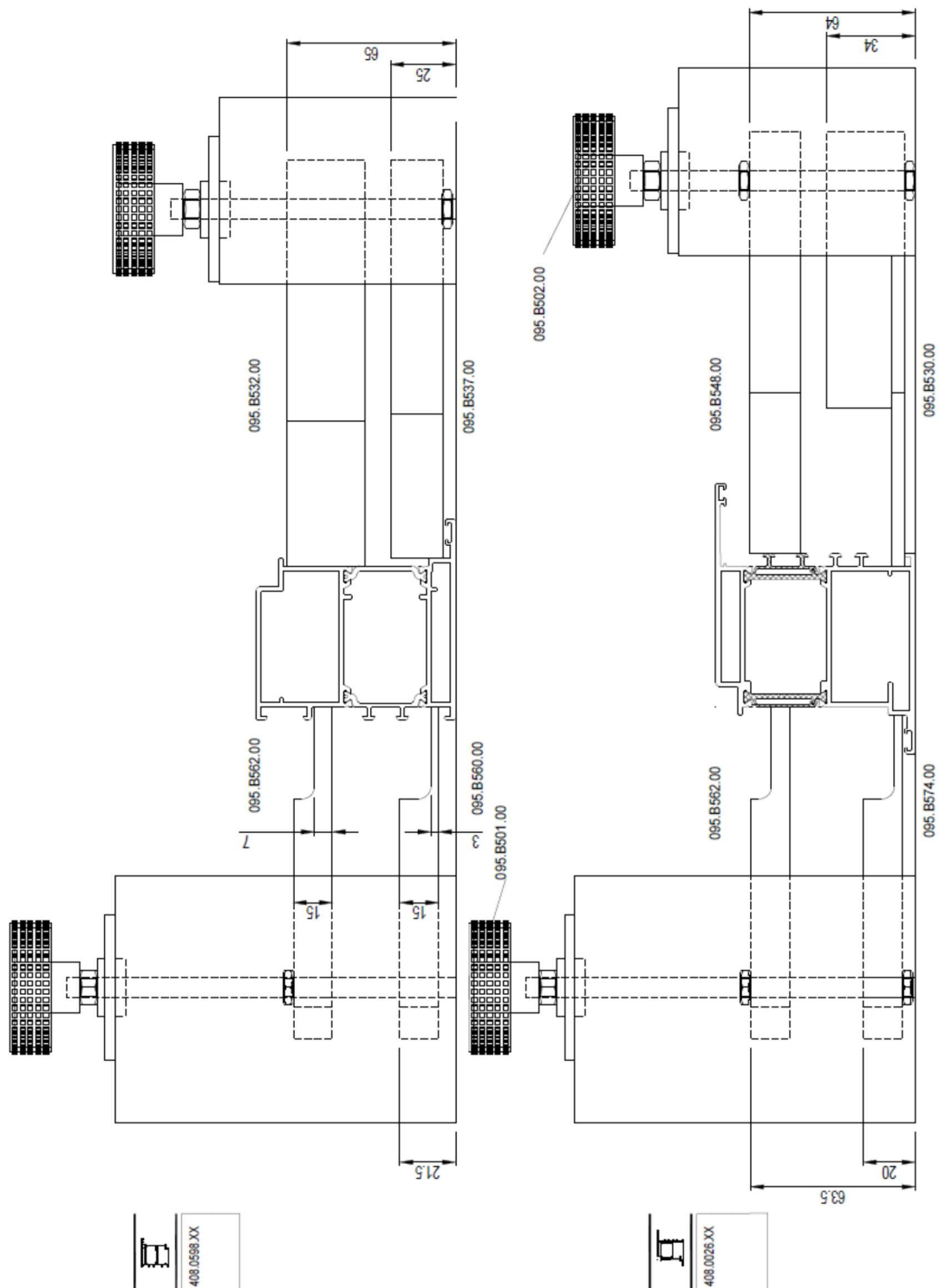
7073 7073
8074 8074

Crimping

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Crimping 095.B500.00

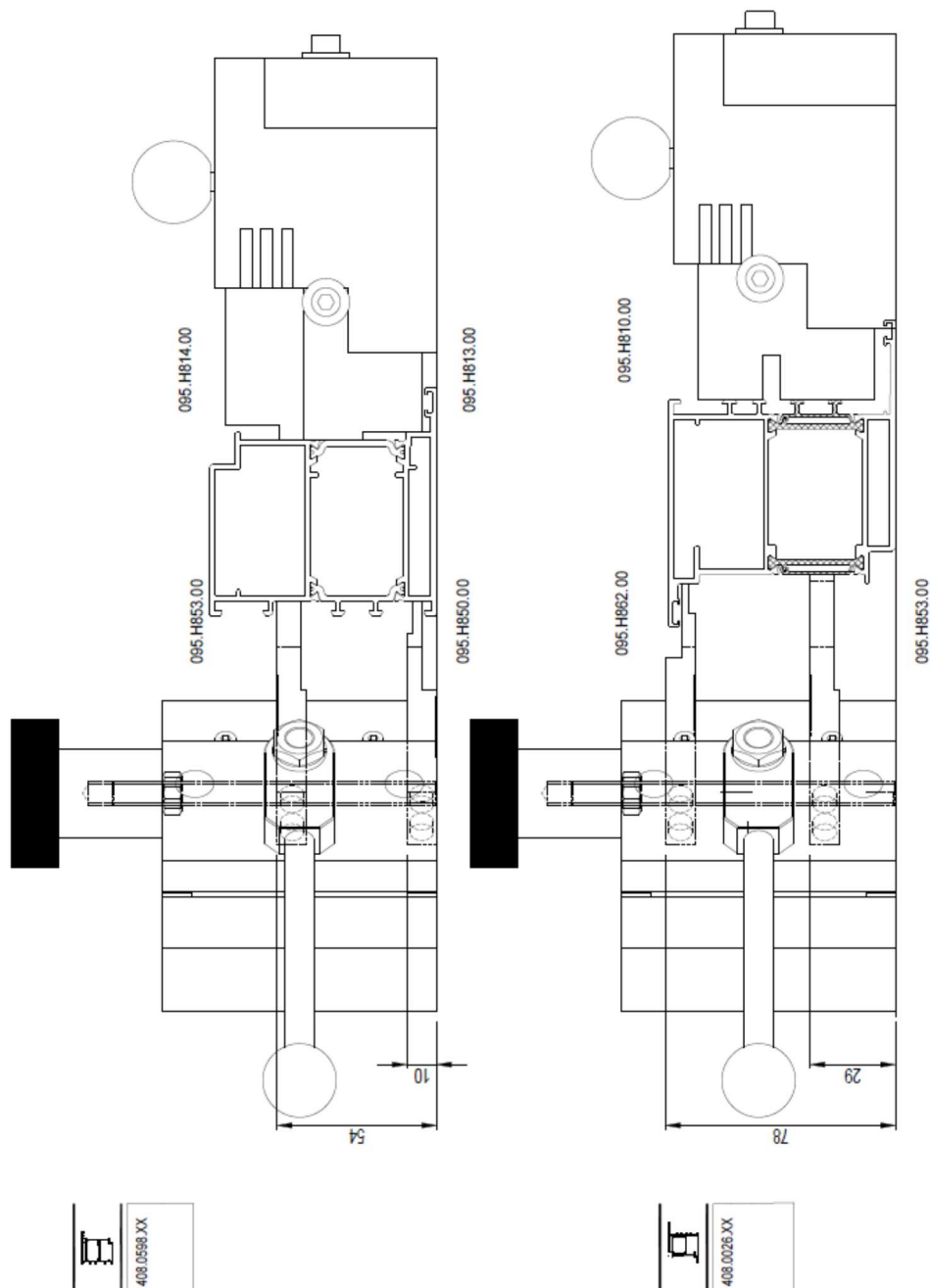


MASTERLINE 8-Fu
AP RC 3



**Crimping (cont'd)****MASTERLINE 8-Fu
AP RC 3**

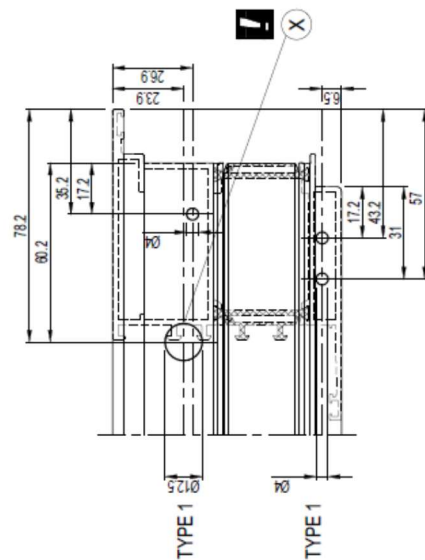
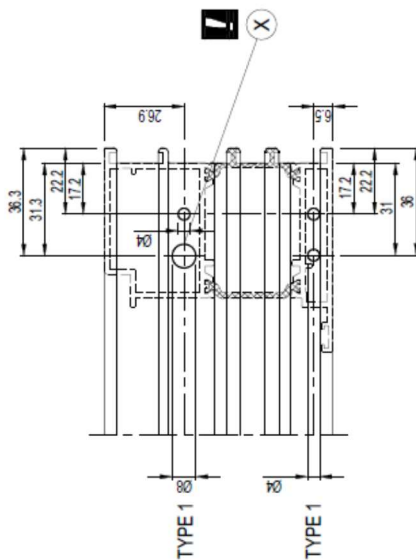
Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Crimping 095.H800.00



Glue injection

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Glue injection



408.0598.XX			
		097.0183.00 + 197.D600.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00
		097.0322.00	
			

408.0026.XX			
		097.0183.00 + 197.D600.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00
		097.0323.00	
			

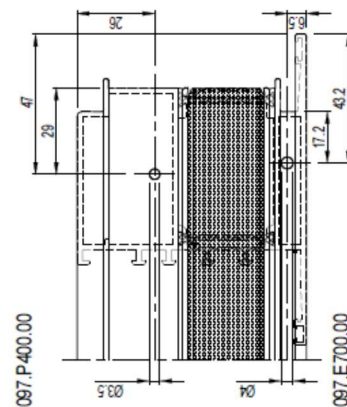
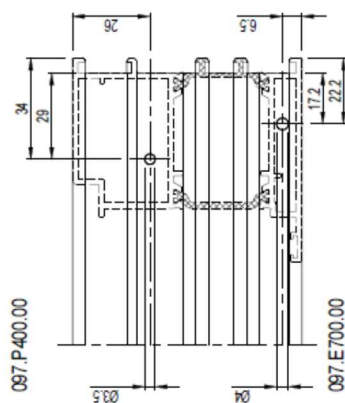
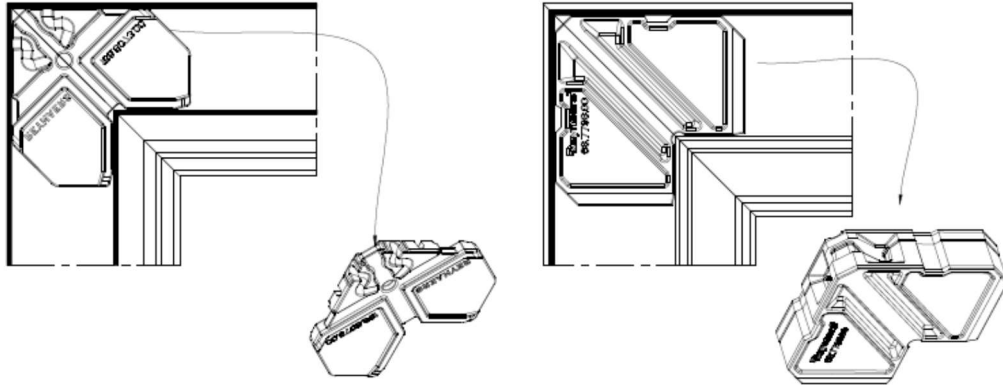
DICHTINGSMODEL
MATERIE DETACHEE
SEALING AGENT
ABDICHTUNG

L'INJECTION NA VERBINDING
INJECTION DE COLLE APRES LA CONNEXION
GLUE INJECTION AFTER CONNECTION
KLEBINJECTION NACH DEM ANSCHLUSS

Glue injection (cont'd)

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Glue injection



408.0598.XX			
			
095.C500.00	095.C600.00	095.C700.00	095.C800.00
097.P400.00	097.P400.00	097.P400.00	097.P400.00
095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00

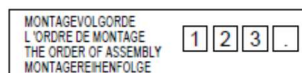
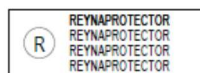
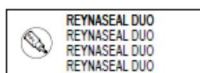
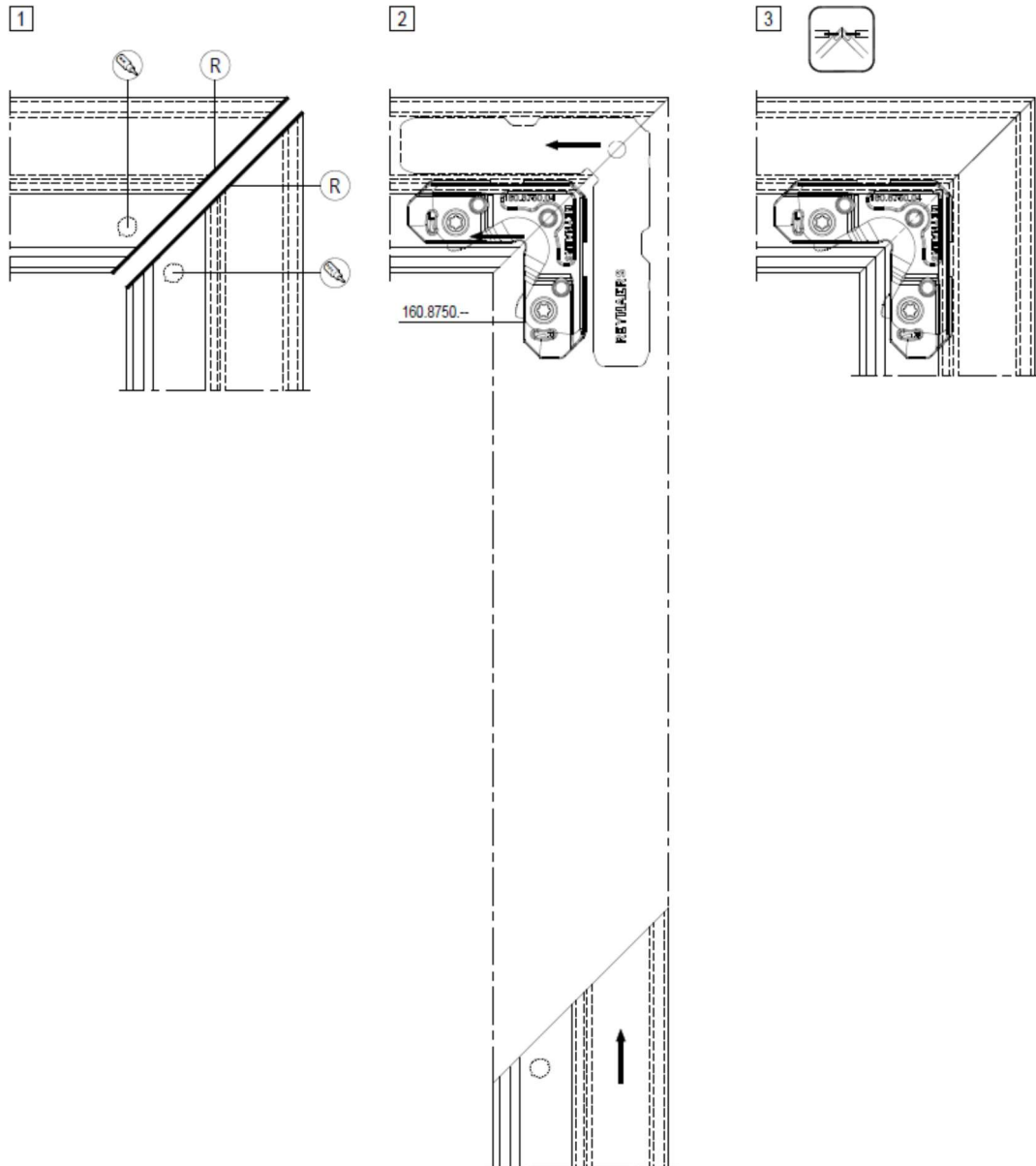
408.0026.XX			
			
095.C500.00	095.C600.00	095.C700.00	095.C800.00
097.P400.00	097.P400.00	097.P400.00	097.P400.00
095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00	095.E000.00 or 095.N300.00 or 095.B700.00 or 095.C300.00

LUMINECTIE NA VERBINDING
INJECTION DE COLLE APRES LA CONNEXION
GLUE INJECTION AFTER CONNECTION
KLEBINJECTION NACH DEM ANSCHLUSS

**Rebate supports****MASTERLINE 8-Fu
AP RC 3**

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

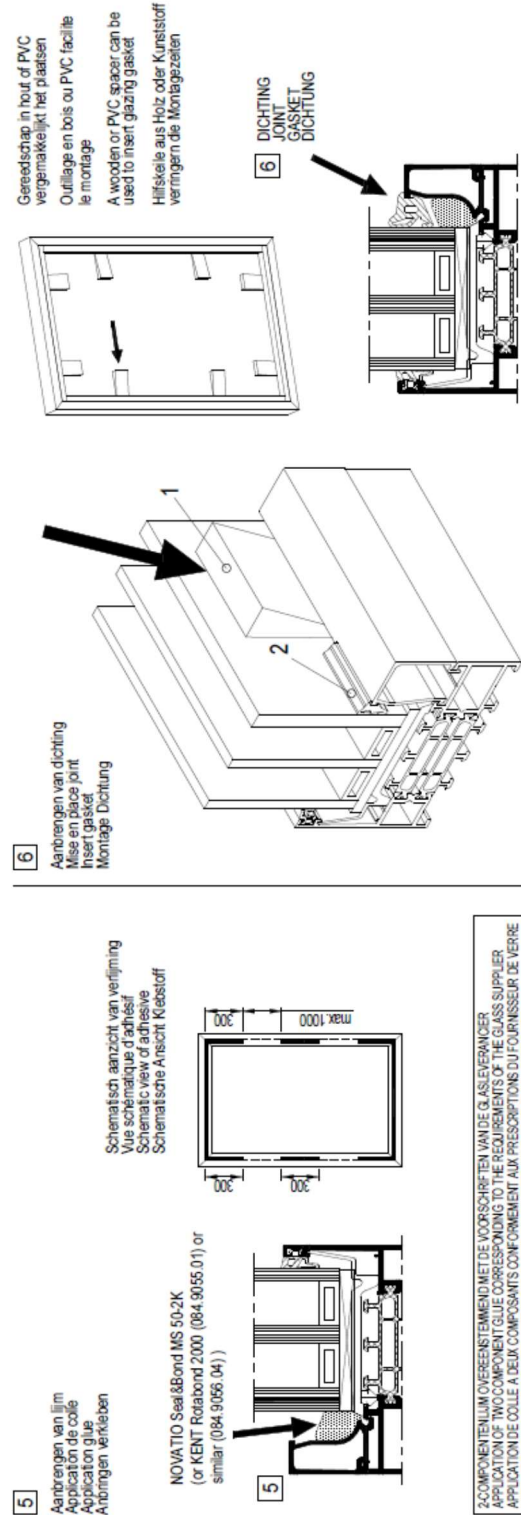
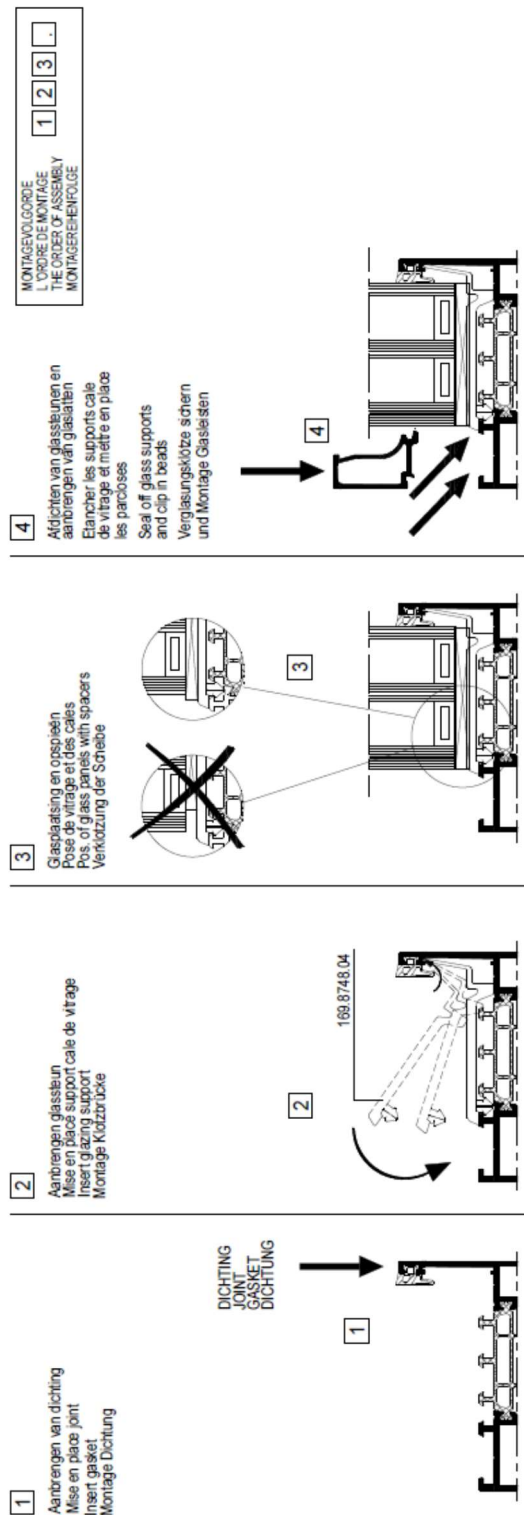
Rebate supports



Glazing method

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Glazing method



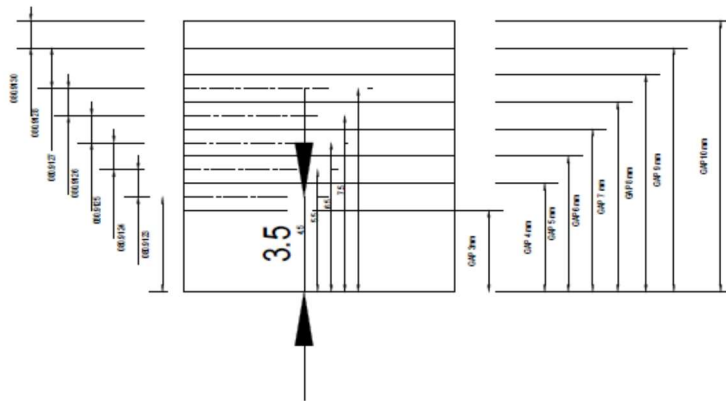


Glazing method (cont'd)

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Glazing method



Gebruiksgebied binnenbeglazingen
Champs d'application des joints de vitrage intérieur
Field of application of inner glazing joints
Anwendungsgebiete der inneren Verglasungsdichtungen

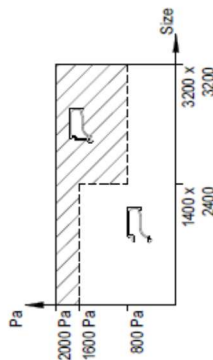
De beglazingstabellen zijn op basis van theoretische glazen
LET OP: Hou steeds rekening met de finale glazeninstelling om de juiste dichtheid te bepalen.
Diktoerante volgens DIN EN 1279-1:2018-10

Les tableaux de vitrage sont basés sur des tailles de verre théoriques
ATTENTION: Toujours tenir compte de la composition finale de verre pour déterminer le joint correct.
Tolérance d'épaisseur selon la norme DIN EN 1279-1:2018-10

The glazing tables are based on theoretical glass sizes
ATTENTION: Always take into account the final glass composition to determine the correct glazing.
Thickness tolerance according to DIN EN 1279-1:2018-10

Die Verglasungstabellen beruhen auf theoretischen Glasgrößen
ACHTUNG: Berücksichtigen Sie immer die endgültige Glaseinstellung, um die richtige Verglasungsdichtung zu bestimmen.
Dickenoleranz nach DIN EN 1279-1:2018-10

	STANDARD GLAZING BEADS P < 800 Pa WH < 3200 x 3200 MM P < 1600 Pa WH < 1400 x 2400 MM TUBULAR GLAZING BEADS P < 2000 Pa WH < 3200 x 3200 MM
--	---



STANDARD GLAZING BEADS		
TUBULAR GLAZING BEADS		

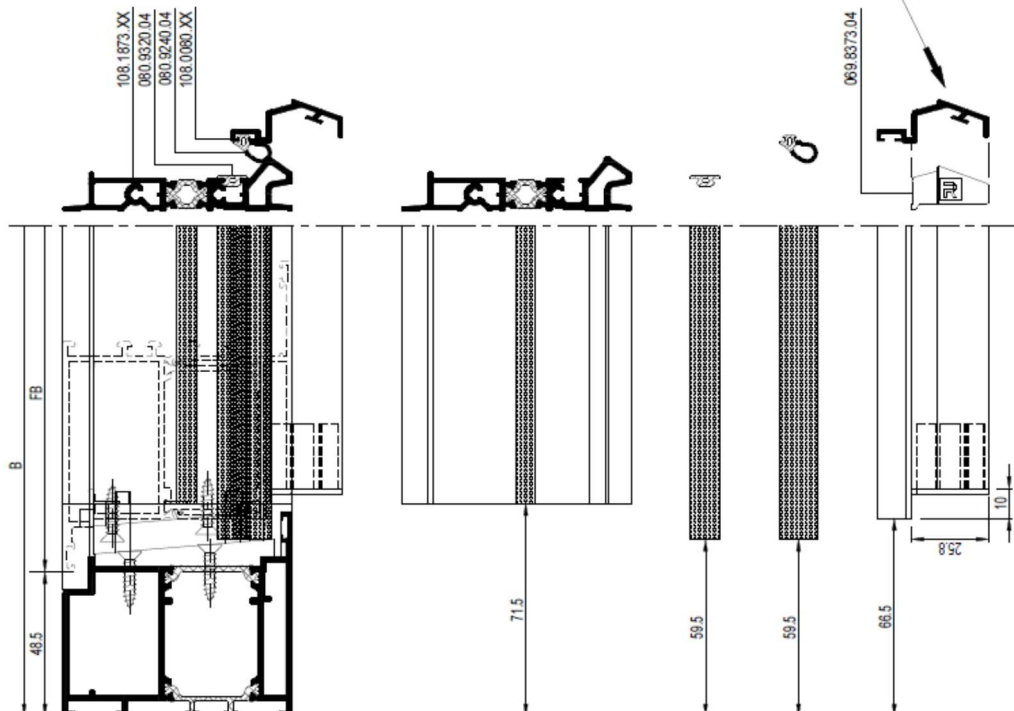
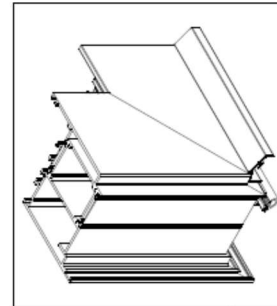
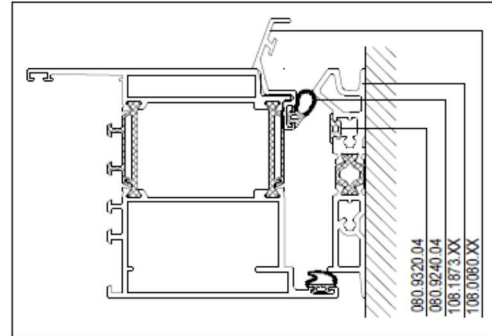
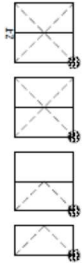
	ROOPLA BEVEILIGING PREVENTION DES CHUTES FALL PREVENTION STURZPRÄVENTION
--	---



End pieces

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
End pieces



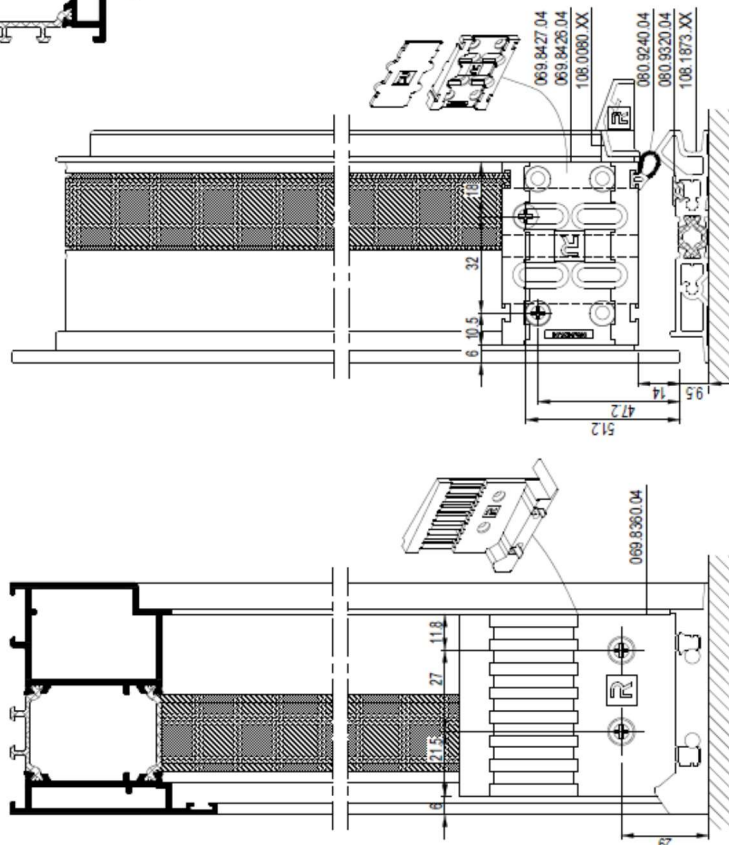
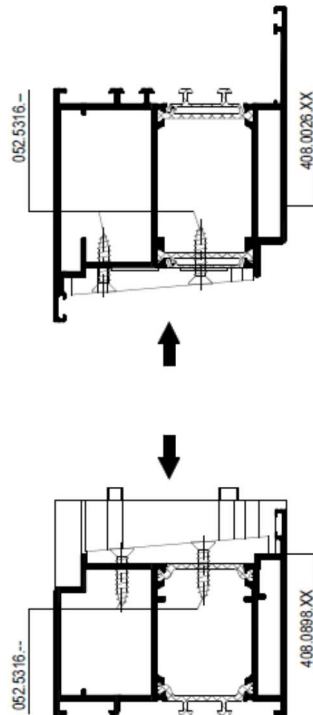


MASTERLINE 8-Fu AP RC 3

End pieces (cont'd)

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

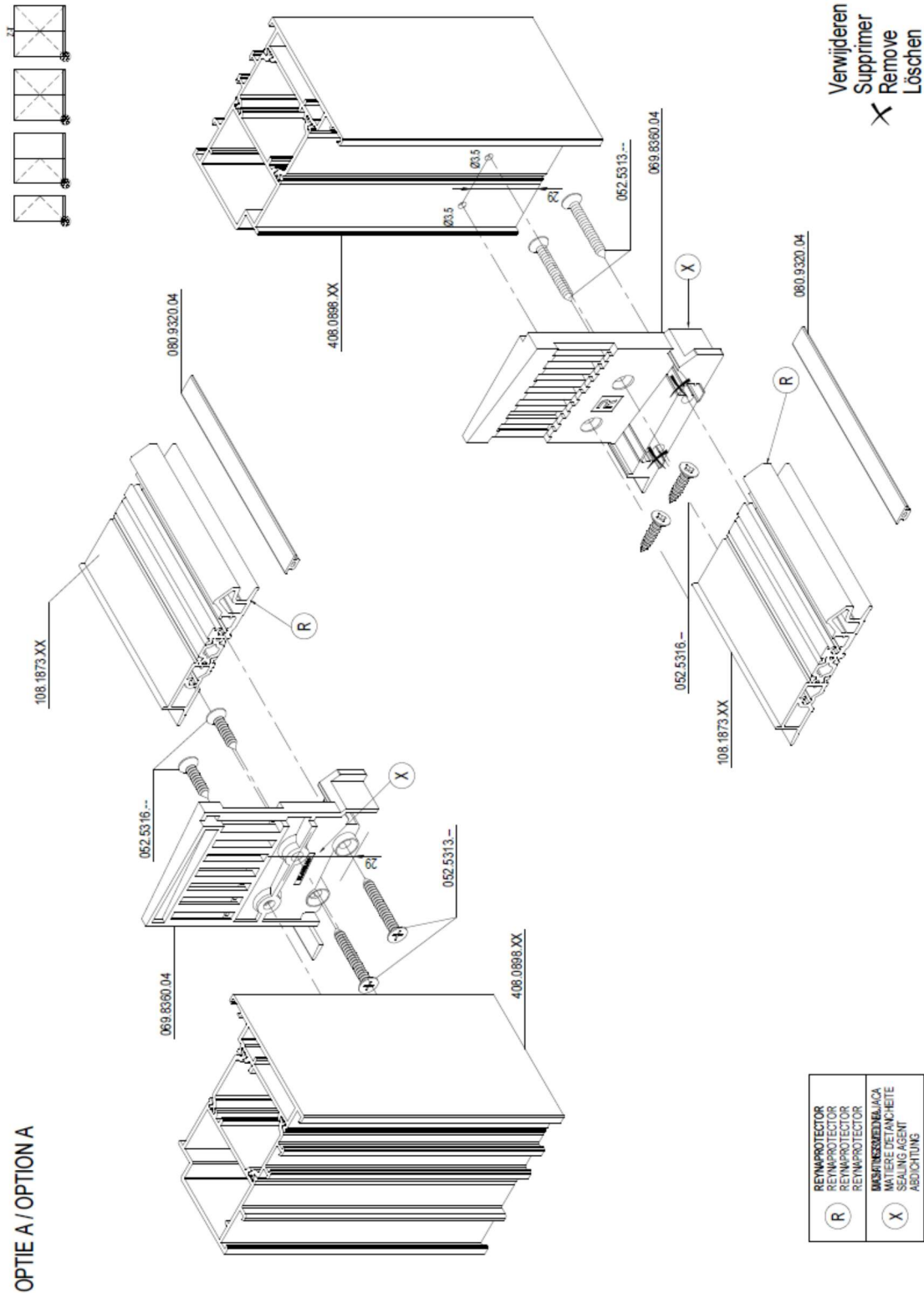
End pieces



End pieces (cont'd)

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
End pieces



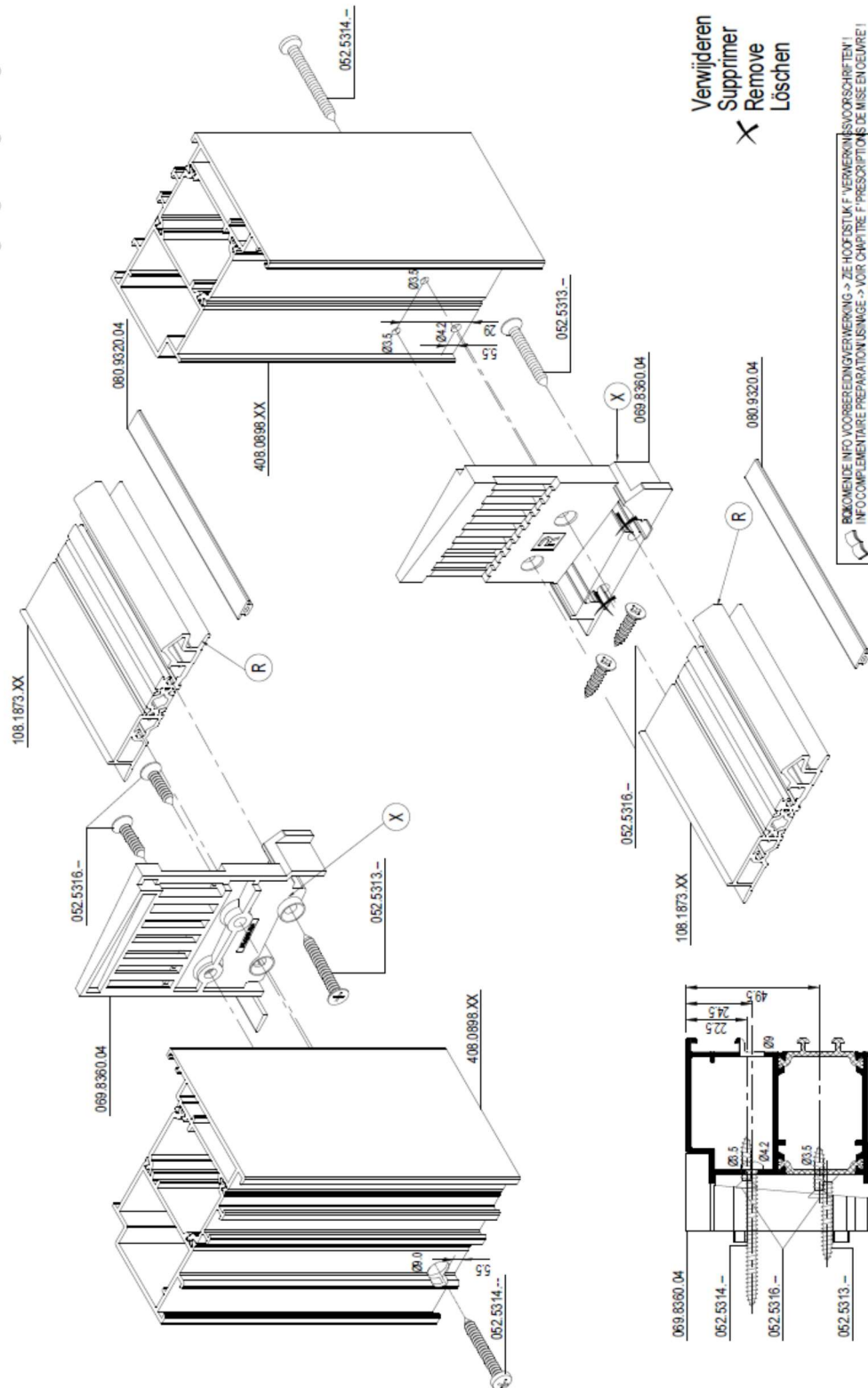
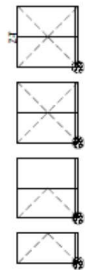


End pieces (cont'd)

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

End pieces



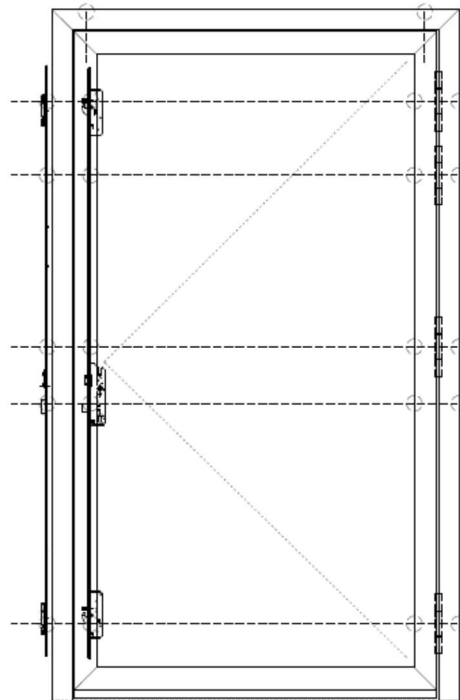
Verwijderen
Supprimer
Remove
Löschen

BIJKOMENDE INFO VOORBEREIDINGVERWERKING -> ZIE HOOFDSTUK F 'VERWERKINGSVOORSCHRIFTEN'!
INFO COMPLÉMENTAIRE PRÉPARATION/USINAGE -> VOIR CHAPITRE F 'PRÉSCRIPTIONS DE MISE EN ŒUVRE'!
ADDITIONAL INFO PREPARATION/PROCESSING -> SEE CHAPTER F 'PROCESSING DATA'!
ZUSÄTZLICHE INFO VORBEREITUNG/VERARBEITUNG -> SEHE KAPITEL F 'VERARBEITUNGSVORSCHRIFTEN'!

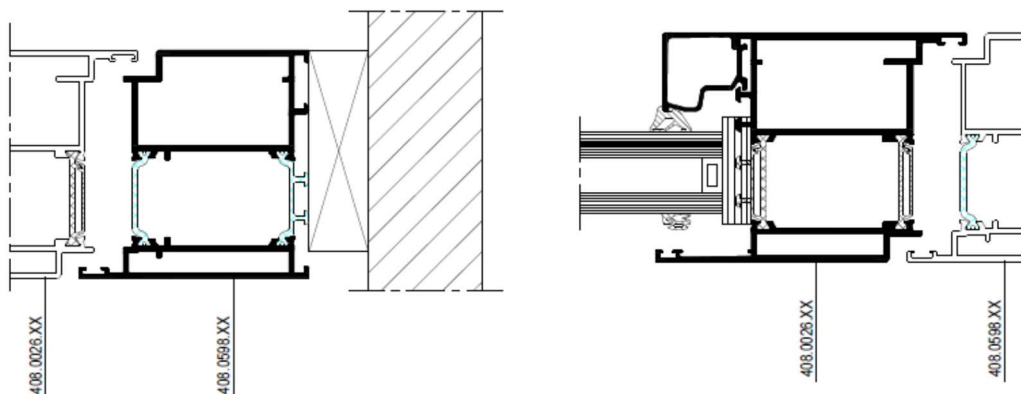
MASTERLINE 8-Fu
AP RC 3

RC3 support

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
RC3 support



NIET VERVORMBARE STELBLOKJES GEBRUIKEN TER HOOGTE VAN SCHARNIEREN EN SLUITPUNTEN.
CALES D'AJUSTEMENT NON COMPRESSIBLE AU NIVEAU DE PAUMELLES ET POINTS DE FERMETURES.
UNDEFORMABLE ADJUSTING BLOCKS AT HINGES AND LOCKING POINTS POSITIONS.
NICHT KOMPRIMERBAR DISTANZKLOTZ UND GLEICHE HOEHE WIE BAENDER UND VERSCHLUSSPUNKTEN NUTZEN.



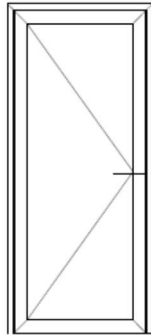


Lock & receiver

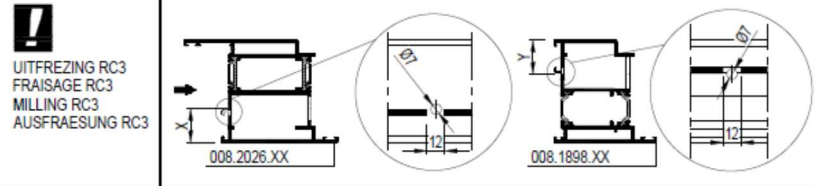
MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Lock & receiver



Referentiemaat
Dimension de référence
Reference dimension
Referenzmass



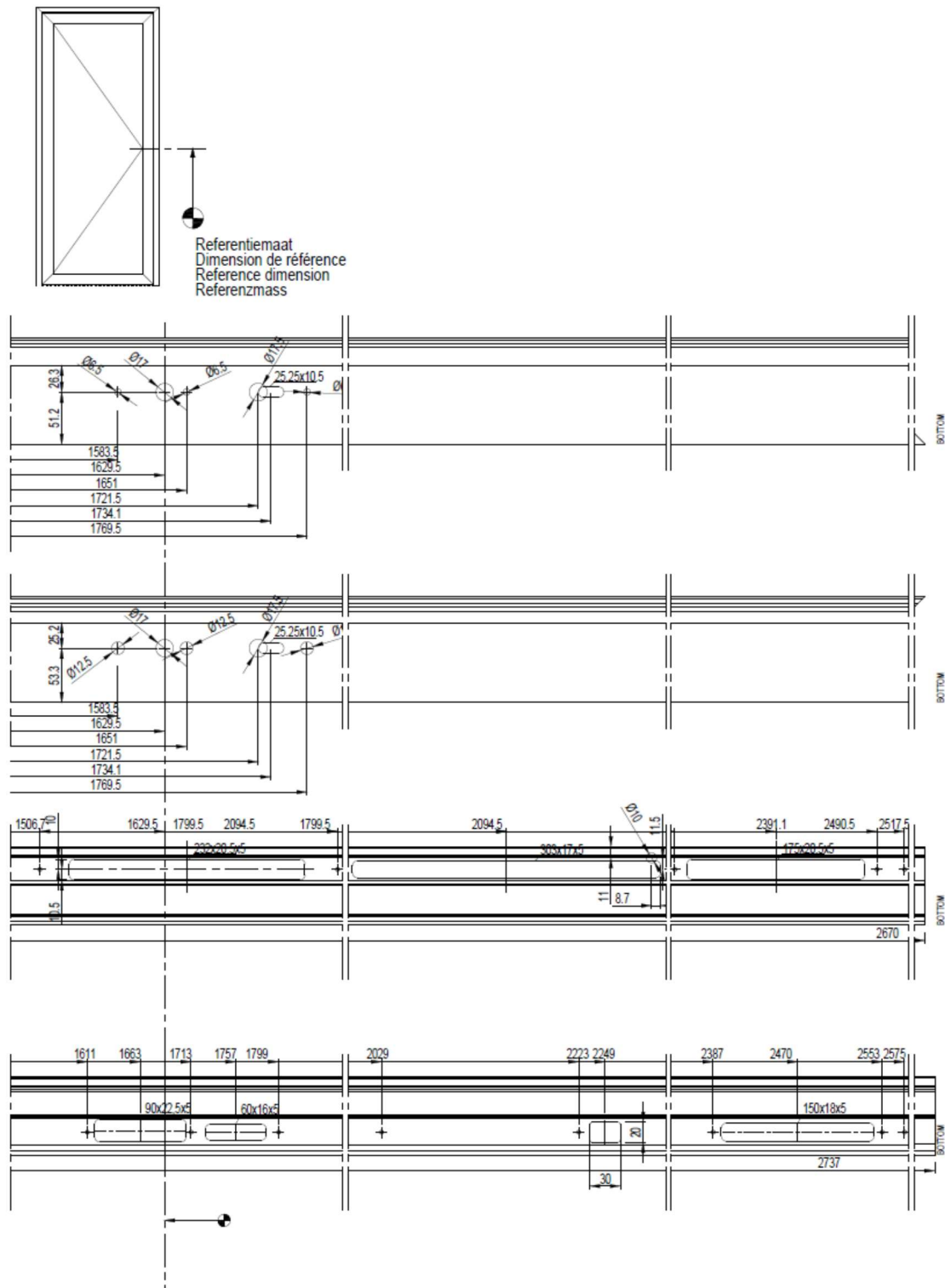
PLAATS BLINDLINKMOEREN ALVORENS SLOT TE MONTEREN
PLACER ECROUS NOYE AVANT DE MONTAGE DE SERRURE
PLACE BLIND RIVET NUTS BEFORE MOUNTING LOCK
BLINDNIETMUTTERN VOR DER SCHLOSSMONTAGE PLATZIEREN



Lock & receiver (cont'd)

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Lock & receiver

Reynaers Technology Centre
Version

TC22_132
27/10/2022 11:43:47



Hinges assembly

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Hinges assembly



MASTERLINE 8

PROFIELEN STEEDS VERMEDIJN VOLGENS DE RICHTLIJNEN VAN DE REINERS-AUTOMATISCH ADELUNG
TRAITEMENTS DES PROFILS SONT TOUJOURS EFFECTUES D'APRES LES RECOMMANDATIONS DE REINERS
ALWAYS PROCESS PROFILES ACCORDING TO THE GUIDELINES OF THE REINERS-AUTOMATION DEPARTMENT
VERARBETTEN SIE PROFIL IMMER GEMÄSS DEN RICHTLINIEN DER REINERS-AUTOMATISCH ADELUNG

CONTROLEER PARAMETERS VAN FREESMACHINE. CORRECTE INSTELLING = CORRECTE FREZING
VERIFIER LES PARAMETRES OÙ LA FRAISEUSE AJUSTEMENT CORRECT = USAGE CORRECT
CHECK PARAMETERS OF MILLING MACHINE. CORRECT ADJUSTMENT = CORRECT MILLING
PARAMETER ODER FRÄSMACHINE PRÜFEN RICHTIGE EINSTELLUNG = RICHTIGES FRÄSEN



NEUWE FREES GEBRUIKEN
UTILISER UN NOUVEAU FRAISE
VERMEDIJN SIE EEN NIEUW FRAISE



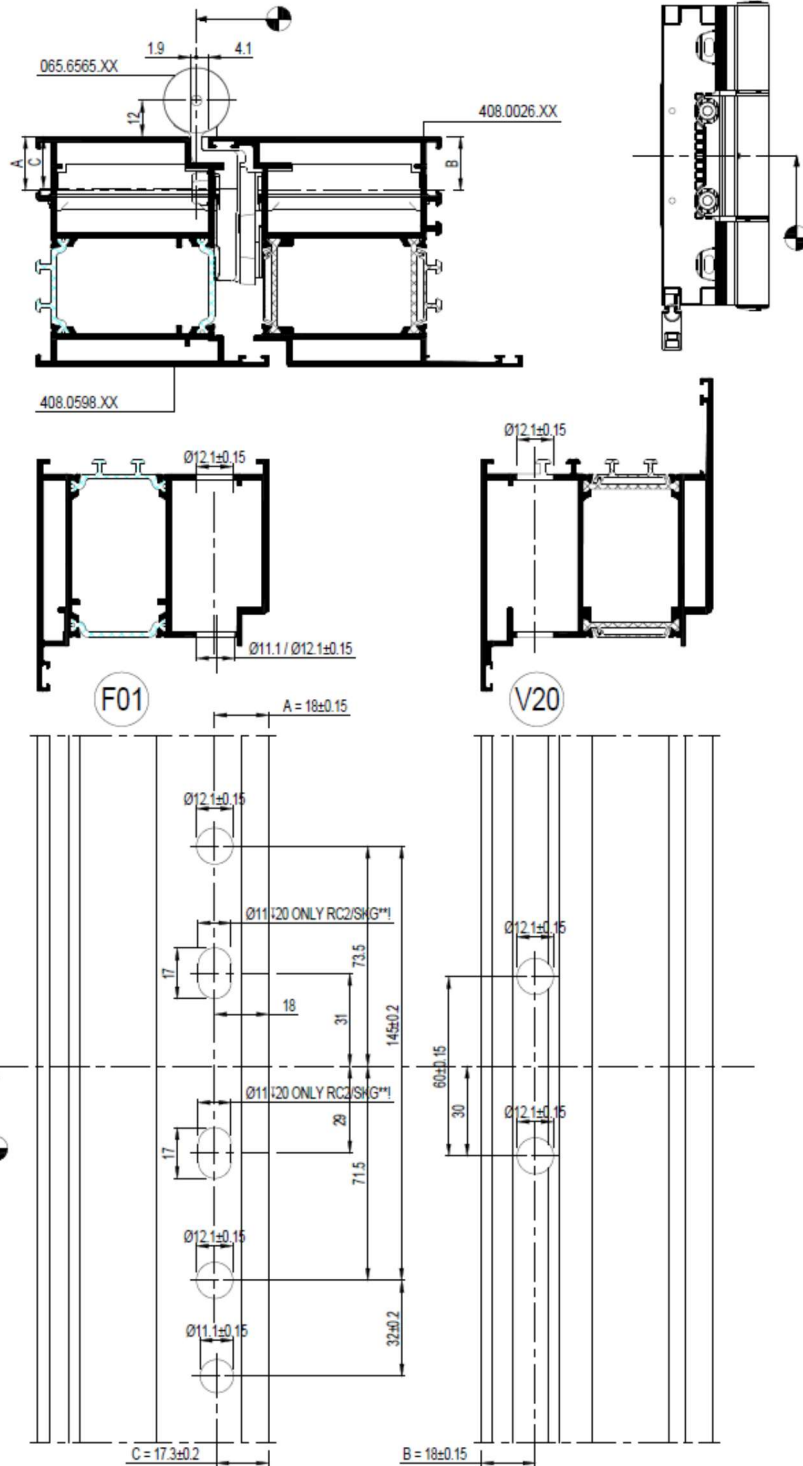
PROFIELEN CORRECT OPSPANNEN
SERREZ CORRECTEMENT LES PROFILS
PROPERLY CLAMP THE PROFILES
KLEMMEN SIE DE PROFILS RICHTIG FEST



DIN R GETEKEND, DIN L = SPIEGELBEELD
DIN R DESSIN, DIN L = MIRROR
DIN R DRAWN, DIN L = MIRROR
DIN R GEZEICHNET, DIN L = SPIEGEL



ALTIJD DE FREZINGEN & AFMETINGEN CONTROLLEREN
VERIFIEZ TOUJOURS LES FRAISES ET LES DIMENSIONS
ALWAYS CHECK THE MILLINGS & DIMENSIONS
ÜBERPRÜFEN SIE IMMER MÜHLEN UND ABMESSUNGEN



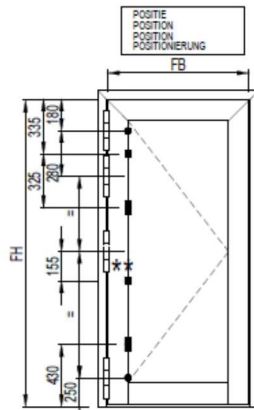


RC3 Anti lift pin milling

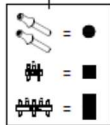
MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

RC3 Anti lift pin milling



FG max 200kg
FH ≥ 2200

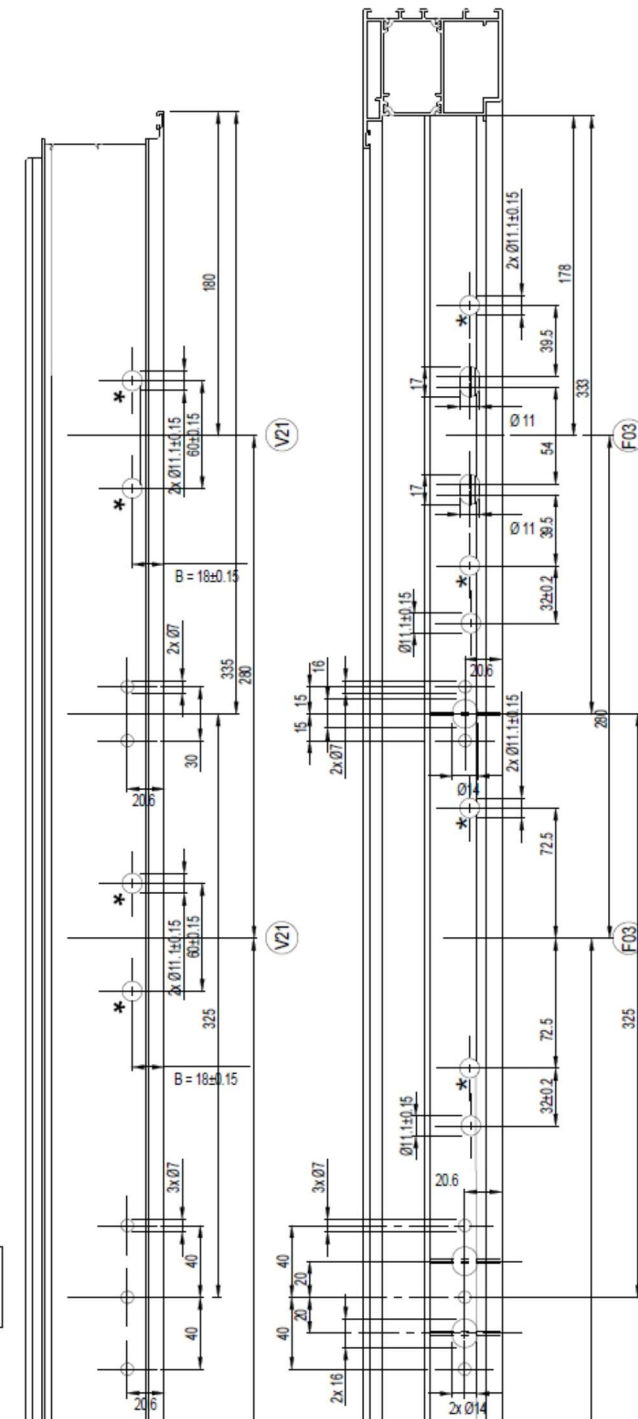


065.6581.-
2x / vent

065.6584.-
1x / vent

*	Ø12 BOORGATEN Ø12 TROUS DE PERCEUSE Ø12 DRILL HOLES Ø12 BOHR LÖCHER	Ø11 BOORGATEN Ø11 TROUS DE PERCEUSE Ø11 DRILL HOLES Ø11 BOHR LÖCHER
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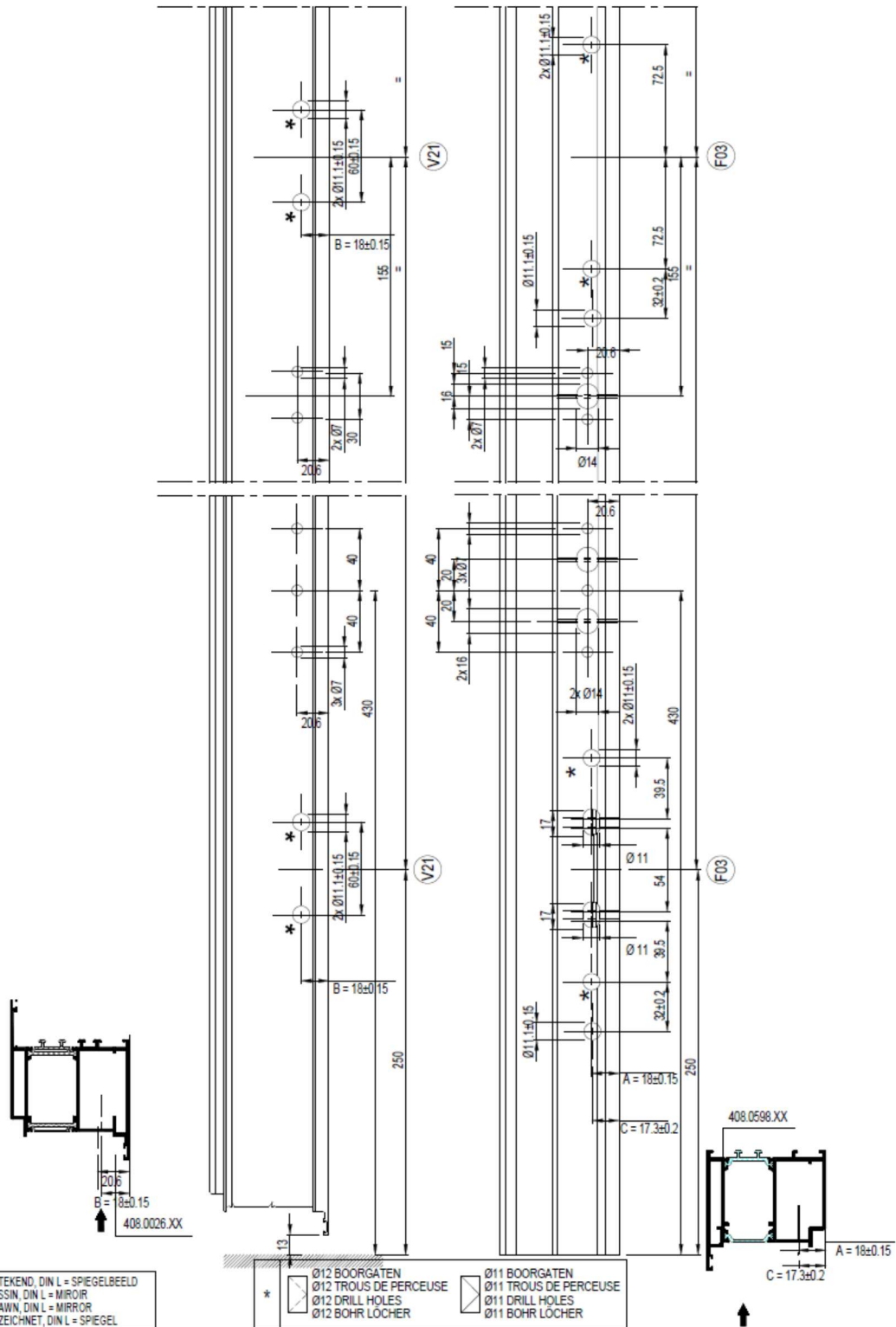
DIN R GETEKEND, DIN L = SPIEGELBEELD
DIN R DESSIN, DIN L = MIRROR
DIN R DRAWN, DIN L = MIRROR
DIN R GEZECHNET, DIN L = SPIEGEL



**RC3 Anti lift pin milling****MASTERLINE 8-Fu
AP RC 3**

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

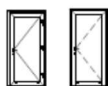
RC3 Anti lift pin milling



RC3 Anti lift pin milling (cont'd)

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
RC3 Anti lift pin milling



CS 77-AP (RC3)
MASTERLINE 8 (RC3)



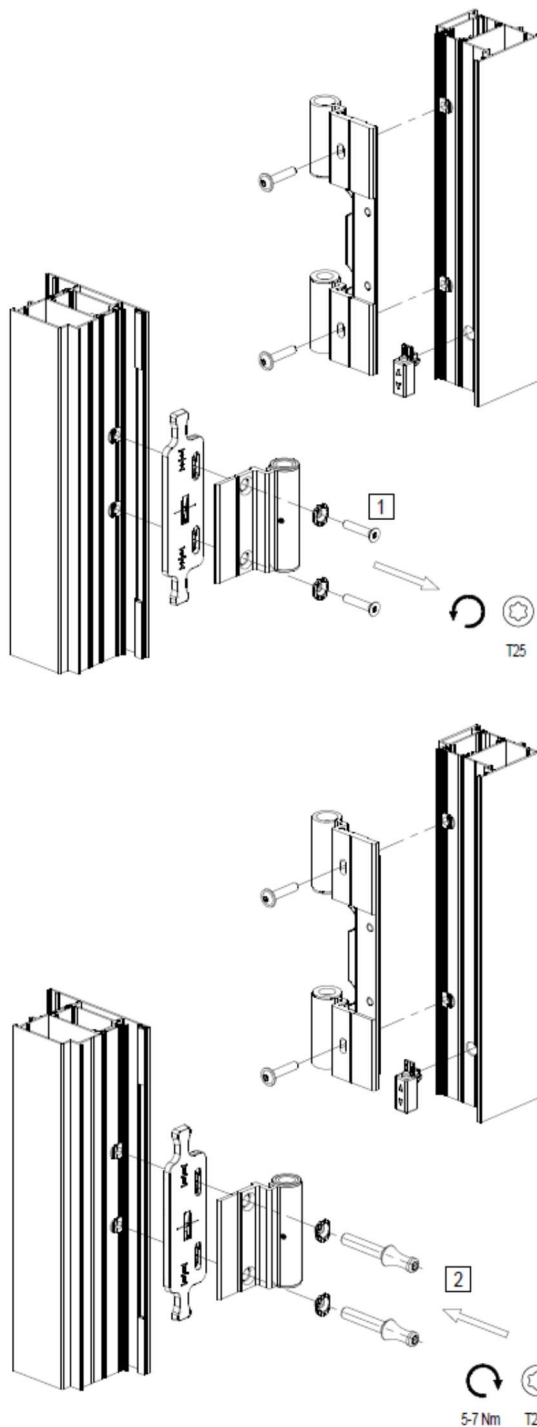
065.6581.--
2x / vent



065.6584.--
1x / vent



NIET VOOR CS 77-FP
PAS POUR CS 77-FP
NOT FOR CS 77-FP
NICHT FUR CS 77-FP





Central lock drilling protection

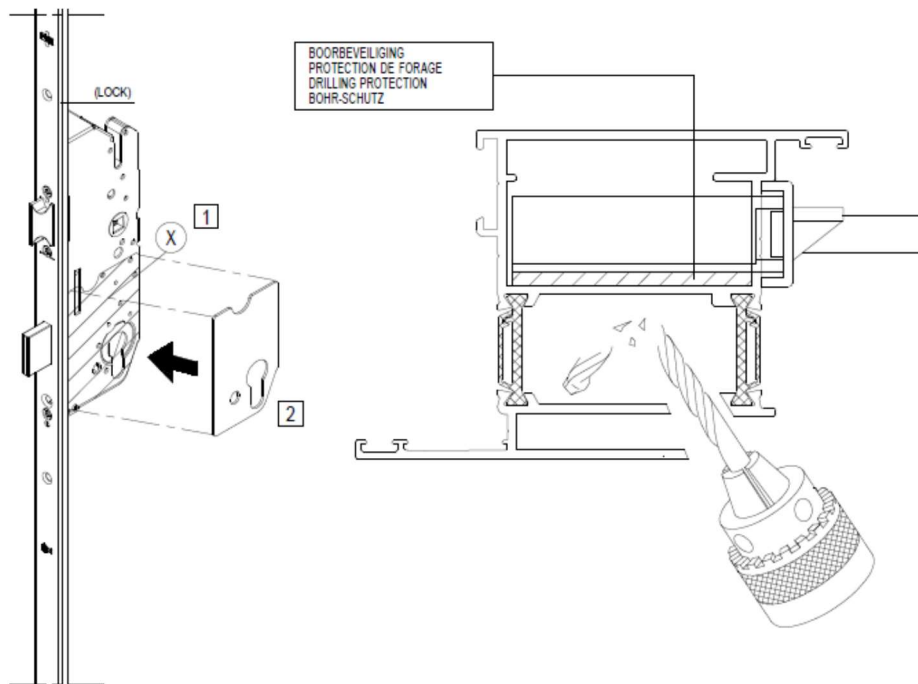
MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Central lock drilling protection



BOORBEVEILIGING
PROTECTION DE FORAGE
DRILLING PROTECTION
BOHR-SCHUTZ

061.8061.--



MONTAGEVOLGORDE
L'ORDRE DE MONTAGE
THE ORDER OF ASSEMBLY
MONTAGEREIHENFOLGE

1 2 3 .

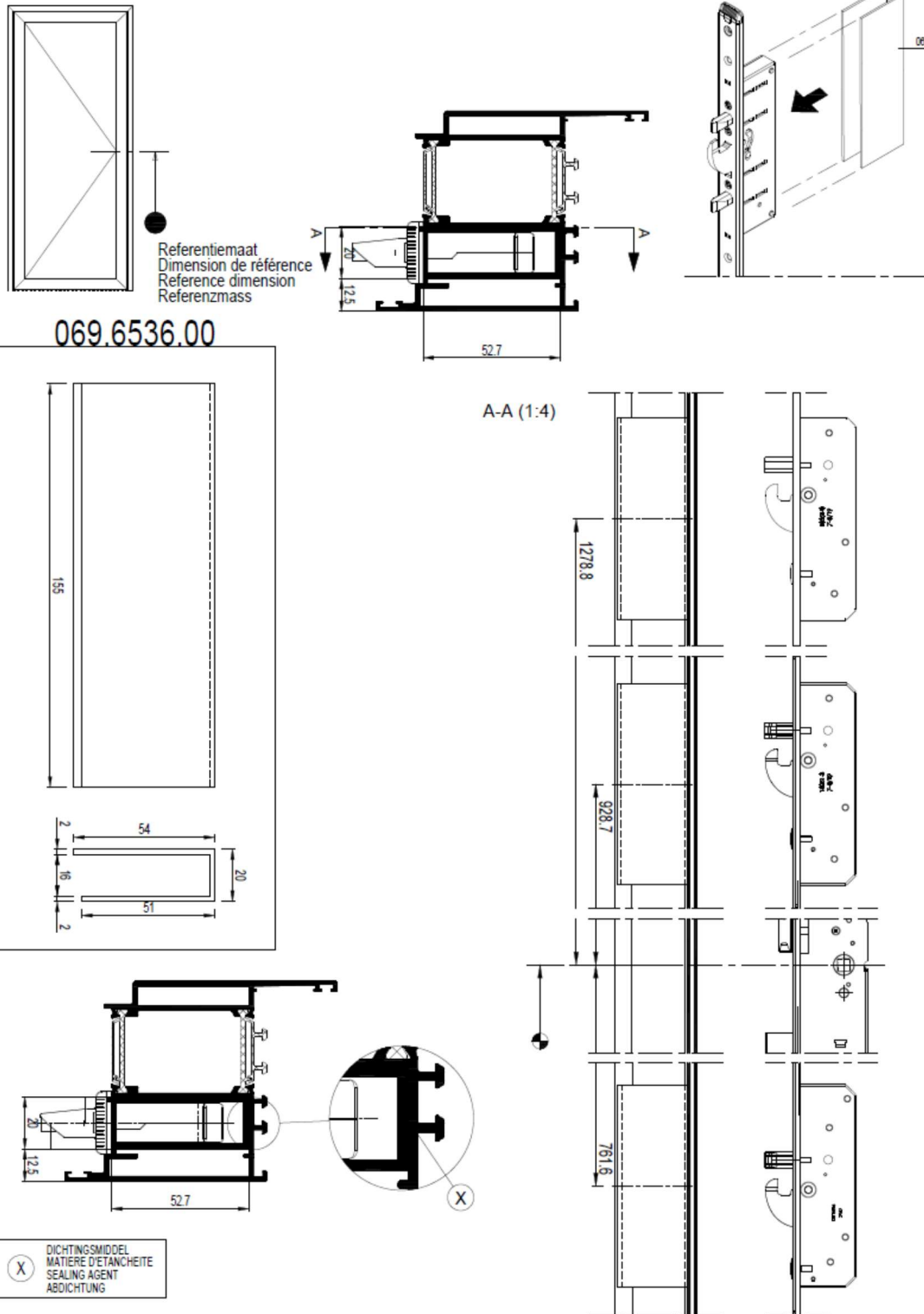
X DICHTINGSMIDDEL
MATIERE D'ETANCHEITE
SEALING AGENT
ABDICHTUNG



Top/Bottom lock drilling protection

**MASTERLINE 8-Fu
AP RC 3**Fuhr 836 lock - Single door with pull handle - SKG[®] cilinder

Top/Bottom lock drilling protection

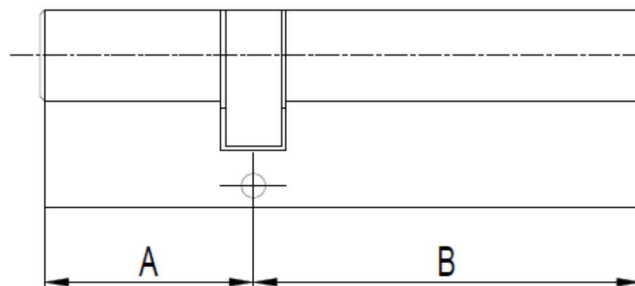
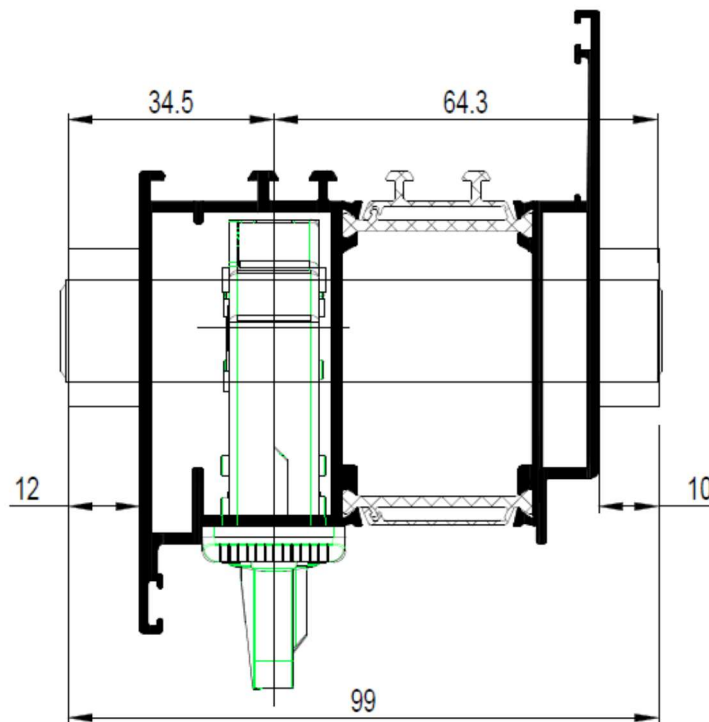




Cylinder

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Cylinder



061.7078.--

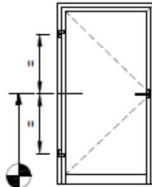
A=34.5(35); B=65



Detachable cable passage

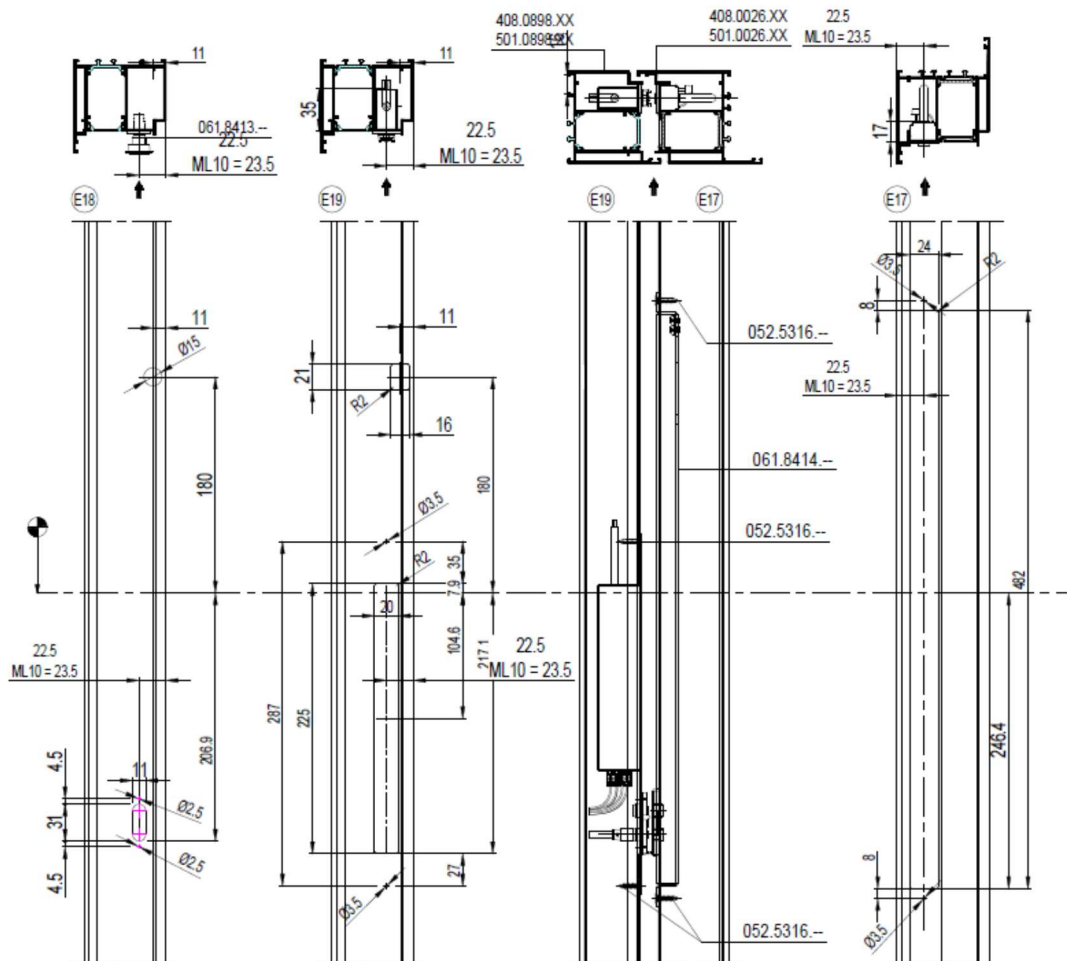
MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Detachable cablepassage



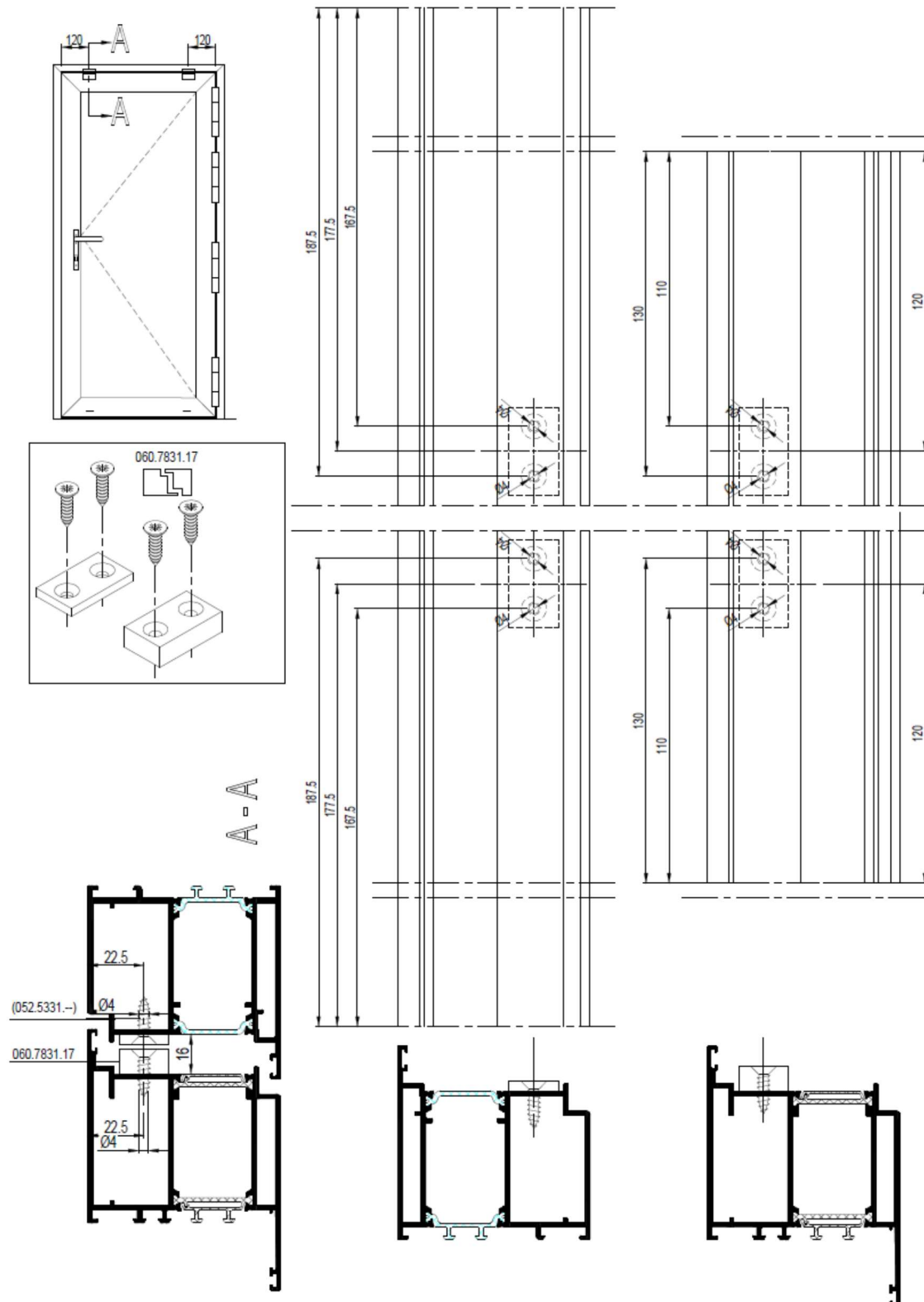
REFERENTIEMAAT
DIMENSION DE REFERENCE
REFERENCE DIMENSION
REFERENZMASS

POSITIE VAN DE FREZINGEN MOET MOGELIJK Aangepast worden TEN GEVOLGE VAN DE SCHARNIERLOCATIE
PEUT-ETRE LA POSITION DES FRAISAGES DOIT ETRE ADAPTEE PAR SUITE DE LA LOCATION DE LA CHARNIERE
THE POSITION OF THE MILLINGS MAY HAVE TO BE ADJUSTED AS A RESULT OF THE LOCATION OF THE HINGES
DIE POSITIONIERUNG DER AUSFRASUNGEN MUB VIELLEICHT ANGEPAST WERDEN INFOLGE DIE LOKATION DES TURBANDES





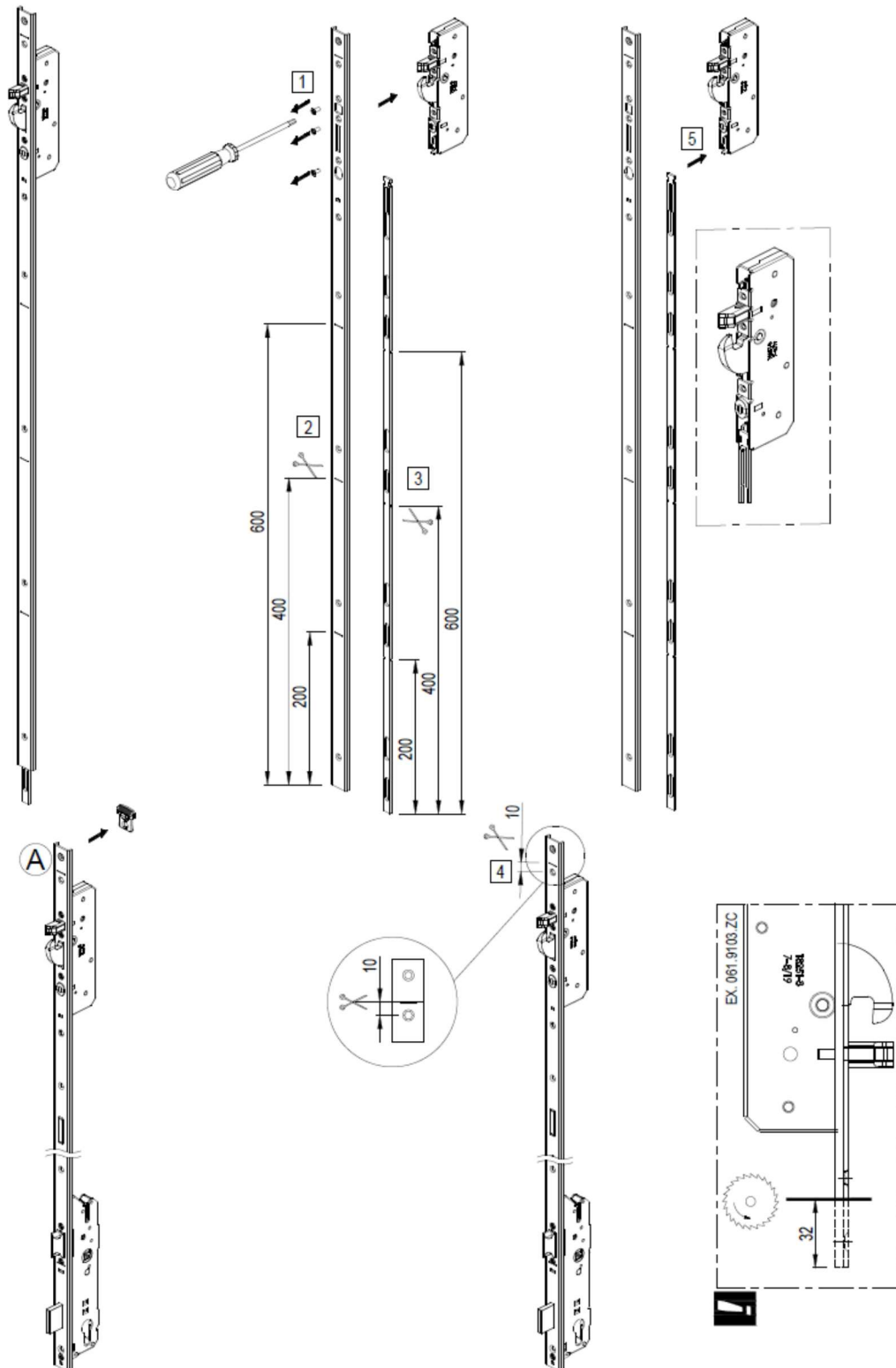
Security device RC3

**MASTERLINE 8-Fu
AP RC 3**Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Security Device RC3

Lock extension

MASTERLINE 8-Fu
AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Lock extension

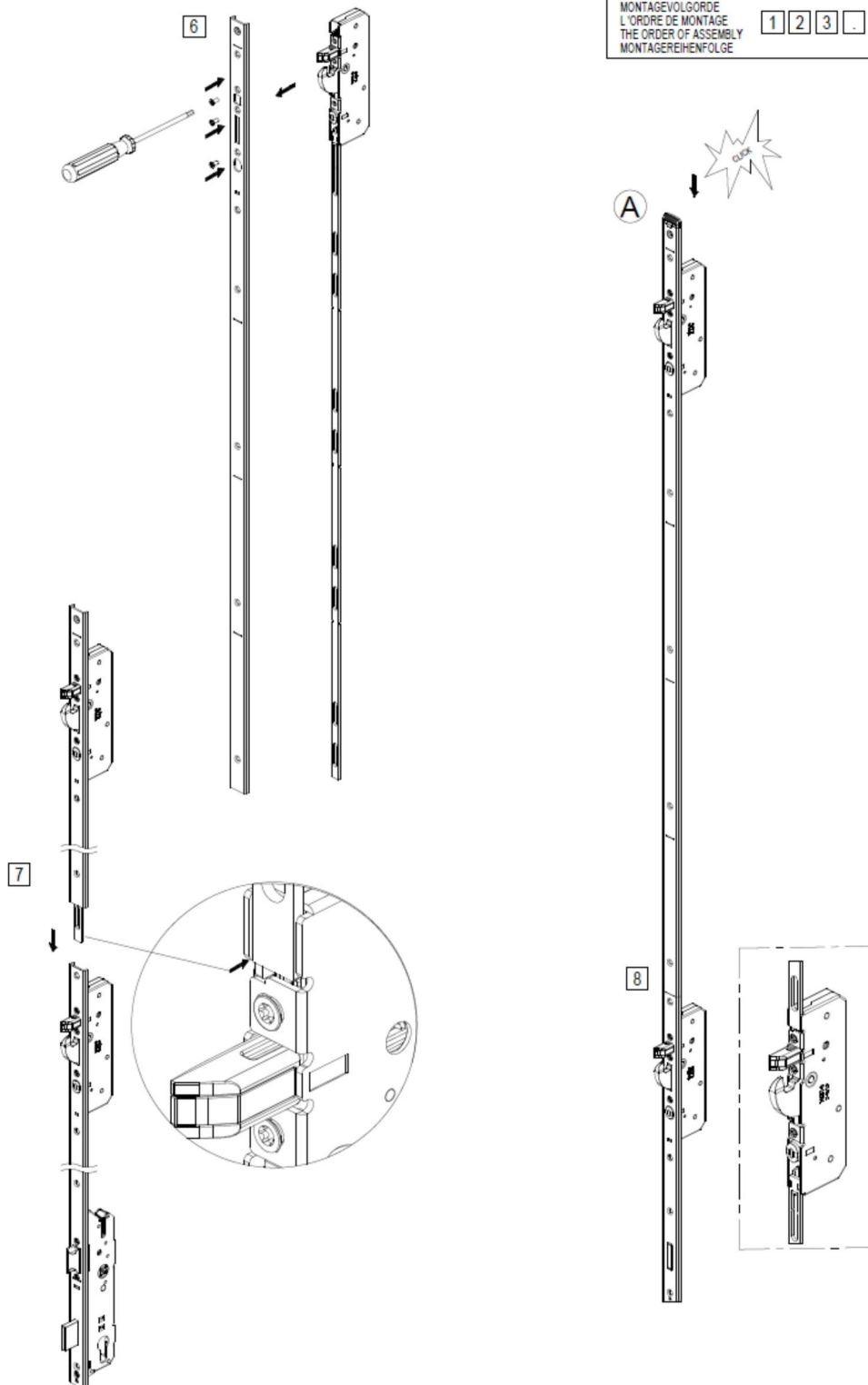




Lock extension 2

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Lock extention 2





Motor assembly

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Motor assembly



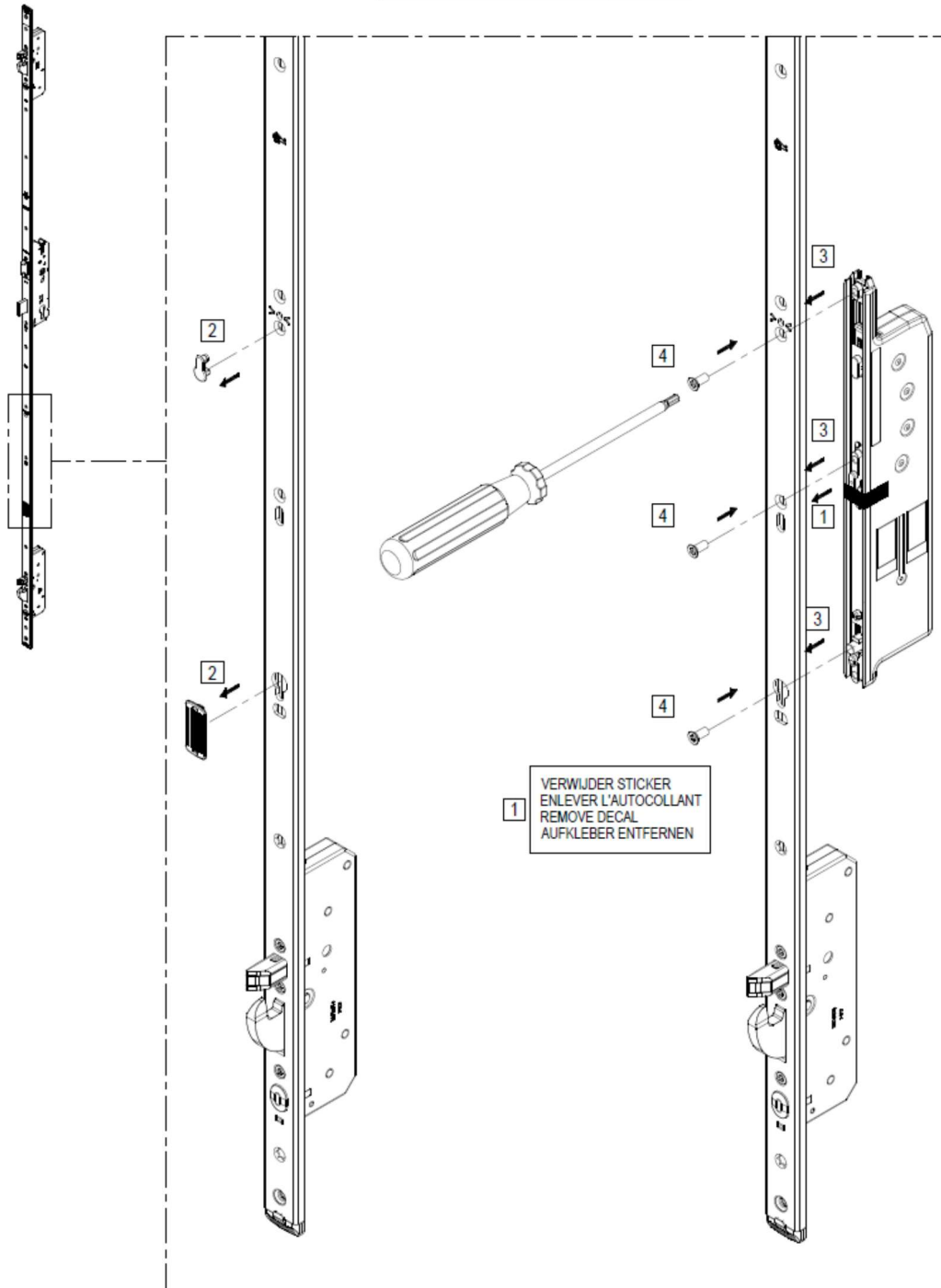
INSTALLATIE MOTOR
INSTALLATION MOTOR
INSTALLATION MOTOR DRIVE
MONTAGE MOTORANTRIEB

MOTOR 836 / 836P SLOT
MOTEUR POUR 836/836P SERRURE
MOTOR FOR 836/836P LOCK
MOTOR FÜR 836/836P SCHLOSS

061.9100.-

MONTAGEVOLGORDE
L'ORDRE DE MONTAGE
THE ORDER OF ASSEMBLY
MONTAGEREIHENFOLGE

1 2 3 4



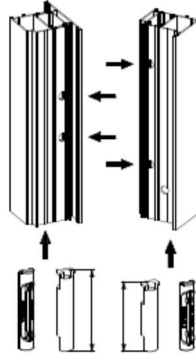
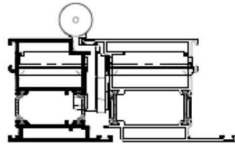


Rollenband install

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Rollenband install



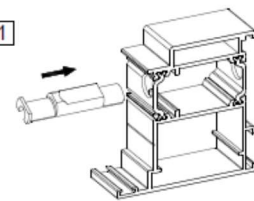
KORTSTE BUSSEN IN KADER
DOUILLES PLUS COURTES DANS DORMANT
SHORTEST BUSHES IN FRAME
KURZESTE BUCHSEN IN RAHMES



VLEUGEL ZELFDE MONTAGE
VANTAIL MEME MONTAGE
VENT SAME ASSEMBLY
FLUEGEL GLEICHEN MONTAGE

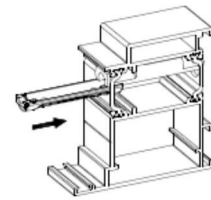


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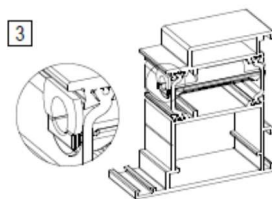


A

2



3



MONTAGE/COMPOSER
L'ORDRE DE MONTAGE
THE ORDER OF ASSEMBLY
MONTAGEREIHENFOLGE

1 2 3 .



Rollenband install 2

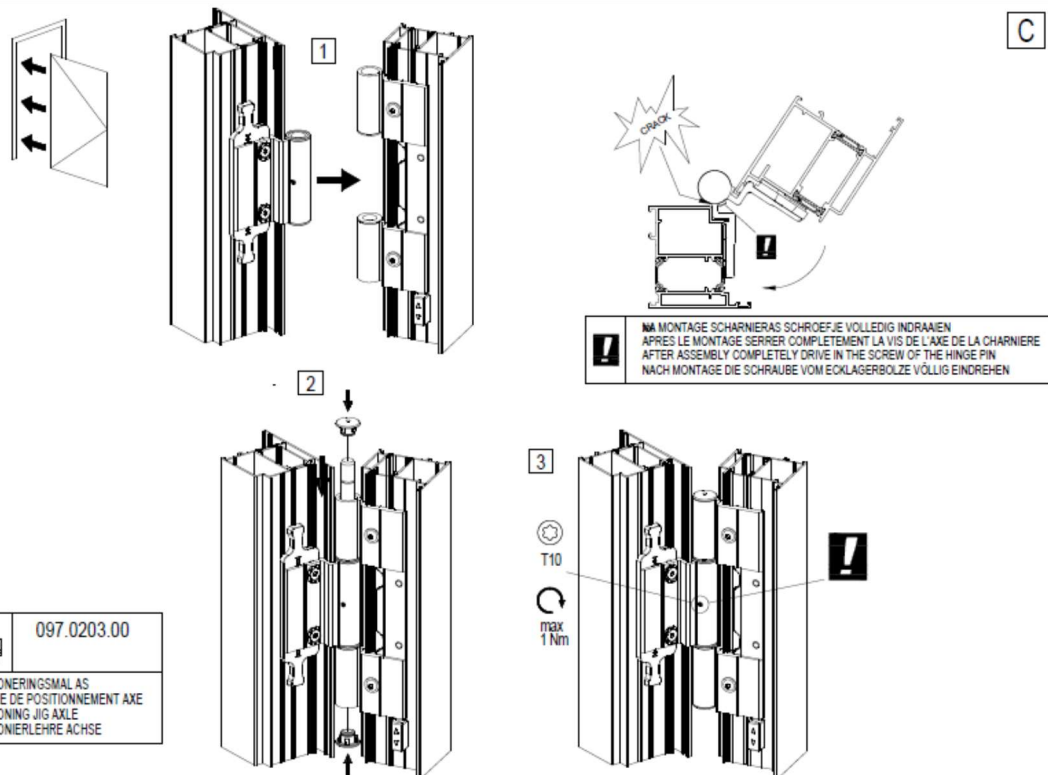
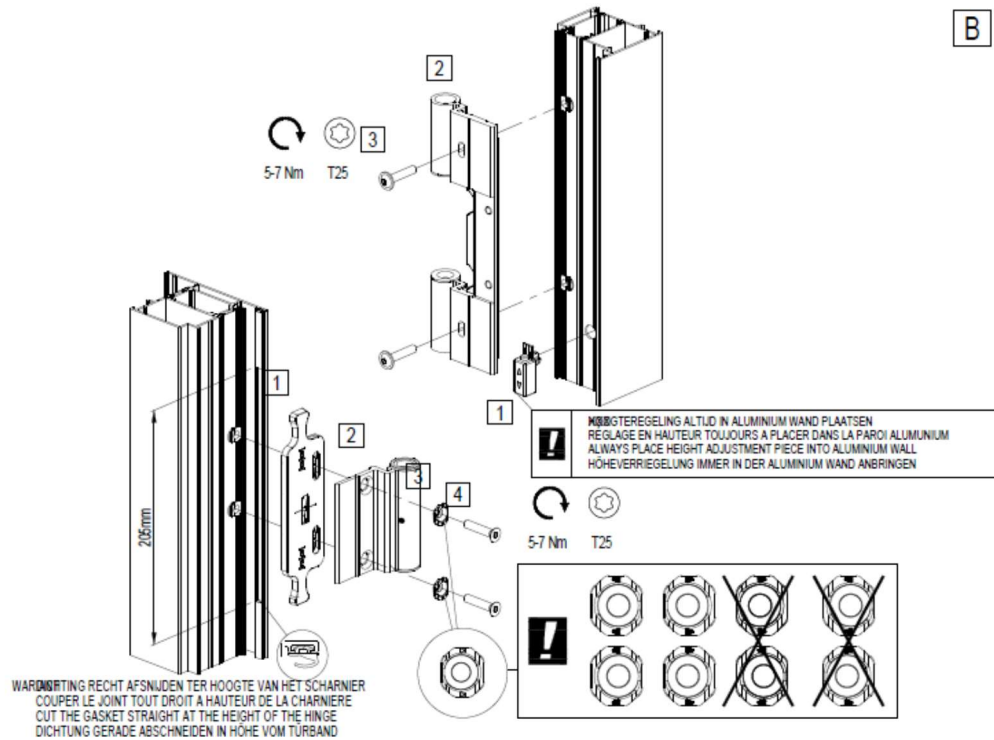
MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder

Rollenband install 2



B



	097.0203.00
POSITIONERINGSMAL AS CALIBRE DE POSITIONNEMENT AXE POSITIONING JIG AXLE POSITIONIERLEHRE ACHSE	



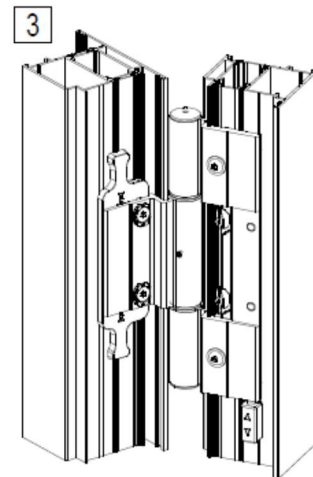
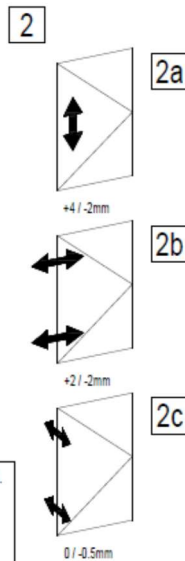
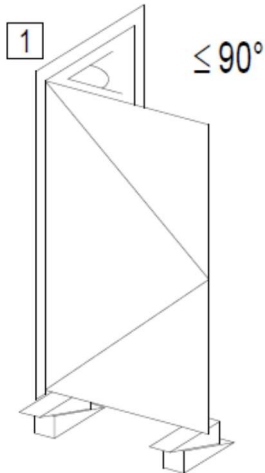
Rollenband adjust

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Rollenband adjust



REGELING
REGLAGE
ADJUSTMENT
VERSTELLUNG



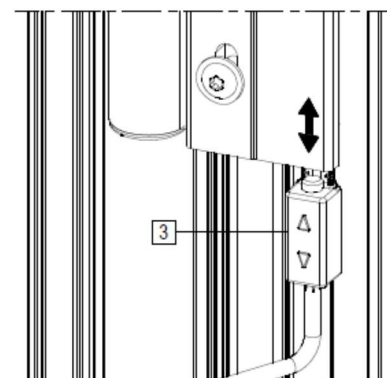
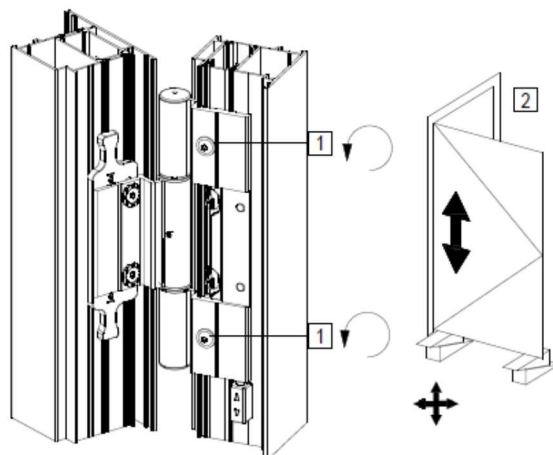
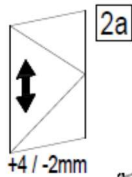
BIJ ELKE VERSTELLING MOET DE DEURVLEUGEL ONTLAST WORDEN.
AVANT TOUT REGLAGE SOULAGER LE VANTAIL. AUCUN REGLAGE
NE DOIT ETRE EFFECTUE EN CHARGE.
WHENEVER READJUSTING THE DOOR VENT, THE LOAD MUST BE
TAKEN OFF THE CENTRE OF GRAVITY.
BEI ALLE VERSTELLUNGEN IST DER TÜRFLUGEL IM
SCHWERPUNKT ZU ENTLASTEN.



T25

5 - 7Nm

VERTIKAAL REGELING
REGLAGE VERTICAL
VERTICAL ADJUSTMENT
VERTIKAL VERSTELLUNG



T25

max. 3Nm

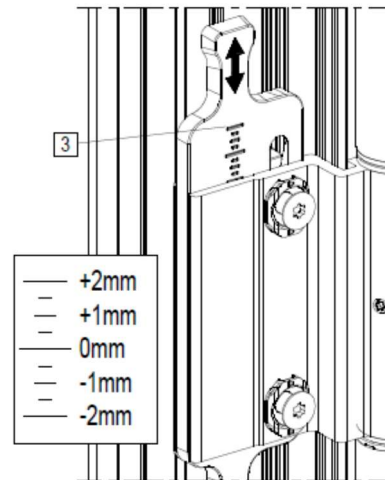
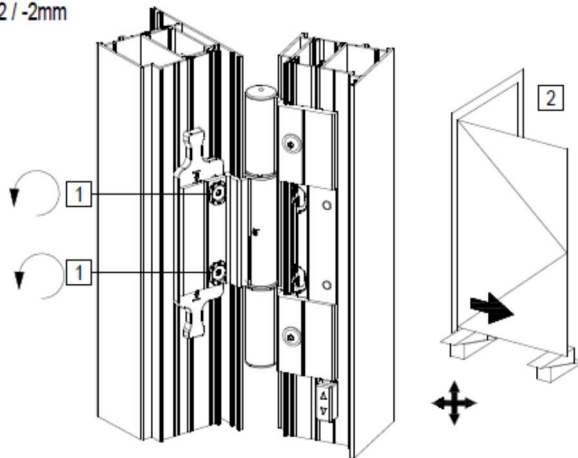
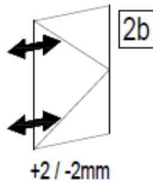
Rollenband adjust 2

**MASTERLINE 8-Fu
AP RC 3**

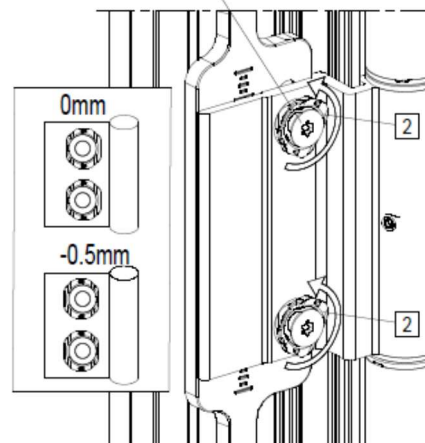
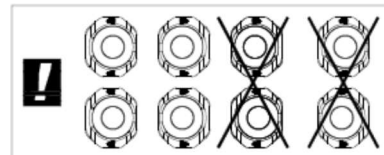
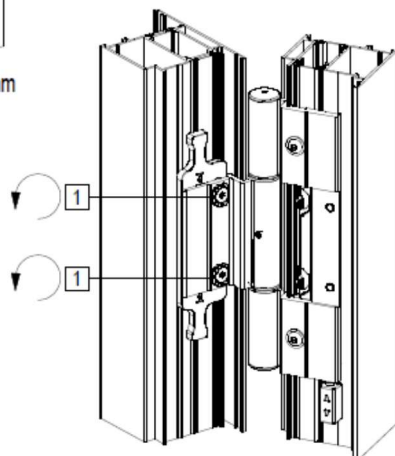
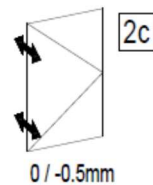
Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Rollenband adjust 2



HORIZONTAL REGLING
REGLAGE HORIZONTAL
HORIZONTAL ADJUSTMENT
HORIZONTAL VERSTELLUNG



AANDRUK REGLING
REGLAGE DE LA PRESSION
PRESSURE SETTING
ANDRUCKVERRIEGELUNG



MONTEGANGSRIJGANG
L'ORDRE DE MONTAGE
THE ORDER OF ASSEMBLY
MONTAGEREIHENFOLGE

1 2 3



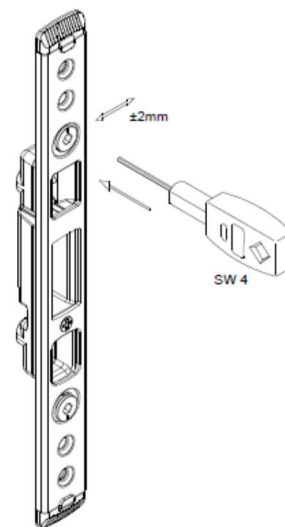
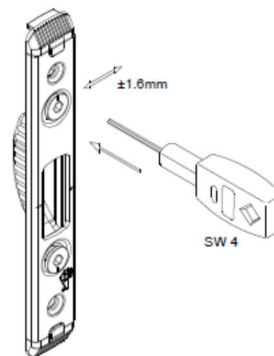
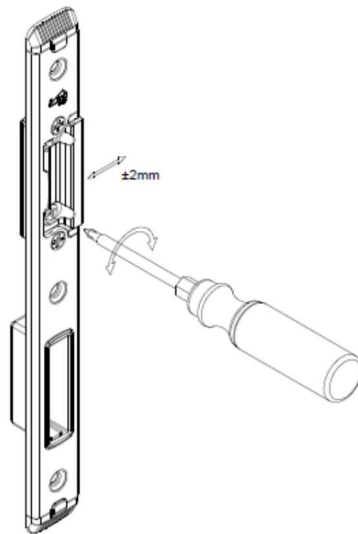
Hardware adjustment

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Hardware Adjustment



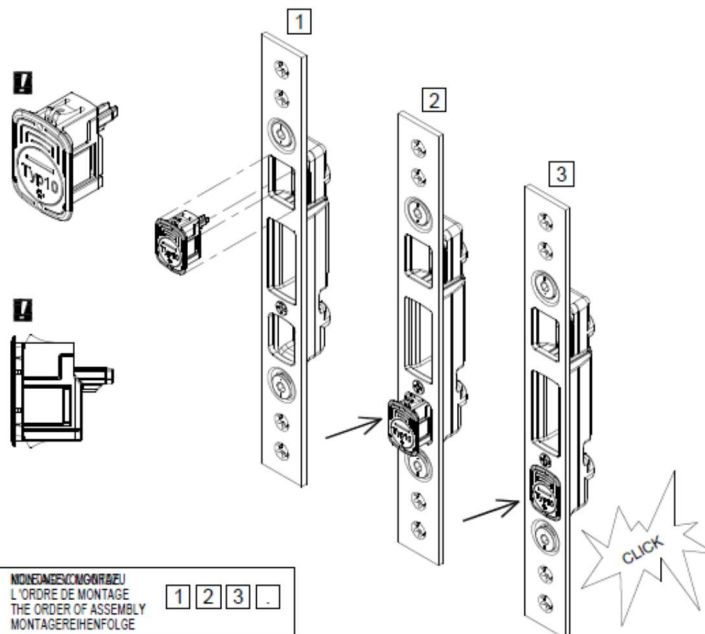
ANPASSINGEN AAN SLOTADEN
GACHE MODIFICATIONS
RECEIVER MODIFICATIONS
SCHLIESSBLECH ANPASSUNG



ABDECKKAPPE MIT MAGNETEN
CAPUCHONS AVEC AIMANTS
COVERS WITH MAGNETS
ABDECKKAPPEN MIT MAGNETEN

	061.8790.04
	061.8791.04

	DEMONTAGE TOOL OUTIL DE DEMONTAGE DISASSEMBLY TOOL DEMONTAGEWERKZEUGE	061.7786.-
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MONTAGEKOMPLEX
L'ORDRE DE MONTAGE
THE ORDER OF ASSEMBLY
MONTAGEREIHENFOLGE

1 2 3 .

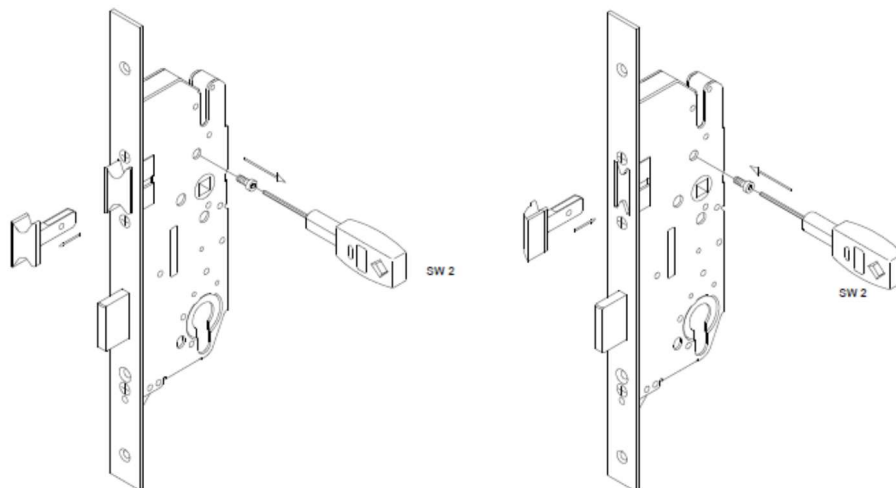
Hardware adjustment 2

MASTERLINE 8-Fu AP RC 3

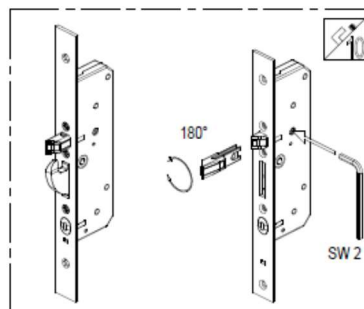
Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Hardware adjustment 2



OPTIES DAGSCHIETER
OPTIONS SERRURE A PENE DEMI-TOUR
CATCH-LOCK OPTIONS
FALLE OPTIONS



OPTION 3 : LATCH DIN L > DIN R

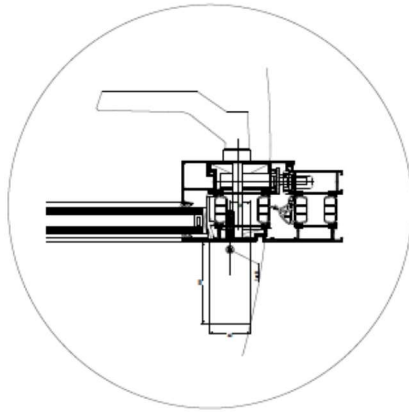




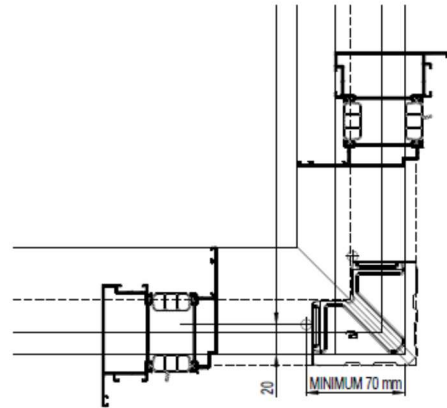
Door pulls

MASTERLINE 8-Fu AP RC 3

Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Door Pulls

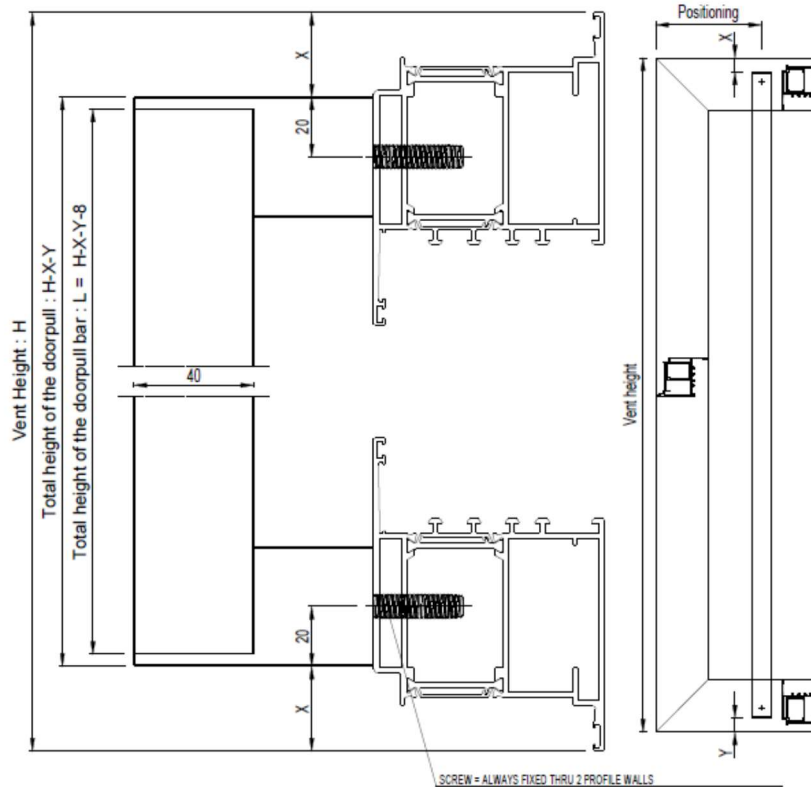


BE AWARE OF THE SWING MOVEMENT OF THE DOOR



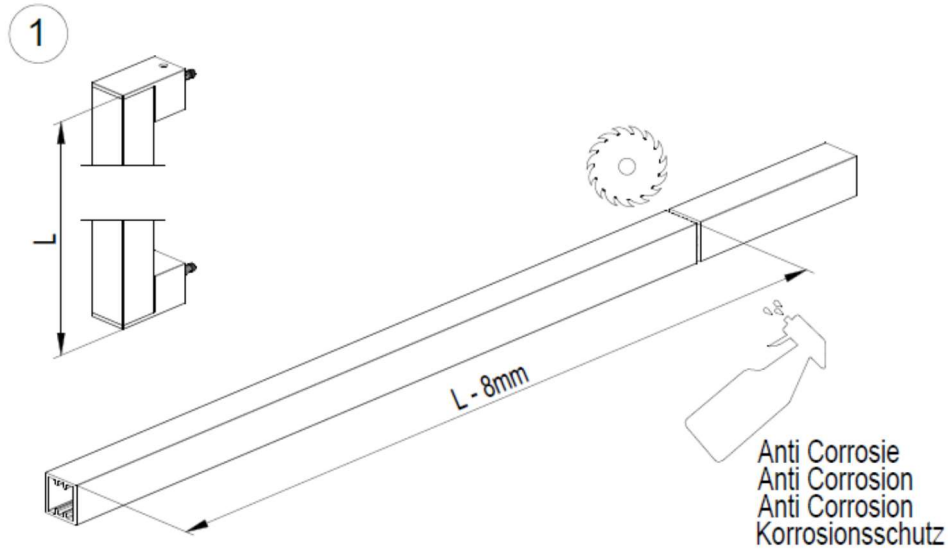
BE AWARE OF THE POSITIONING OF THE CORNER
MINIMUM 70 mm AWAY FROM EDGE OF PROFILE

X and Y are free to choose

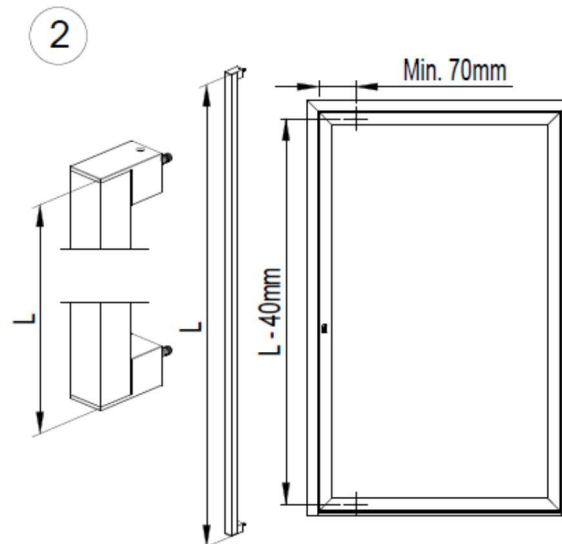




Door pulls (cont'd)

**MASTERLINE 8-Fu
AP RC 3**Fuhr 836 lock - Single door with pull handle - SKG[®] cylinder
Door Pulls

Cut the bar to the correct length





Door pulls (cont'd)

**MASTERLINE 8-Fu
AP RC 3**Fuhr 836 lock - Single door with pull handle - SKG ** cilinder
Door Pulls