

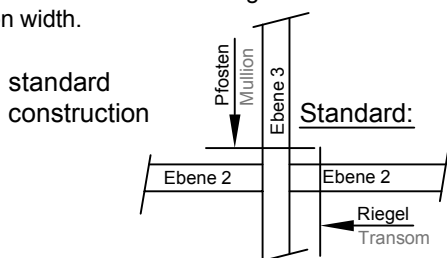


### General information about mounting inner gaskets

It is generally recommended to mount the gasket onto the prepared components while still in the factory to facilitate handling later. The gaskets are pressed into the reception grooves of the basic profile by hand or with a rolling tool (set to the respective gasket width). Due to possible color rub-off, it is recommended to wear gloves and avoid contact with the wood surface.

### Sealing system

The standard mullion is usually constructed in **level 3 [E3]**, while the standard transom is constructed in **level 2 [E2]**. If a curtain wall area needs to be divided again, the gasket on **level 1 [E1]** may be connected to the gasket on level 2 in an overlapping manner. If condensate from the glass rebate cannot be drained via the mullion rebate, a so called "transom drainage" may be created in the transom with the gasket on **level 4 [E4]**. The "LARA GF" system thus allows for 4 different gasket levels in the 50 mm and 60 mm construction widths and for 3 different gasket levels in the 80 mm construction width.



### Pressing in the gasket

The continuous mullion (rafter) gaskets are placed on the basic profile directly "from the roll" and cut according to the length of the component.

### Notching of the continuous gasket [Kd]

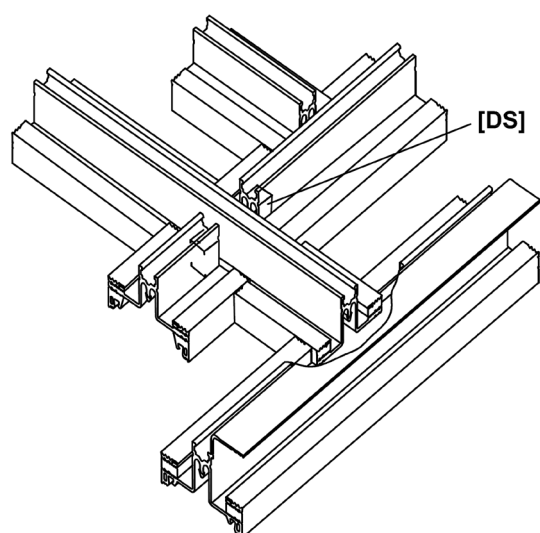
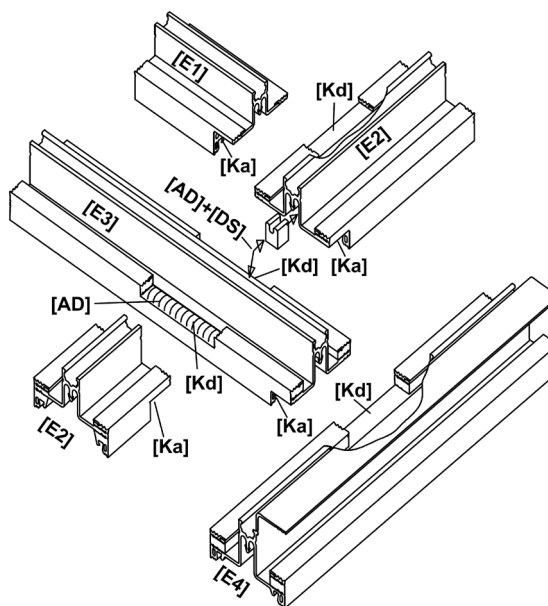
The glass contact lips of the continuous gasket are notched with a notching tool at the T-joints to fit the width of the abutting gasket and the remainder is torn off. To do this, the notching tool must be adjusted to the appropriate length and depth. The exact position of the recess is found by placing the guide of the notching tool on the basic profile and cutting the already mounted continuous gasket by applying pressure with the palm of a hand.

### Notching of the abutting gasket [Kd]

The abutting gasket is prepared with approximately 1% allowance in length. When determining the length, please consider that the abutting gasket overlaps the continuous gasket by 13 mm. The back side of the abutting gasket of the T-joint is notched to the appropriate depth 13 mm from the end and the back area is torn off.

### Creating the gasket overlap

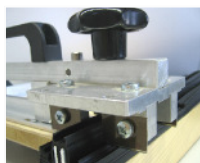
The cleaned (for example with water and detergent) and dried overlap is closed with **EPDM sealant [AD]** and the appropriate **sealing part [DS]** on the side of the abutting gasket. A streak of **EPDM sealant [AD]** is placed in the recess of the continuous gasket and pressed together so that the glass contact lips are on one level.



pressing in the gasket



notching of the continuous gasket



notching of the abutting gasket



### Glass thickness options

Please see the table on the right for minimum and maximum glass thickness dimensions.

The table is based on exterior glazing gaskets with a gap width of 4 mm. If gaskets for a gap width of 6 mm are used, the glass thickness must be 2 mm less.

### Preparing for the glass seat installation

As described above, the basic profile must be attached at the glass seat with 5 screws. Please keep in mind the load-bearing capability of the mullion-transom connection as well as the deflection of the transom when exposed to the glass load.

### Glass seat installation and maximum glass weights

According to the relevant glazing guidelines, exactly 2 glass seats are to be installed beneath each glass pane. The admissible glass loads for glass seats may be found in the table on the right. Depending on the glass thickness, the appropriate glass seats (see table) are screwed on with a distance of 90 - 100 mm from the mullion space using 2 screws each of either B 5.5 x 22 (item no. 825522) or B 5.5 x 38 (item no. 825538). For single glazing, the blocking is conducted directly on the screw channel of the basic profile.

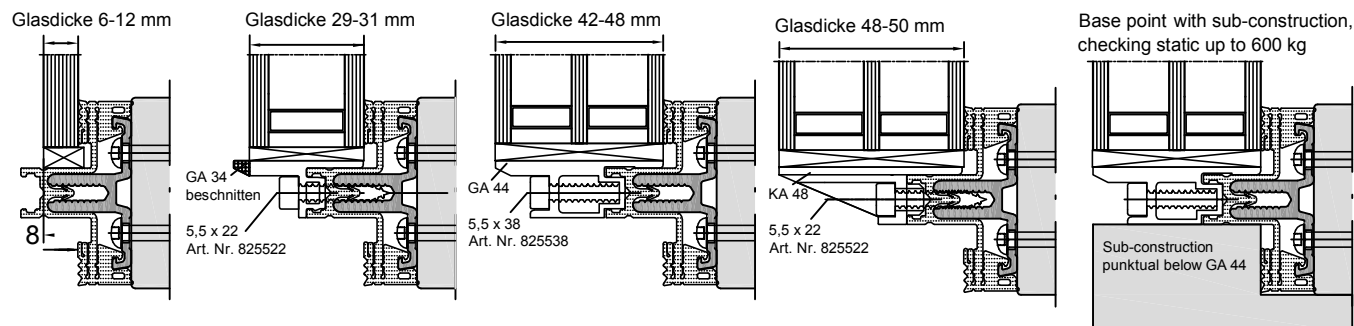
### Minimum / maximum glass thickness

Glass thickness (mm)	with basic profile P2011/50 P2011/60	with basic profile P2011/55 P2011/80	other basic profiles and visibly screwed profiles
6 - 8	-----	available	-----
9 - 12	available	available	-----
18 - 21	-----	available	-----
22 - 23	available	available	-----
24 - 44	available	available	available
45 - 46	available	available	available
47 - 48	available	available	available
48 - 50	available	available	available

### Selection of glass seats / maximum glass load

Glass thickness (mm)	type of glass contact point	maximum glass load for glass thickness up to (mm)
6 - 12	direct contact of glass and basic profiles	
18 - 23	GA 26, cut on site	up to 28 mm: 400 kg
24 - 28	GA 26	
29 - 31	GA 34, cut on site	up to 34 mm: 350 kg
32 - 36	GA 34	
36 - 42	GA 44, cut on site	up to 44 mm: 250 kg
42 - 46	GA 44	
47 - 48	GA 44, recommendation: use glazing with steel core	up to 48 mm: 225 kg
48 - 50	KA 48	up to 50 mm: 200 kg

### Glass seat for different glass thicknesses



### Function of the insulator

The insulator has 2 functions:

- 1.) Improving the thermal insulation value "U" and thus avoiding heat loss as well as reducing the formation of condensate.
- 2.) Controlled ventilation and condensate drainage from the transom into the mullion glass rebate by dividing the adjacent fields.

### Choosing and installing the insulator

The choice of insulator depends on the glass thickness and the basic profile to be used. (see table)

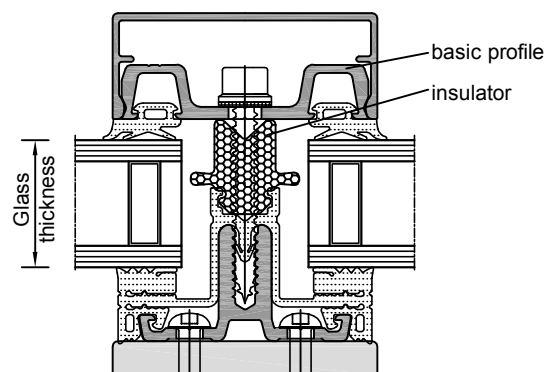
The insulator is clipped onto the already installed gasket during the glazing process. Standard designed curtain walls with post drainage needs a space of 5-10 mm in between the butt joint of the insulators of transom and mullion for drainage and ventilation.

**Due to its limited UV resistance, the insulator must be protected from sun exposure for at least two months after installation by applying the continuous glazing profiles.**

glass thickness (mm)	with basic profile		
	P 2011/50, -/60 (*1)	P 2011/55	P 2011/80
24 - 28	IP 1	IP 2	IP 80, (*2)
29 - 33	IP 2	IP 3	IP 80, (*2)
34 - 38	IP 3	IP 4	IP 80, (*2)
39 - 43	IP 4	IP 5	IP 80, (*2)
44 - 48	IP 5	-----	IP 80

(\*1) including similar visibly screwed profiles

(\*2) cut on site

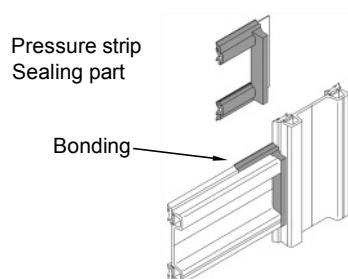


## Cutting and preparing the pressure profile or pressure strip

The mullion pressure profiles are cut to the length needed. The transom pressure profiles in between are made 3 mm shorter than the cover profile space on each side. When using the pressure profiles P 2011/50 or P2011/60 with pressure strip sealing parts, the pressure profile is shortened on both sides of the transom by 8 mm each up to the mullion cover profile space. An additional bore of 6 must always be placed to make sure that the distance between the fixation points is not longer than 60 mm from the edge.

## Sliding in the glazing gasket

The glazing gasket must have approx. 1 % excess, be compressed and slid into the pressure profile. Since the pressure strip sealing part is used on the transom, the joint of the sealing part must be glued to the end of the glazing gaskets with EPDM adhesive. When mounting without a sealing part, the gasket on the transom pressure profile must project 3 to 5 mm on each side in order to create a closed joint with the continuous mullion gasket, which should be glued with EPDM sealant, once the installation is complete.



## Using special glazing gaskets

If transom cover profiles sloped towards the glass (P 2016/13-55 to -100) are installed, the transom gasket 7500043 must be used.

For glass joints (trimming) with silicone joint tape, it is recommended to use the silicone gasket 7500042. The joints of joint tape and gasket may be made durable with silicone adhesive.

## Preparing installation of the pressure profiles

The choice of screws depends on the glass thickness and the pressure profile (see table) to be used.

The pressure profiles are installed after the glass panes have been professionally blocked, secured with "short pieces" (= approx. 15 cm sections from pressure profiles with inserted gasket, installed in line with the glass pane), and inserted.

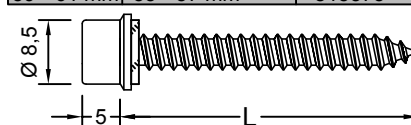
## Installing the pressure profiles

The pressure profiles are usually screwed in with a torque of 4.0 Nm. Even contact pressure is important for the screwing process: The inner gasket must be touching the glass with sufficient contact pressure, the outer glazing gasket must be even and continuous without distortions at the screw points. A simple, easy to make template may help determine the distance to be kept from the outer edge of the pressure profile to the glass level.

## Selection of screws

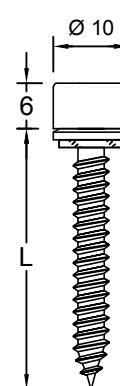
(when using glazing gaskets with a gap width of 4 mm)

for basic profile P 2011/50, P 2011/60, P HGF-50	for basic profile P 2011/55 und P 2011/80 N		
Glass thickness	Glass thickness	Art. Nr. screw	Length "L" screw
9 - 12 mm	6 - 8 mm	815525	25 mm
13 - 16 mm	9 - 12 mm	815530	30 mm
22 - 24 mm	18 - 20 mm	815538	38 mm
25 - 26 mm	21 - 22 mm	815540	40 mm
27 - 28 mm	23 - 24 mm	815542	42 mm
29 - 31 mm	25 - 27 mm	815545	45 mm
32 - 34 mm	28 - 30 mm	815548	48 mm
35 - 36 mm	31 - 32 mm	815550	50 mm
37 - 38 mm	33 - 34 mm	815552	52 mm
39 - 41 mm	35 - 37 mm	815555	55 mm
42 - 44 mm	38 - 40 mm	815558	58 mm
45 - 46 mm	41 - 42 mm	815560	60 mm
47 - 48 mm	43 - 44 mm	815562	62 mm
49 - 51 mm	45 - 47 mm	815565	65 mm
52 - 54 mm	48 - 50 mm	815568	68 mm
55 - 56 mm	51 - 52 mm	815570	70 mm
57 - 58 mm	53 - 54 mm	815572	72 mm
59 - 61 mm	55 - 57 mm	815575	75 mm



for visibly screwed cover profiles  
such as P 2020/50-11

Glas thickness	Item no. screw	Length "L" screw
24 - 25 mm	816540	40 mm
26 - 27 mm	816542	42 mm
28 - 30 mm	816545	45 mm
31 - 33 mm	816548	48 mm
34 - 35 mm	816550	50 mm
36 - 37 mm	816552	52 mm
38 - 40 mm	816555	55 mm
41 - 43 mm	816558	58 mm
44 - 45 mm	816560	60 mm
46 - 47 mm	816562	62 mm
48 - 50 mm	816565	65 mm
51 - 53 mm	816568	68 mm
54 - 55 mm	816570	70 mm
56 - 57 mm	816572	72 mm



## Cutting and preparing the cover profiles (= cover plates)

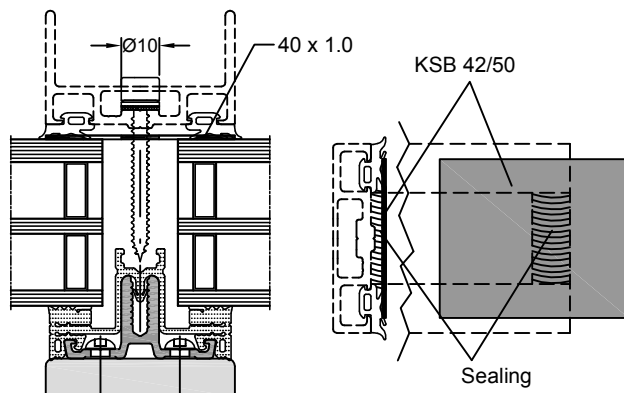
First, the mullion cover profile is clipped on and, if necessary, kept from slipping by means of a lateral screw. If no sealing part is used at the transom, the 3 mm gap between transom pressure profile and mullion cover profile should be sealed with silicone.

The transom cover profile is cut with a 0.5 to 1 mm gap in the space of the mullion cover profile and then clipped on. For some cover profiles, end covers are available, which may be inserted at the end of the rafter to cover up the visible opening of the profiles. The end covers are glued in with silicone and secured with screws or rivets. Should disassembly of the cover profiles become necessary, we recommend the use of finishing tools in order to avoid damage to the profiles.



### Construction with visibly screwed cover profiles

The visibly screwed cover profiles are delivered in a non-punched version. The bores must be drilled with a short step drill with a distance of max. 250 mm in between and max. 60 mm from the profile end. Use screws with a big head (10 m). The glass joint is sealed continuously with a butyl strip under the cover profile. As an alternative, the joint of transom and mullion may be backed by cross joint plate KSB 42/50. This requires the lateral groove between transom cover profile and cross joint plate to be sealed in a permanently elastic manner.



### Installation using a butyl strip

Before mounting the pressure profile, the glass joint may be completely taped over with the self-adhesive butyl strip and therefore sealed if necessary. Self-cleaning glass is not affected in its function by the butyl strip. The application of butyl strips is especially recommended for glazing roofs with a shallow incline, with complicated sectioning, or when using visibly screwed cover profiles. The fastening screws of the basic profiles, which pierce through the butyl strip, must be greased with commercial machine grease so that the butyl strip does not tear at the screw points. If insulators and butyl strips are used at the same time, the special installation circumstances must be considered when choosing the insulator.

### Glass rebate ventilation and drainage

#### Mullion drainage

The glazing system is constructed to feature "multiple field ventilation". The glass rebate is ventilated through the transom on all 4 corners of the pane fields into the mullion glass rebate. The structure must be created in a way that allows the glass rebates of the mullions (or rafters) to be opened towards the outside for ventilation and for the safe drainage of possible condensate. (= structure type "mullion drainage")

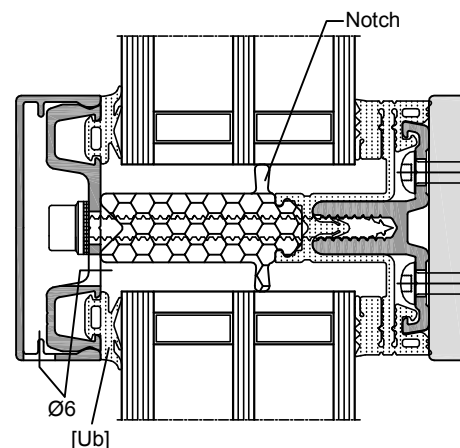
#### Transom drainage

If in rare cases the mullion cannot be opened towards the bottom, the gasket GF 50 (60) RF-E4 can perform the so called "transom drainage". For this to happen, the mullions are first drained into the lowest transom, which guides the moisture to the exterior via small recesses (approx. 5-8 cm every 80 cm) in the outer (lower) glazing gasket. The pressure profile of the continuous mullion is shortened down to the center line of the transom in order to create additional drainage openings at the base point of the mullion. The lateral ends of the glass

rebate of the lowest transom are closed off with insulators and EPDM sealant so that moisture may only be released in a controlled manner through the planned openings. Please also see the appropriate detailed drawing in this catalog.

### Additional openings for ventilation

If the curtain wall elements are placed higher than regular room-high window elements, the distances between the sections to be ventilated and the drainage opening at the end of the mullion may become too long. For transoms exceeding the distance to the drainage opening by 2.5 m, additional ventilation openings are recommended in the form of bores 6 mm on the bottom side of the profile, or **recesses [Ub]** in the outer (lower) glazing gasket (recess L = 30 mm). The openings must be placed on both sides of the transom, approximately 150 mm from the edge. For transoms longer than 1.5 m, additional notches (L = 30 mm) in the insulator are necessary and ventilation openings must be placed every 1000 mm. The ventilation openings must be continuous up to the glass rebate.



### Sloped glass structures

LARA GF is suitable for the application as a glass roof system for slopes from 10° to 90°. For lateral profiles (trimmings) it is important to keep the structural height low so that water can drain freely.

Self-purification of the glass is limited for flat roofs due to slowly draining water. Flat roofs are also subject to increased risk of water leakage. **The slope of the glass roof may therefore never be lower than 10°.**

Glazing, which is only 10° from being vertical, is considered vertical glazing according to the German TRLV Guideline and therefore provides a wider range of glass for selection.

### CE certification for curtain walls

Structures, which are up to 15° from being vertical, are considered curtain walls according to DIN EN 13830 and must therefore display a CE certification from the curtain wall manufacturer.

GUTMANN will provide extensive support in this endeavor.

### Construction of the supporting structure

The wood qualities, surface treatment and dimension information described for the "LARA GF" system, mostly apply to "LARA classic" as well.

However, please also note the following for LARA classic:

### Glass rebate

Millings or gluing and screwing wood borders prepare the wood construction for the reception of the inner gasket and the glass. It is important that the rebate dimensions are adapted to the thickness of the glass. The glass rebate of the continuous mullion (rafter) must be continuous at the T-joint as well so that moisture can be released. Please check the base points of mullions and rafters to make sure that the moisture on the inner gasket level can easily be released to the outside.

### Glazing

The glass panes are placed directly into the glass rebate and professionally blocked with 2 glazing blocks each on the bottom edge of the pane. Secure the panes with "short pieces" (= approx. 15 cm sections from basic profiles with inserted gasket, installed in line with the glass pane).

The maximum glass weights for vertical glazing are based on the load bearing capacity of each wood construction and must be determined on-site. The table therefore only provides approximate values.

Approximate values: maximum glass weight LARA classic

Glass thickness	construction width 64 mm	construction width 80 mm	construction width 100 mm
bis 34 mm	120 kg	200 kg	300 kg
bis 44 mm	80 kg	150 kg	250 kg

### Mounting inner gaskets

For vertical glazing, the inner silicone gasket 2020/2 or the EPDM gaskets 2020/5 or 2030/5 may be used. For increased tightness requirements, the T-joints of silicone gaskets should be sealed with neutral silicone.

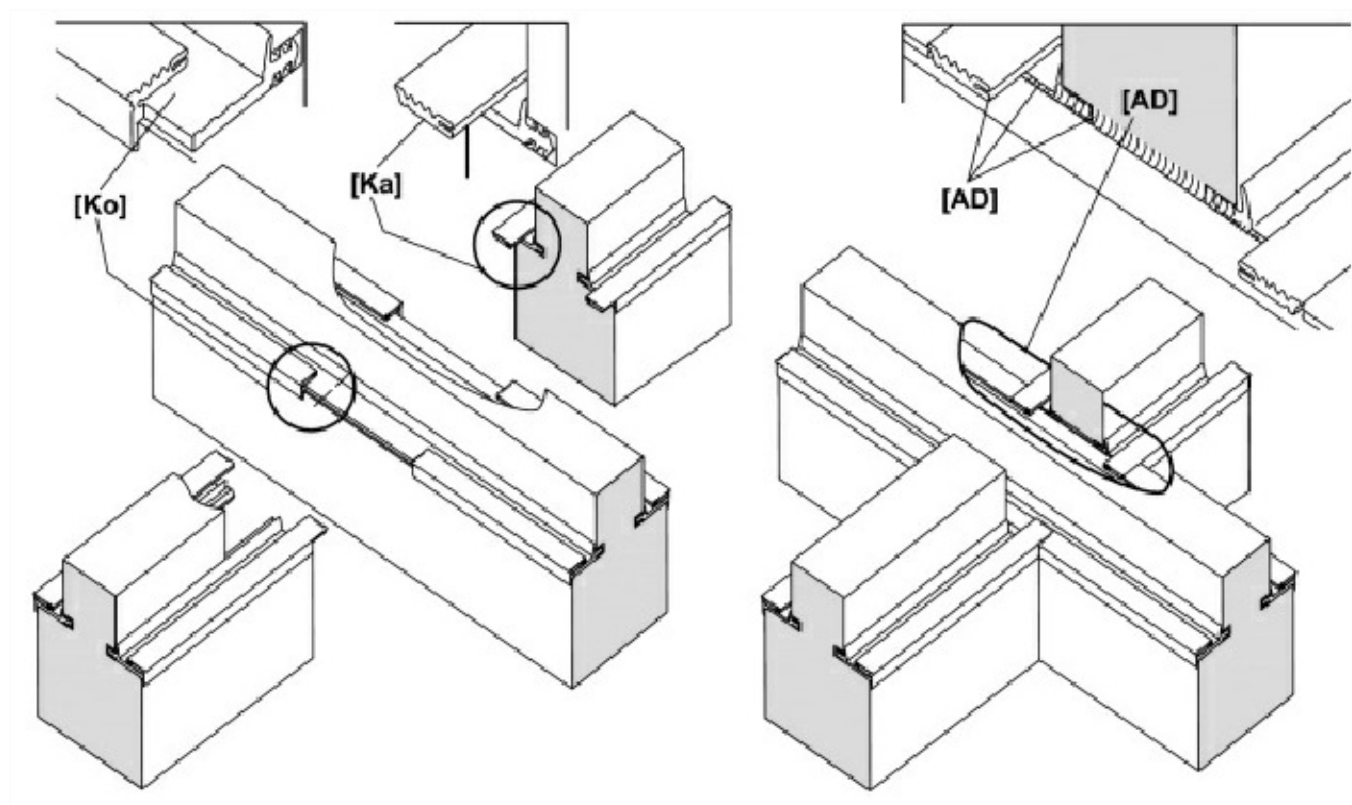
Two-layer EPDM gaskets (2020/5N or 2030/5N) must be used for high driving rain loads and glass roofs. With a sharp knife or broad broach, the continuous gaskets receive a **notch on top [Ko]** at the T-joint, while the abutting gasket receives a **notch on the bottom [Ku]**. The gasket joint is overlapped and sealed with **EPDM sealant [AD]** towards the wood and between the gaskets.

### Cutting and mounting pressure and cover profiles, inserting gaskets

All information provided in the Processing Guidelines for the "LARA GF" system applies here as well.

### Installing the pressure profiles

Unlike in the "LARA GF" system, the pressure profile in LARA classic is fixed directly in the wood through system fastener H 2000 with V2a Spax screws 5 x 50. The fastener is clipped into the punched oblong holes of the pressure profiles and positioned in the center of the oblong hole before screwing. The rebate projection on the fastener is used to position the pressure profiles on the center of the wood profile. It is important for screwing that the bracing projection on the fastener is pressed tightly onto the profile by the flat head of the screw, yet not sheared off, so that the profile can glide on the fastener and the profile still has enough room for heat expansion.



### Sealing the T-joint

The transom basic profile is made to be 3 mm shorter than the cover profile space. During installation, the 3 mm gap between transom basic profile and mullion cover profile must be sealed with silicone.

### Glass rebate ventilation

The glass rebate is ventilated through the continuous rebate system from the transom into the mullion (= multiple field ventilation) and also by rear-ventilation between the front edges of wood profile and basic profile. The structure must be created in a way that allows the glass rebates of the mullions (or rafters) to be opened towards the outside for ventilation and for the safe drainage of possible condensate.

### Additional openings for ventilation

If the curtain wall elements are placed higher than regular room-high window elements, the distances between the fields to be ventilated and the drainage opening at the end of the mullion may become too long. For transoms exceeding the distance to the drainage opening by 1.8 m, additional ventilation openings are recommended in the form of oblong holes 5/20, bores 6 mm, or **recesses [Ub]** in the outer (lower) glazing gasket (recess L = 30 mm). The openings must be placed on both sides of the transom, approximately 150 mm from the edge. The ventilation openings must be continuous up to the glass rebate.

### Sloped glass structures

When using the gaskets 2020/5N or 2030/5N, LARA classic is suitable for the application as a glass roof system for slopes from 10° to 90°.

For lateral profiles (trimmings) it is important to keep the structural height low so that water can drain freely.

Self-cleaning effects of the glass are limited for flat roofs due to slowly draining water. Flat roofs are also subject to increased risk of water leakage. **The slope of the glass roof may therefore never be lower than 10°.**

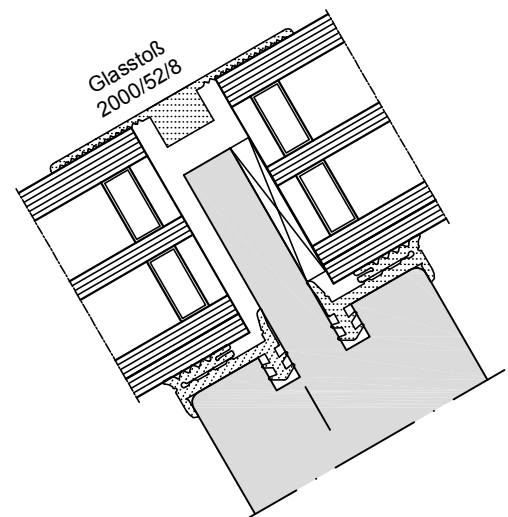
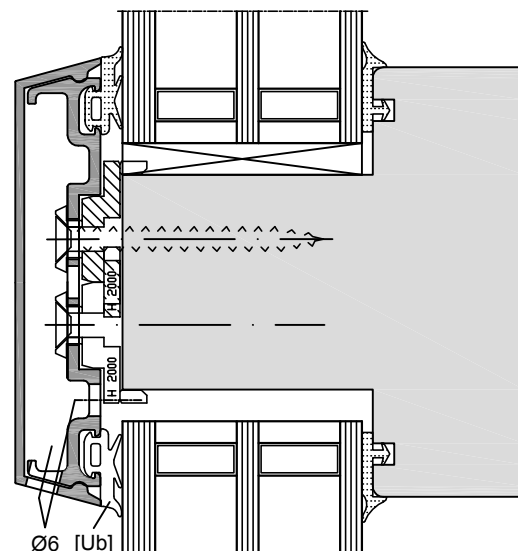
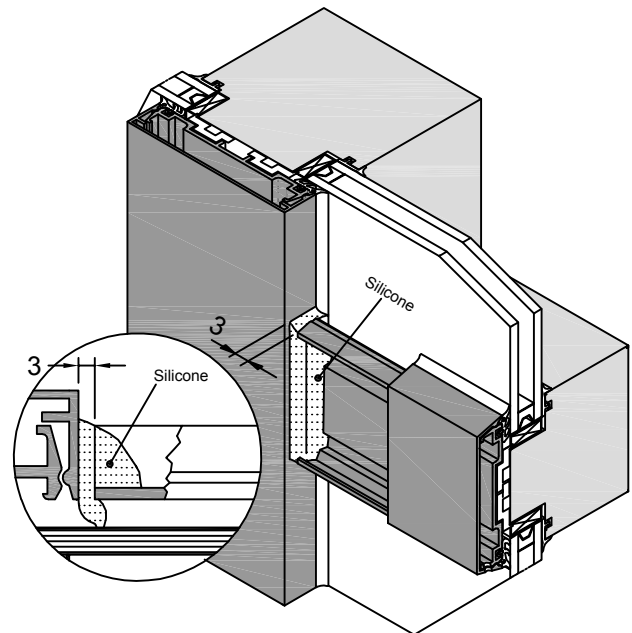
### Installation of the silicone joint tape

The silicone joint tapes (for example 2000/52/8) must be mounted on the glass joint as follows:

- 1.) Clean glass pane, for example with acetone.
- 2.) Loosely insert silicone tape.
- 3.) Apply adhesive tape on the left and right side of the silicone tape.
- 4.) Remove the silicone tape and apply a layer of neutral silicone adhesive around the glass pane edge.
- 5.) Insert silicone tape and apply even pressure with the roll.
- 6.) Immediately remove the adhesive tape with the residual silicone.

Setting time approx. 3 hours, curing approx. 24 hours.

Process must not be performed in wet conditions and temperatures under 5 °C.



### Construction of the supporting structure

It is recommended to build the strapping from laminated lumber because solid wood structures tend to warp. The dimensions must be adapted to the static requirements.

### Mounting inner gaskets

Inner gasket PD 60-100 is used for continuous mullions or rafters. Transoms or trimmings abutting laterally use the gasket RD 60-100. The gaskets are self-adhesive and are simply glued onto the structure. In order to allow for parallel mounting of the gasket, the formation of rebates in the structure is recommended. Steel brads, which are nailed under the bracing projections, may be used for further fastening. For wood widths of 60 to 100 mm, the gaskets are torn open at the predetermined disconnecting points and thus cover the different wood widths.

### Creating the gasket overlap

An overlap is created at the T-joint by carving **back-side notches [Ku]** in the transom gasket (RD 60-100) and **front-side recesses [Ko]** in the mullion gasket (PD 60-100) with a sharp knife. The overlap is sealed with **EPDM sealant [AD]** at the contact points and last openings.

### Glass seats

Vertical glazing requires two glass seats to be installed under each pane approximately 100 mm from the corner. The system screws (PD-RD) with gasket ring (two per glass seat) must be used with the glass seats GAE 22 or GAE 28. This allows glass loads of up to 50 kg. For glass loads of up to a maximum of 75 kg, an additional screw must be placed in the center under the glass seat.

Selection of glass seats

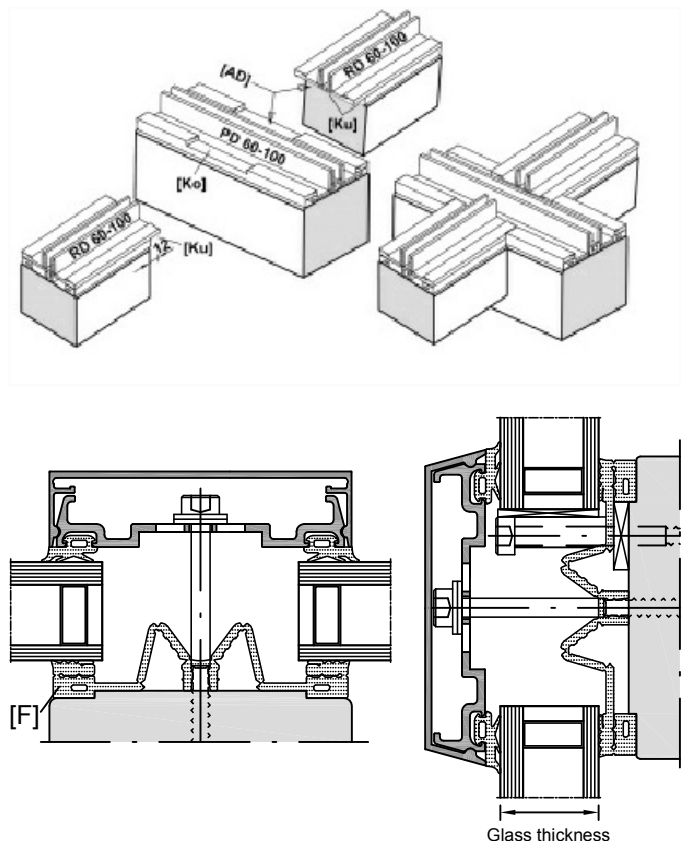
Glass thickness	type of glass seat
6 - 8 mm	glass seat directly on the screw head
9 - 22 mm	GAE 22, cut on site
24 - 27 mm	GAE 22
28 - 33 mm	GAE 28

### Selection of pressure and cover profiles

Depending on the width of the wood strapping, the face widths of the pressure and cover profiles may be 50, 55, 60, 64, 80, and 100 mm.

### Cutting and preparing the pressure profiles

The mullion pressure profiles are cut to the length needed. The transom pressure profiles in between are made 3 mm shorter than the mullion cover profile space on each side. An additional bore of 6 must always be placed to make sure that the distance between the fastening bores is not longer than 60 mm from the edge.



### Installing the pressure profiles

The pressure profiles are mounted after the glazing has been placed. The designated glazing gasket is slid into the pressure profile. The system screw "PD-RD" is used for fastening. The screw is placed in the center of the punched holes and screwed directly into the wood through the inner glazing gasket. Even contact pressure is important for the screwing process: The inner gasket must be touching the glass with sufficient contact pressure, and the outer glazing gasket must be even and continuous without distortions at the screw points.

### Installation of the cover profiles

The mullion cover profile is cut to the length needed and clipped onto the basic profile. For some cover profiles, end covers are available, which may be inserted and glued at the end of the rafter.

### Roof incline options

The incline of the glass roof should not be lower than 10°.

### Glass rebate ventilation

The glass rebate is ventilated through the continuous rebate system from the transom into the mullion. The bottom edge of the mullions or rafters must be constructed in a way that allows safe drainage of condensate that may possibly form in the glass rebate.