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



























Additional documents

- No. 002014 Processing FRAME⁺ aluminium windows 75

Further general information on the processing of the frame, mullion, transom and structural profiles and also all accessories of the FRAME⁺ 75 WI series

Symbols

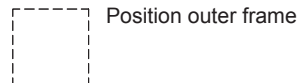
	drilling with jig		drive-in		cutting of rubber		milling
	cleaning, degrease and prime		glueing		seaming paste		spray
	welding		countersunk		grinding		manual tightening
	cutting		screwing with torque		milling template transom timber connector		clamping
	punching with tool		milling with jig		nailing with tool		drive-in with non-rebound soft hammer
	sawing		screwing		drilling		
	punching by hand		cutting threads		pressing		



butt joint



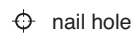
mitred corner



Position outer frame



glue hole



nail hole

Installation instructions for burglar-resistant windows of resistance class RC2/RC3

In addition to the general usage guidelines for the RAICO FRAME⁺ window systems W, LF, the following usage guidelines are necessary in order to fulfil the conditions for resistance class RC2/RC3 according to DIN EN 1627:

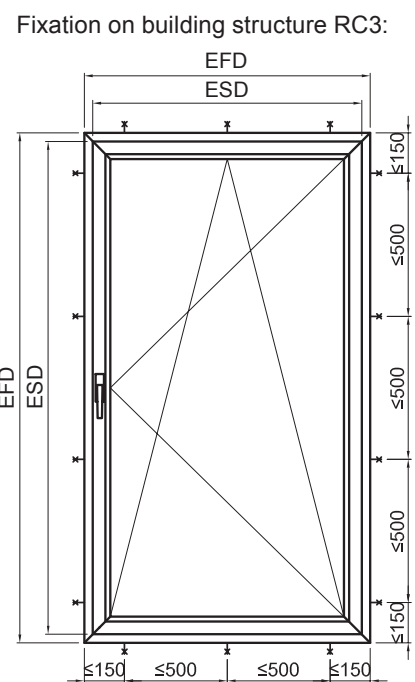
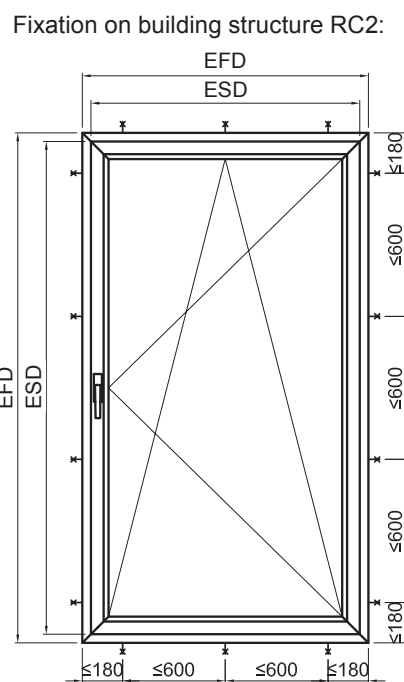
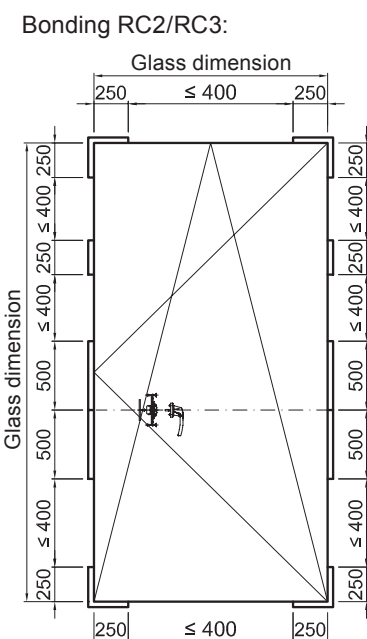
1. The permissible leaf sizes are to be observed according to the static values and technical data for the single profiles.
2. Particular attention must also be paid to adherence to the cutting tolerances of profiles and locking bars according to the usage guidelines and installation instructions.
3. Lockable window handles that meet the requirements according to DIN EN 1627 to 1630 are approved. In the case of window handles without rosettes or with oval rosettes, the safety mortice bolt set no. 293063 with drilling protection must be used. In the case of geared handles, the safety gear protection set no. 293065 with gear protection must be used.
4. The additional burglar-resistant safety locking sets
 - **RC2:** no. 224966 and 224967 or 293050
 - **RC3:** no. 293053
 are to be installed according to the installation instructions. First of all the safety closing mechanisms are installed in the sash or in the locking bolt (insertable). The specified dimensions for the positions of the safety strikers on the frame are only for approximate positioning. The exact positions of the safety strikers must be determined by transfer of the closer position. When transferring, the fitting must be in turning position. After completing the assembly, it is necessary to check the function of the required engagement of the safety locking parts.
5. In the case of Tilt and Turn leaves, the standard central locking set is replaced by the safety corner deflection set no. 293062 and for the standard corner deflection the safety air gap reducing set no. 293051 is additionally required.

6. The glazing must be implemented as anti-vandal glazing according to DIN EN 356.

Construction designation EN 1627	Anti-vandal class (glass) DIN EN 356
RC2	P4A
RC3	P5A

7. Transparent or opaque fillings are adhered circumferentially to the safety glass pane or to the inner shell of the panel (see sketch). When adhering the panes of insulating glass, the inner safety pane is to be adhered. Glass carriers and support blocks/spacers are also to be adhered. It is to be ensured that drainage and rear ventilation remain guaranteed. As a matter of principle when employing wet gluing methods, the respective instructions for use with pre-treatment must be followed precisely and the applicable safety data sheets must be observed. Exclusively disposable cleaning cloths are to be used for cleaning and pretreatment.
8. The 2-component adhesive DC 993 by DOW CORNING, the 2-component silicone adhesive OTTOCOLL S81+S-CA 2030 by OTTO CHEMIE, the 2-component silicone adhesive Sikasil WT-480 by Sika, the adhesive Sikasil AS-66 by Sika and other comparable glues may be used to adhere the filling. The full hardening times must be observed.
9. In addition to the usual shimming of the glazing, spacer blocks must be attached as backfilling next to all burglar-resistant locking parts, the strips and the gear, assuming the fact, that there is no glass bonding at the corresponding location.

Processing
Production process



= Bonding

Fixing points to the building structure

Fixing points to the building structure

Installation instructions

for burglar-resistant windows of resistance class RC2/RC3

10. When assembling the elements, it is compulsory to adhere to the maximum distances between the fixing points in the outer frame (see sketch).

If necessary, the positions of the safety locking parts are to be checked again before drilling out (see point 4). For the attachment of the outer frame, suitable fastening elements from the product ranges of well-known manufacturers are to be used in appropriate lengths. When fixing, the building joint between the outer frame and the building structure must be firmly backfilled in the area of the fixing points, e.g. using plastic blocks.

The test does not contain any statement about the burglar-resistance of the wall.

Therefore, the following allocation is to be observed when installing burglar-resistant windows:

11. According to DIN EN 1627, manufacturers of burglar-resistant structural elements can have themselves certified on a voluntary basis. This requires the attachment of identifying signs by the manufacturer.

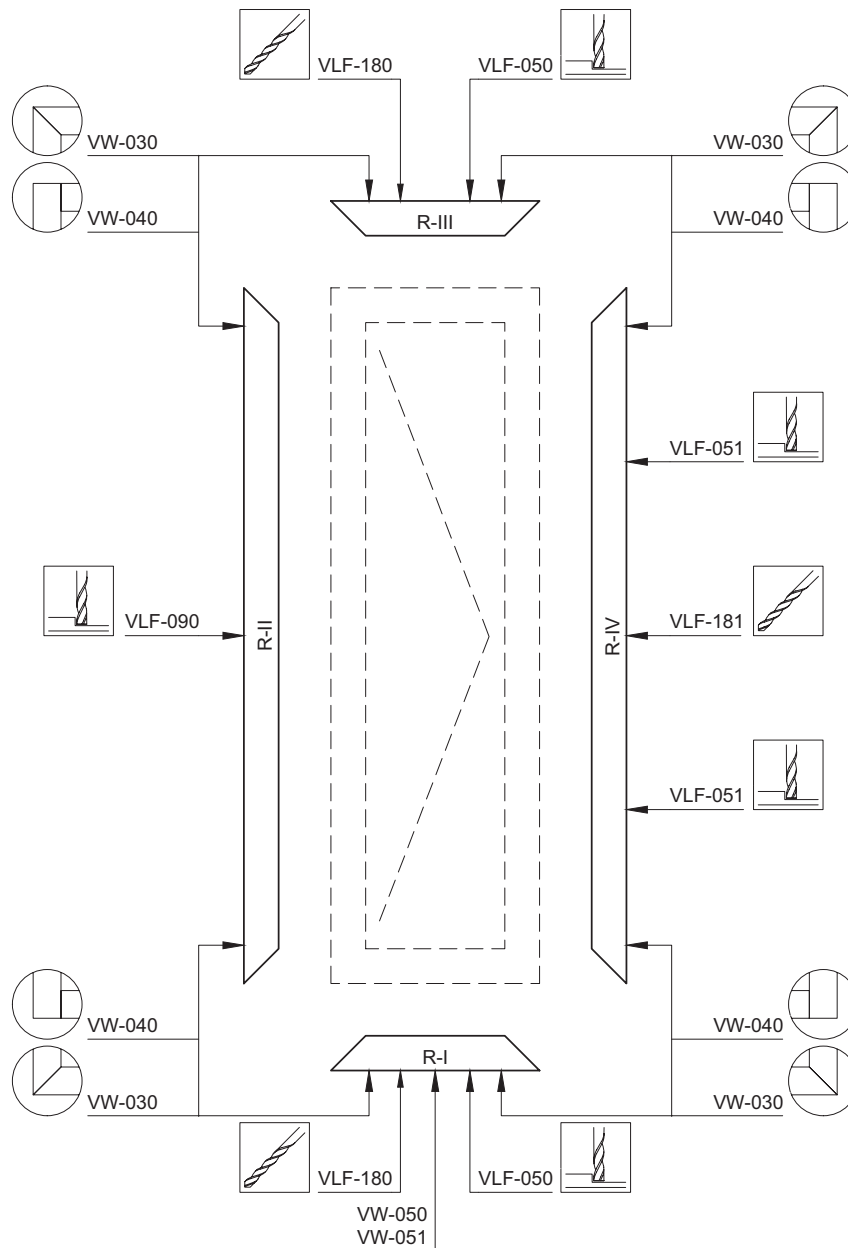
The manufacturer must confirm the professional production and installation by means of the following certificates.

Allocation of the resistance classes of burglar-resistant windows to walls

Resistance class of the structural element according to EN 1627	Surrounding walls				
	Constructed from masonry according to DIN 1053-1			Constructed from reinforced concrete according to DIN 1045	
	Nominal thickness mm min.	Compressive strength class of the bricks	Mortar group min.	Nominal thickness mm min.	Strength class min.
1 and 2	≥ 115	≥ 12	II	≥ 100	B 15
3	≥ 115	≥ 12	II	≥ 120	B 15
4	≥ 240	≥ 12	II	≥ 140	B 15
5	–	–	–	≥ 140	B 15
6	–	–	–	≥ 140	B 15

Mounting and assembly
Production process outer frame

Section:
75LF - R
Step 01.01



■ R-I

1. Cut profile to length [VLF-010 / VLF-011]
2. Drill / punch nail and glue holes [VW-030 / VD-040]
3. Drainage/ventilation:
 - with drainage caps [VW-050]
 - through the antechamber [VW-051]
4. **If necessary:** for motorised version make the recess in the outer frame [VLF-050]
5. **If necessary:** hole for opening monitoring [VLF-0180]

■ R-II

1. Cut profile to length [VLF-010 / VLF-011]
2. Drill / punch nail and glue holes [VW-030 / VD-040]
3. **If necessary:** for motorised version, carry out the machining for the cable transition depending on the DIN direction [VLF-090]

■ R-III

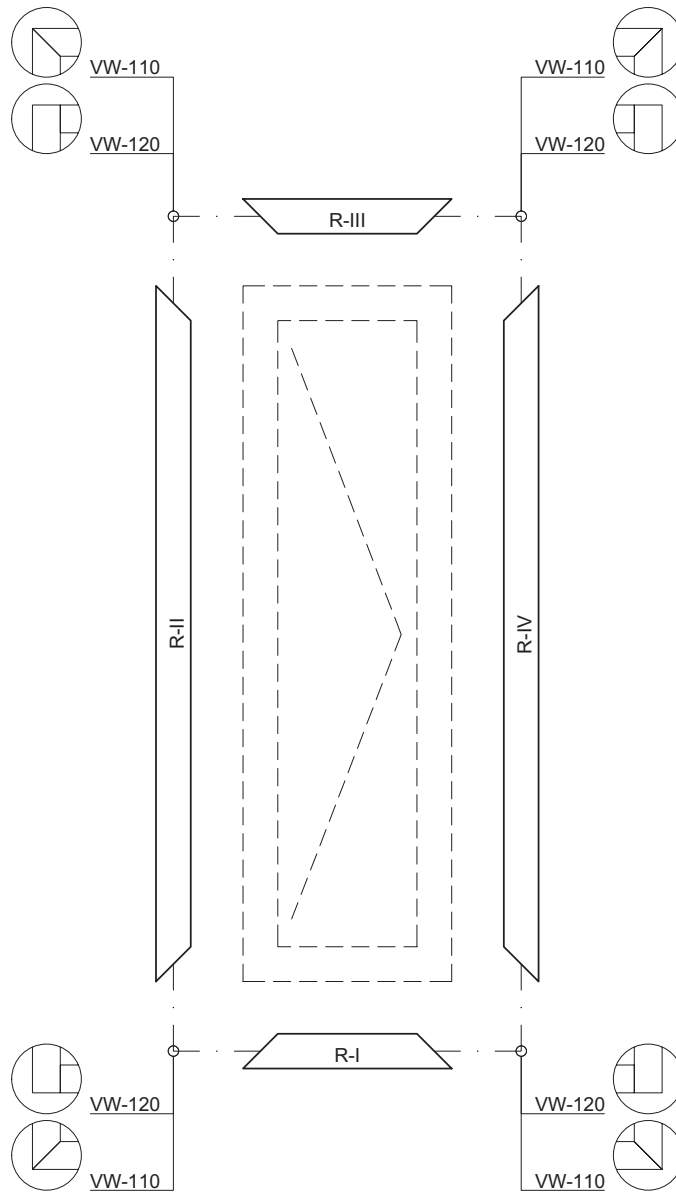
1. Cut profile to length [VLF-010 / VLF-011]
2. Drill / punch nail and glue holes [VW-030 / VD-040]
3. **If necessary:** for motorised version make the recess in the outer frame [VLF-050]
4. **If necessary:** hole for opening monitoring [VLF-0180]

■ R-IV

1. Cut profile to length [VLF-010 / VLF-011]
2. Drill / punch nail and glue holes [VW-030 / VD-040]
3. **If necessary:** hole for lock monitoring according to DIN direction [VLF-181]
4. **If necessary:** carry out the milling for RC strike plate [VLF-240]

Mounting and assembly
Production process outer frame

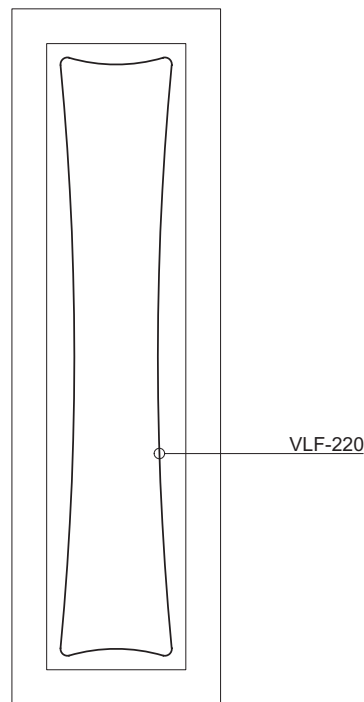
Section:
75LF - R
Step 02.01



1. **If necessary:** insulation insertion into the hollow chamber insert and cut to length
2. Execute corner connection [VW-110]
OR
Execute T-connector [VW-120]

Assembly the outer frame
Assembly centre gasket, sealing frame and gasket corners

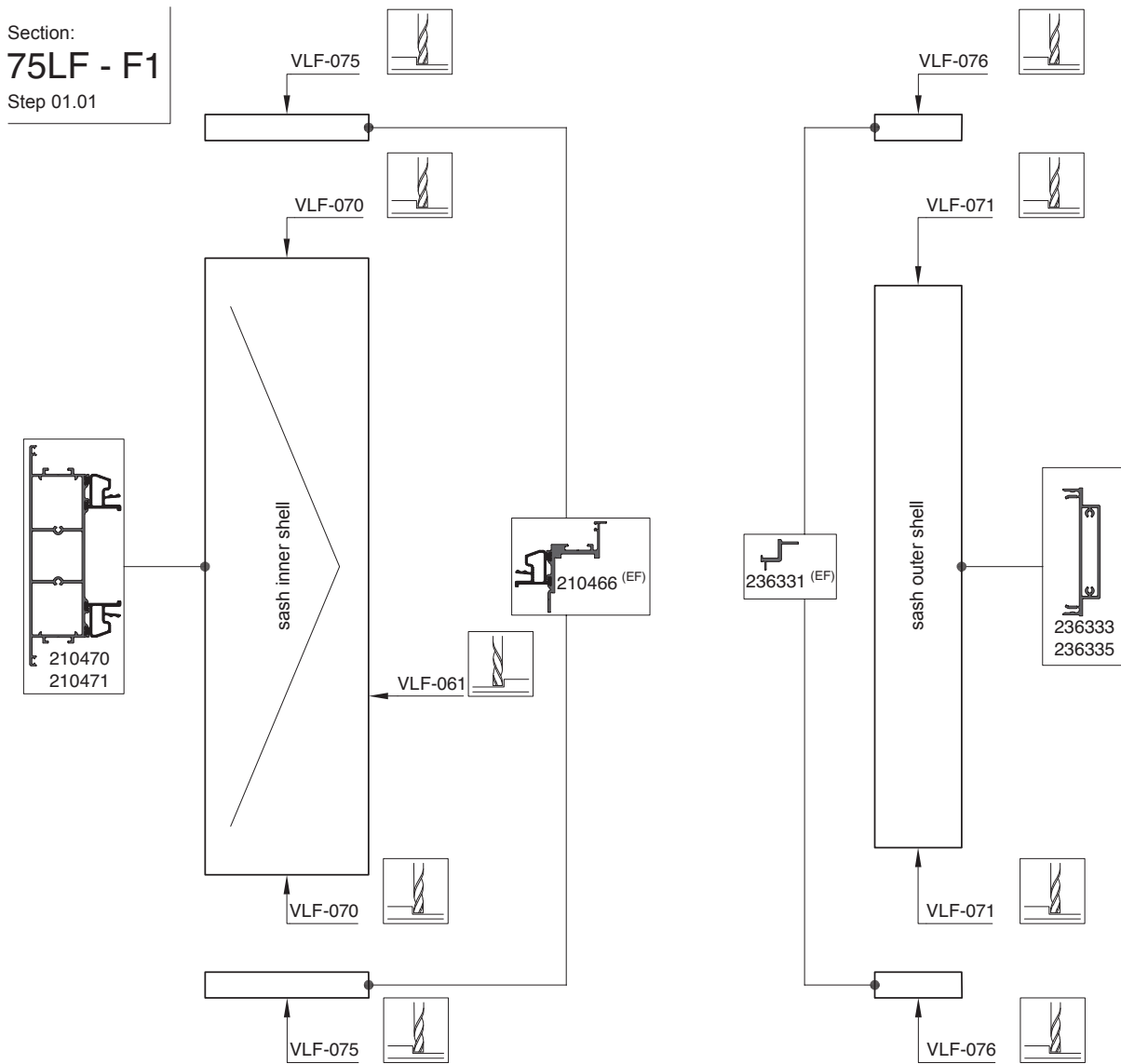
Section:
75LF - R
Step 03.01



! Final assembly / Hanging and unhooking the sash
see production process "75LF" **!**

1. Assembly centre gasket frame and stop gasket frame
[VLF-220]

Processing of manual operated sash
Sash inner shell and outer shell



■ **Sash inner shell**

1. Cut profile to length [VLF-010 / VLF-011 / VLF-022]
2. Notch profile (top and bottom) [VLF-070]
3. Handle processing according to DIN direction [VLF-061]
4. **If necessary:** producing cover in-house [VLF-075]

EF = in-house production

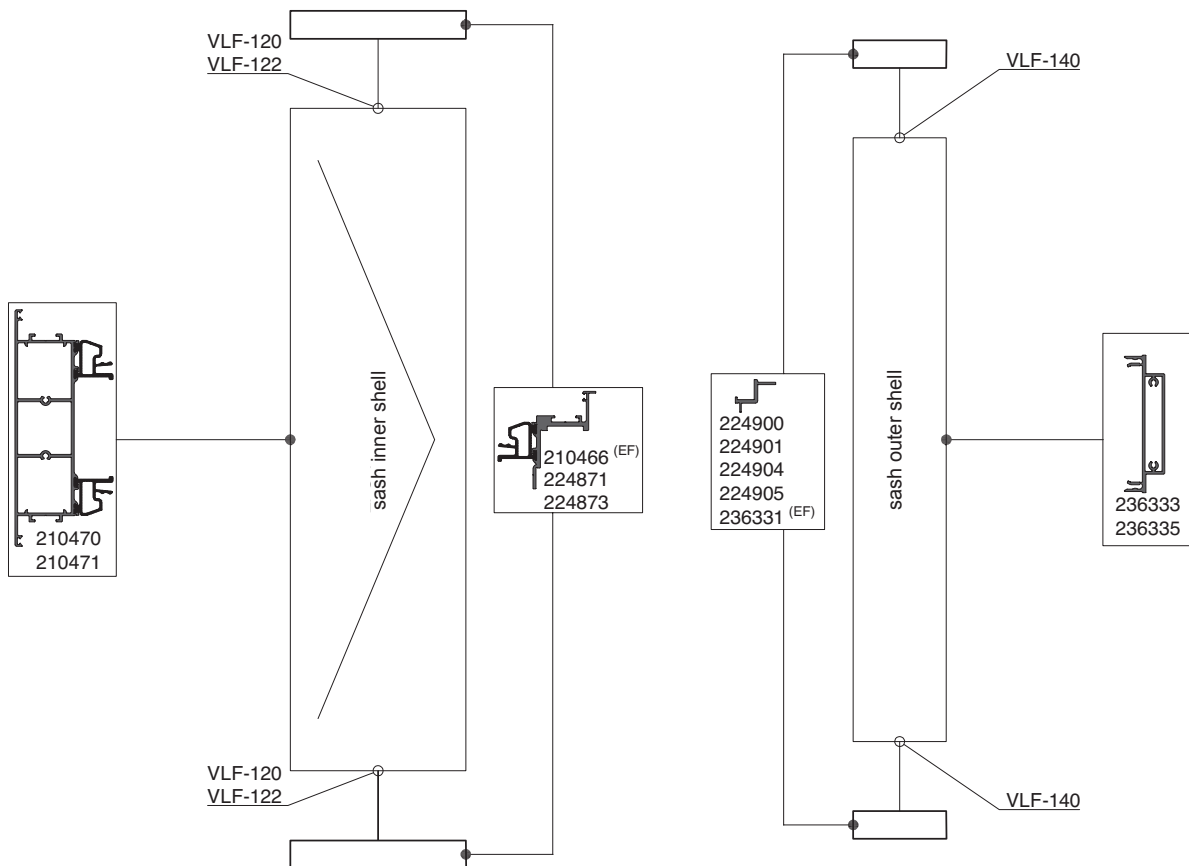
■ **Sash outer shell**

1. Cut profile to length [VLF-010 / VLF-011 / VLF-022]
2. Notch profile (top and bottom) [VLF-071]
3. **If necessary:** producing cover in-house [VLF-076]

Assembly of manual operated sash

Mounting the cover profile of sash inner shell and sash outer shell

Section:
75LF - F1
Step 02.01



■ **Sash inner shell**

1. Clean profile cut edges and cover profile [VLF-120]
2. Plug on the syntetic corner sealing piece and screw it down [VLF-120]
3. Coat the vertical leg of the cover profile inner shell with sealing compound [VLF-122]
4. Place the cover profile of the inner shell on the top and bottom of the sash profile, push on and screw together [VLF-122]
5. **If necessary:** for LF 300 cover profile, screw inner shell to the front side [VLF-122]
6. Spray out the syntetic corner sealing pieces with sealing compound [VLF-122]
7. Align escaping sealing compound with the profile contour and do not wipe it away [VLF-122]

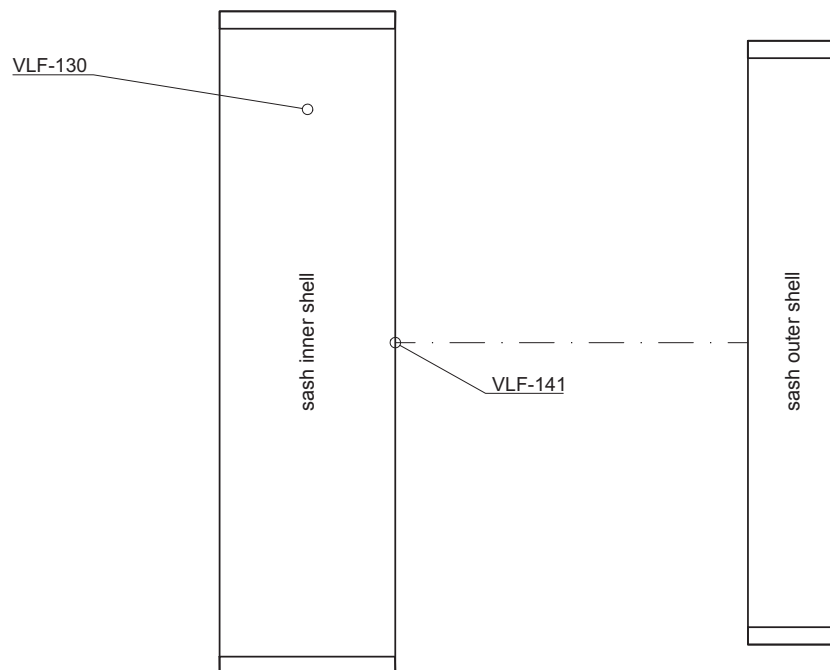
EF = in-house production

■ **Sash outer shell**

1. Clean profile cut edges and cover profile [VLF-140]
2. Coat outer shell along cover profile contour with seam paste [VLF-140]
3. Place the cover profile on the outer shell and screw it in place [VLF-140]
4. Ensure flushness between outer shell and cover profile [VLF-140]

Assembly the sash inner shell with the sash outer shell
Production process manual operated sash

Section:
75LF - F1
Step 02.02

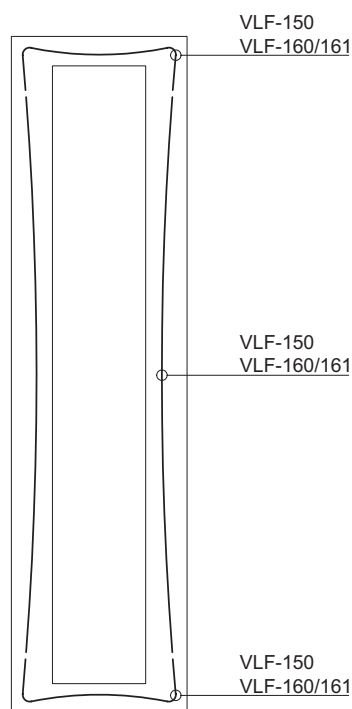


■ **Sash inner shell and outer shell**

1. **If necessary:** insert insulation insertion and cut to length [VLF-130]
2. **If necessary:** install sound insulation measures [VLF-130]
3. Center the sash outer shell onto the inner shell and clip it on [VLF-141]
4. Pre-drill and screw using the drill template [VLF-141]

Accessories
Production process manual operated sash

Section:
75LF - F1
Step 03.01



! Final assembly / Hanging and unhanging the sash
see production process “75LF“ **!**

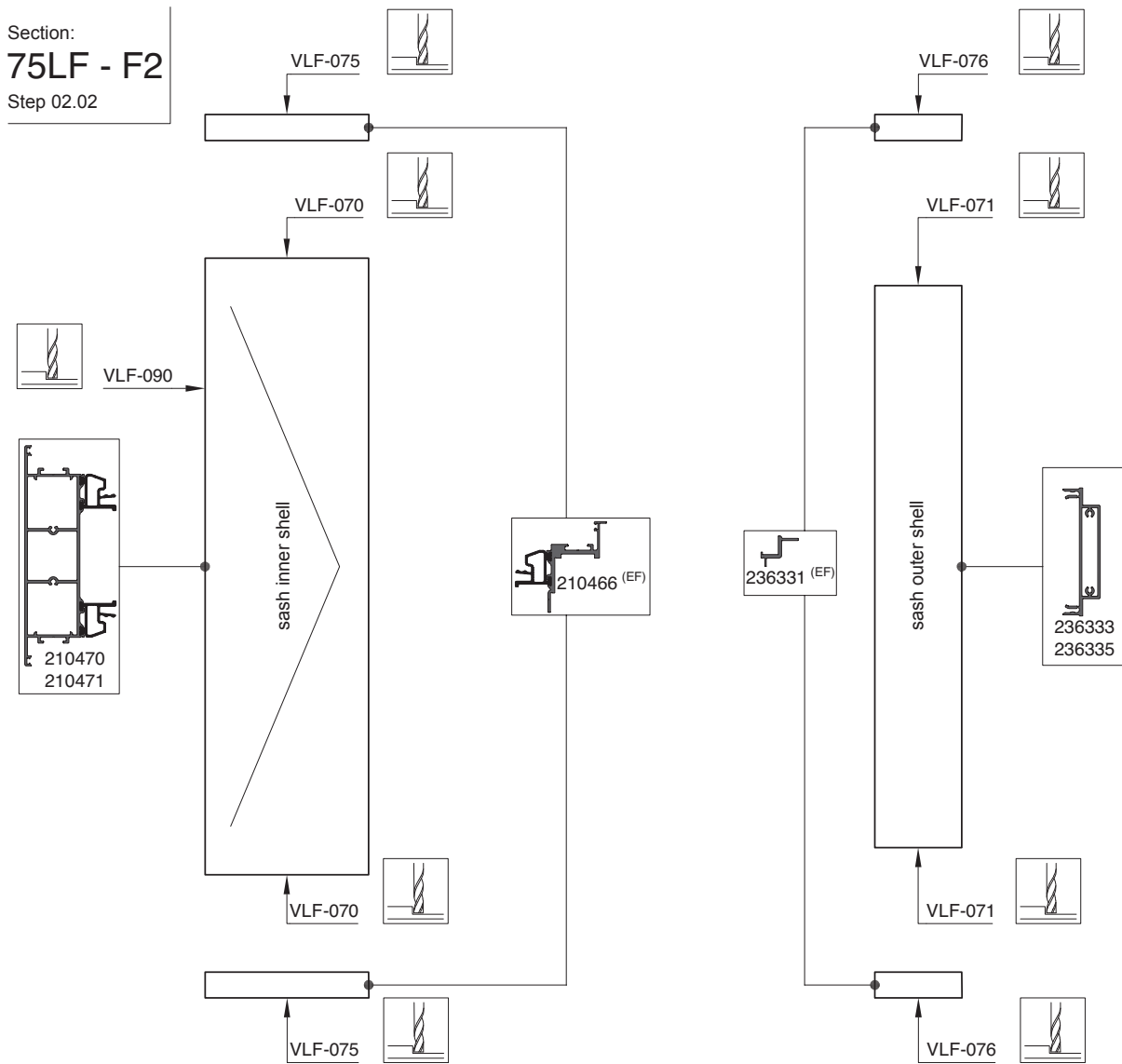
■ **For surface-mounted and concealed fitting**

1. Press the moulded part 220619.170 / 220619.300 into the sealing groove [VLF-150]
2. Cut gasket 220614 to size and glue with moulded part [VLF-150]

■ **For overlap integrated fittings**

1. Assembly of stop gasket moulded parts and stop gasket after hinge installation [VLF-160 / VLF-161]

Processing of sash inner shell and sash outer shell
Production process of motorised sash



■ **Sash inner shell**

1. Cut profile to length [VLF-010 / VLF-011 / VLF-022]
2. Notch profile (top and bottom) [VLF-070]
3. Milling of the opening for cable transition according to DIN direction [VLF-090]
4. **If necessary:** producing cover in-house [VLF-075]

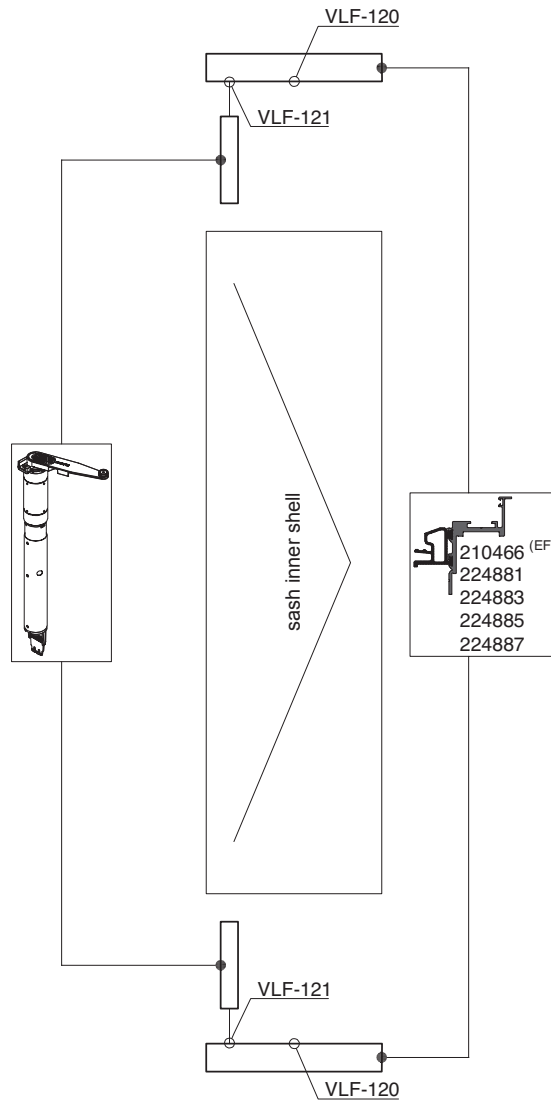
EF = in-house production

■ **Sash outer shell**

1. Cut profile to length [VLF-010 / VLF-011 / VLF-022]
2. Notch profile (top and bottom) [VLF-071]
4. **If necessary:** producing cover in-house [VLF-076]

Assembly and mounting rotary actuators
Production process of motorised sash

Section:
75LF - F2
Step 02.01



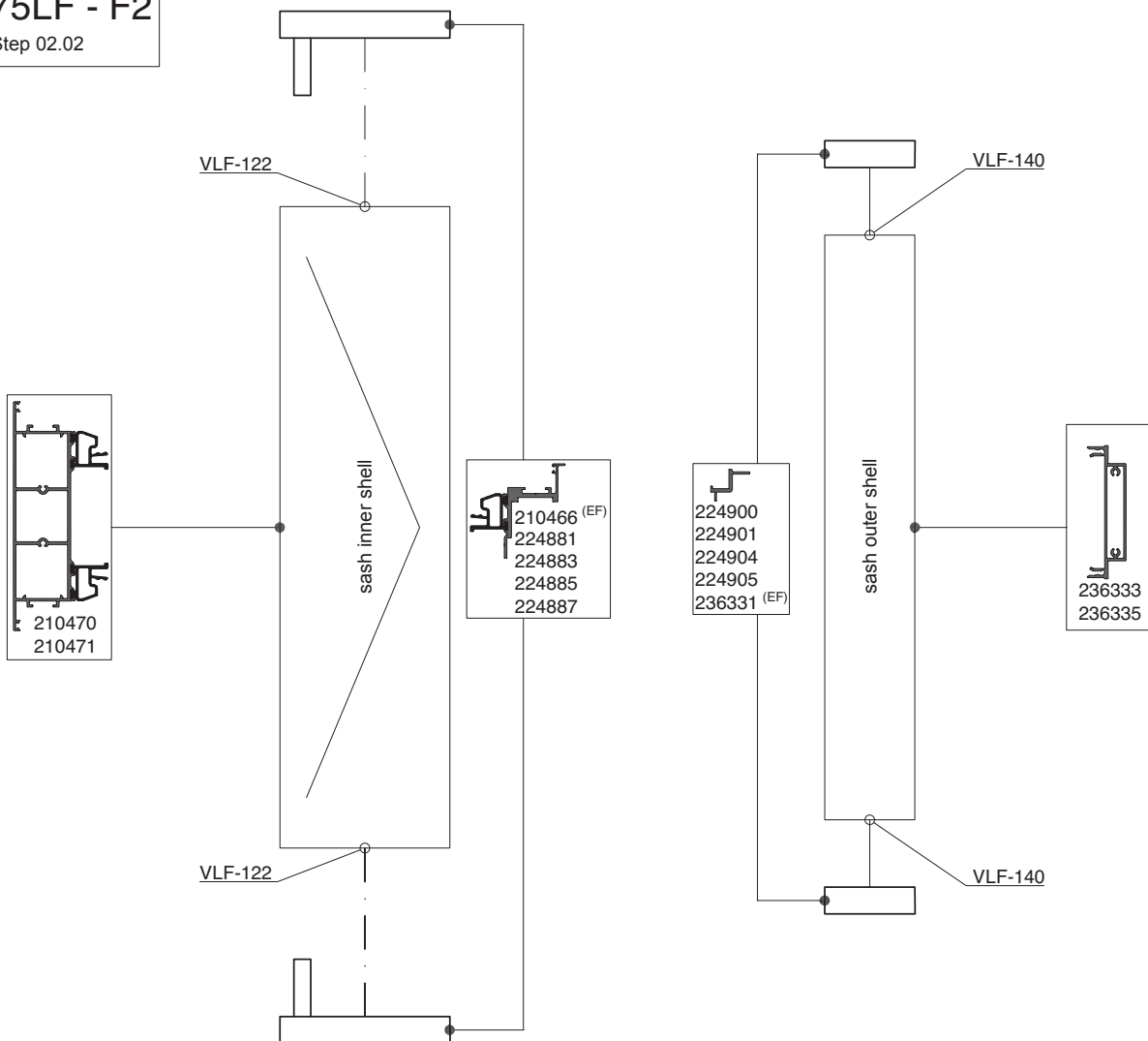
■ **Sash inner shell**

1. Clean profile cut edges and cover profile [VLF-120]
2. Plug on the syntetic corner sealing piece and screw it down [VLF-120]
3. Attach the rotary actuator to the cover profile and screw it together [VLF-121]
4. Insert the gear wheel into the rotary arm, then place it on the shaft of the motor and screw it down [VLF-121]
5. Wire the motor [VLF-121]

EF = in-house production

Assembly of motorised sash
Mounting the cover profile of sash inner shell and sash outer shell

Section:
75LF - F2
Step 02.02



■ Sash inner shell

1. Coat the vertical leg of the cover profile inner shell with sealing compound [VLF-122]
2. Place the cover profile of the inner shell on the top and bottom of the sash profile, push on and screw together [VLF-122]
3. **If necessary:** for LF 300 cover profile, screw inner shell to the front side [VLF-122]
4. Spray out the synthetic corner sealing pieces with sealing compound [VLF-122]
5. Align escaping sealing compound with the profile contour and do not wipe it away [VLF-122]

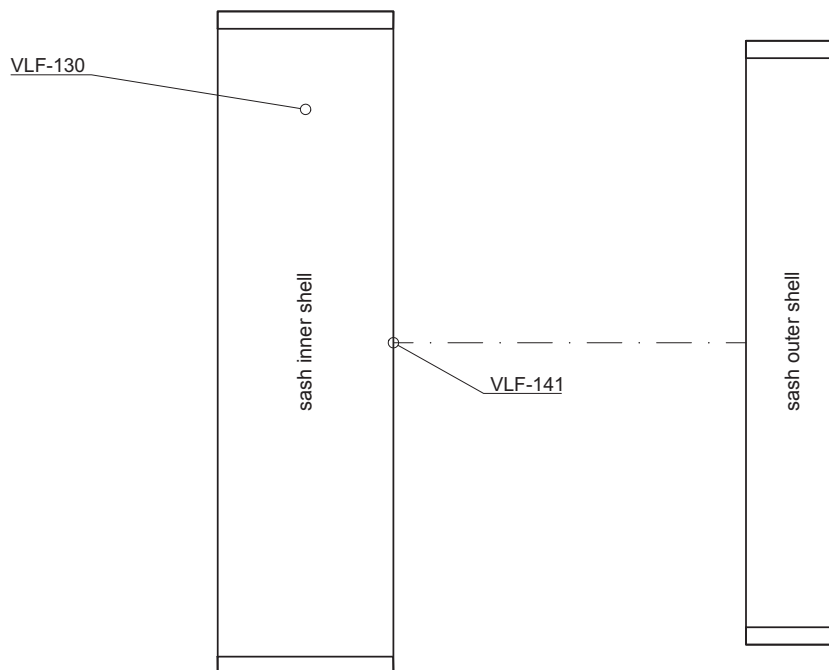
EF = in-house production

■ Sash outer shell

1. Clean profile cut edges and cover profile [VLF-140]
2. Coat outer shell along cover profile contour with seam paste [VLF-140]
3. Place the cover profile on the outer shell and screw it in place [VLF-140]
4. Ensure flushness between outer shell and cover profile [VLF-140]

Assembly of sash inner shell with sash outer shell
Production process motorised sash

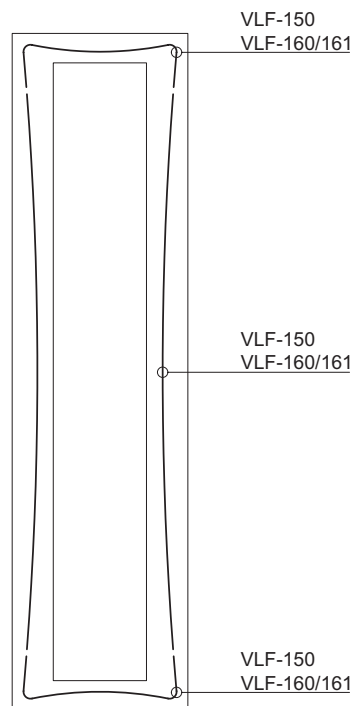
Section:
75LF - F2
Step 02.03



■ **Sash inner shell and outer shell**

1. **If necessary:** insert insulation insertion and cut to length [VLF-130]
2. **If necessary:** install sound insulation measures [VLF-130]
3. Center the sash outer shell onto the inner shell and clip it on [VLF-141]
4. Pre-drill and screw using the drill template [VLF-141]

Section:
75LF - F2
Step 03.01



! Final assembly / Hanging and unhanging the sash
see production process "75LF" !

■ **For surface-mounted and concealed fitting**

1. Press the moulded part 220619.170 / 220619.300 into the sealing groove [VLF-150]
2. Cut gasket 220614 to size and glue with 952023 with moulded part [VLF-150]

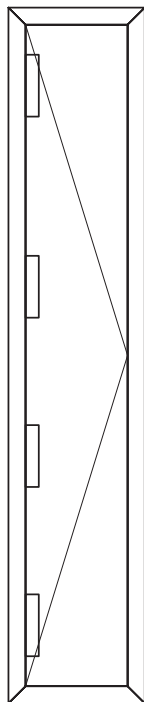
■ **For overlap integrated fittings**

1. Assembly of stop gasket moulded parts and stop gasket after hinge installation [VLF-160 / VLF-161]

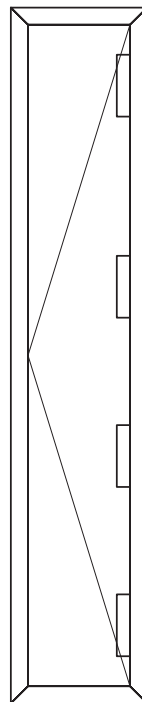
Assembly
Sash – Outer frame

Section:
75LF
Step 01.01

DIN L



DIN R



■ **Sash - Outer frame**

1. If needed, set up and align the ventilation flap outer frame
2. Install the fitting depending on DIN direction and variant [see fitting installation instructions]
3. Additionally at integrated and sash overlap fittings see [VLF-160 / VLF-161]
4. **If necessary:** for motorised version, connect cable transition [VLF-090] and screw the swivel arm to the glider [VLF-191]
5. **If necessary:** install contact element for opening monitoring [VLF-180]
6. **If necessary:** install contact element for closure monitoring [VLF-181]