



Lumon 6 Balcony Glazing System



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Lumon 6 Balcony Glazing System			
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Be inspired





Four seasons on a glazed terrace



Lumon glazing systems offer you a chance to transform your terrace into a pleasant and functional leisure space with countless decorating possibilities. Lumon quality materials will also ensure protection from environmental constraints in order to enable your terrace plants to thrive and start their growth season early in the spring.

Our glazing solutions have been designed to work in harmony with your lifestyle. What could be more enjoyable than sipping a nice cup of tea on your terrace with good friends, watching the sunset...



Our quality is in the details



The minute design and technical solutions of Lumon balcony glazing systems maximises usability. Finer profiles and shaped details create an elegant appearance and a product which is easy and comfortable to use. Thanks to stackable panes, our balcony glazing can be completely opened, which makes cleaning them very safe and easy.

You can choose between ventilation, partly open or fully open positions – Lumon glazing systems will meet your needs.

Technical Description

Lumon Balcony Glazing Systems consist of two horizontal aluminium profiles attached to the balcony ceiling and the floor, parapet or a railing. Toughened glass panes are attached to the profiles through separate mechanisms allowing the panes to slide and to turn.

The panes are 8, 10 or 12-mm toughened glass. The Table of Recommended Glass Pane Sizes shows the optimal glass thicknesses for each balcony. Toughened glass is not easily broken but in case it does break, it will crumble into small, blunt-edged fragments that do not pose a serious risk of injury.

Aluminium glazing beads are attached to the top and bottom of each pane with the help of flanges ground to the upper and lower edges of the pane. Fastening is secured with glue. The upper and lower glazing beads are provided with the components which enable the sliding and opening of the panes.

The first pane is opened by unlocking the handle and it can also be locked in the ventilation position. The other panes can be moved by sliding and turning. When the panes are turned, their hinges lock to the chamfers in the profiles. In this way, the glazing can be opened completely. On "L" and "U" balconies the panes can be slid over +90° ... +270° corners.

The upper profile is attached to the ceiling through a telescopic profile or to the overhang with mounting brackets. The lower profile is attached with mounting brackets or through the bottom of the profile to the railing structure. Corrosion-resistant fasteners must be used in attaching the system to the balcony structures.

Rainwater is drained off by using water sills made of a plastic-coated steel sheet or an aluminium sheet.

A seal is used to close the gap between the glass pane and the wall.

1. Aluminium profiles

The upper and lower profiles and the glazing beads are aluminium and polyester powder-coated or anodized; anodizing is available on special order.

The upper and lower profiles are selected on a case-by-case basis.

The standard colours are:

- RAL 9006 grey
- RAL 9016 white
- RAL 7024 dark grey

Other colours and anodized coatings are available on special order.

The wedges used in glazing are always dark grey RAL 7024.

2. Glass panes

The glazing panes are cut in 8, 10 or 12-mm toughened float glass. For more details, see the table of recommended glass pane sizes in Chapter 10. The panes have chamfered edges. All the panes comply with the EN 12150-1 and EN 572-8 standards. It is on the ground flanges of the panes that the glazing beads are attached and secured with glue.

Fixed and hinged panes used to close openings are 6 mm toughened glass.

The panes used in balcony glazing systems are usually clear glass in order to maintain the appearance of the façade virtually unchanged. Stained or sand-blasted panes can also be optionally used.

When choosing special glass types (sand-blasted, Stippolyte and Satinato), the pane sizes must be confirmed by the manufacturer. After the heat treatments, the strength values differ from those of regular clear or stained glass.

3. Hinges and sliding parts

A hinge with rollers and an upper guide are attached to the upper glazing bead. The hinge and the lower guide are attached to the lower glazing bead. When the glass panes are opened, they are fastened to each other by the hinges. All parts are aluminium, stainless steel or high quality plastic materials. The visible plastic parts are light or dark grey, according to the order, whereas the plastic parts inside the profiles are always dark grey.

4. Seals

There is a light or dark grey silicone seal between the lower profile and the glazing bead. A 20-30 mm silicone seal is provided between the side wall and the outermost pane. A transparent PVC seal can be used between the panes, if necessary.

5. Fasteners

The upper and lower profiles are attached to the concrete structures with corrosion-resistant wedges or expansion anchors or concrete screws. The screws are stainless steel or corrosion-resistant, and the brackets are aluminium.

The fastening manners recommended by the manufacturer are described in Chapter 5.

6. Flashings

All flashings, such as water sills and corner flashings are made of a 0.5 mm plastic-coated steel sheet or an aluminium sheet, depending on the project. The manufacturer's colour chart shows the colours available. RR chart colours are used for direct deliveries from the factory. Aluminium flashings are painted according to the RAL colour chart.

General instructions

Ventilation

Ventilation on the balcony is provided through the 2-3 mm gaps between the panes. Moreover, there needs to be enough space on each side of the glazing for the structure to be utilised properly. The first pane can be locked in the ventilating position where it remains ajar.

IMPORTANT! Ventilation is essential to prevent the condensation of moisture and to keep the balcony structures in good condition.

Locking

Lumon 6 Balcony Glazing offers different mechanisms for opening and locking the panes depending on how they are located.

The glazing being attached on the railing or on its side and the lower profile remaining at a reasonable height, a keyed push-button lock can be attached to the handle located at the lower latch.

However, if the glazing height is superior to 2400 mm, the glazing has to be attached to the floor and the ceiling. In this case, the opening mechanism cannot be located at the bottom of the pane, but a handle will be attached to the bead in the middle section of the pane. This medial handle will be positioned at least 250 mm from the top and bottom edges of the glazing. It is not possible to integrate a keyed push-button lock in the medial handle.

A medial handle can also be used when the balcony glazing is installed on the side of a parapet or a railing with the help of a bracket or a profile and the lower profile is located in such a low position that the regular handle would be difficult to use. In these cases also, the keyed push-button lock is unavailable and the handle has to be positioned at least 250 mm from the top and bottom edges of the glazing.

Sealing

Lumon balcony glazing provides protection from wind and weather. However, due to necessary ventilation, the glazing is not fully airtight and, in certain conditions, rain or snow may enter the balcony.

Thermal insulation

The Lumon balcony glazing systems consist of uninsulated aluminium profiles and single glass panes. A glazed balcony is not a warm space and its characteristics are not comparable to those of normal warm living spaces. Even after the balcony has been glazed, heat insulation of the building continues to be provided by the insulated wall, the windows facing the balcony and the balcony door.

Noise control

Lumon balcony glazings reduce traffic noise by 8-12 dB. The results vary due to the thickness of the panes and the environmental conditions. A decrease of 10 dB corresponds to half as much audible noise.

Cleaning

Both the inner and outer surfaces of the panes can be washed from the inside the balcony, as the panes can be turned inwards for cleaning.

Manufacturing

Lumon balcony glazing systems are custom made for each balcony. All materials and components related to the basic product are supplied by the factory, whereas accessories are delivered to order. For a specification of the content of the delivery, see Chapter 9.

Official regulations

Balcony glazing systems are subject to permission. The local official regulations relating to balcony glazing systems must be checked beforehand. Balcony glazing causes minimal changes to the visual appearance of the building as it is made of transparent, colourless glass and no vertical profiles are used.

Special cases

The solutions specified in the technical file may not be applicable in all circumstances. In these cases, the solutions to be applied must be planned on a case-by-case basis.

Specific instructions**Height of the railing**

In case of a risk of falling, the balcony glazing cannot be used as a railing but a separate railing should be provided behind it. Its total height must be over 1.0 m and its protective section must be higher than 0.7 m. A separate handrail must be provided behind openable glass panes if the upper surface of the lower profile is less than 1.0 m from the balcony floor. Should the lower profile double as a handrail, its attachment must be checked against loads specified in the Building Regulations.

The maximum height of a balcony glazing installed on a parapet or a railing structure is 2.4 m. This permits the manufacturer to guarantee the lasting usability of the glazing in all circumstances detailed in the Table of Recommended Glass Pane Sizes.

Opening the panes / using the balcony

Corner and "U" balconies have panes that are opened only for cleaning. In some cases, the panes and the balcony door may open in the same place. Drainage pipes, pillars and such must also be taken into account when designing glazing systems.

Structures

Glazing causes vertical loads on the ceiling structure and horizontal wind load on both the ceiling and railing structures. For a flawless functioning of the glazing, the vertical load should not cause any deflection. The maximum weight of an individual pane is 75 kg for straight balconies and 60 kg for over-a-corner balconies. The maximum width of a pane is 1.0 m and height 3.0 m. For a single-pane side the maximum width of the pane is 1.2 m. At the opening end of the balcony, i.e. where the upper profile is attached to the ceiling, one single point of the structure holds the weight of the entire system. Check the strength of the fastening and of the structure. The railing must be sufficiently strong at the point where the lower profile is attached, and this point must withstand the additional wind load caused by the glazing.

Opening rules

- It is possible to have up to 9 glass panes openable to the right and 9 to the left
- It is possible to have one fixed glass pane at both ends
- Maximum glass width is 1000 mm
- Maximum glass width is 1200 mm for a single-pane side of a balcony
- Minimum width for an openable pane is 300 mm or 15 % of the glass height
- Maximum glazing height is 3000 mm
- Minimum width for a fixed pane is 200 mm or 10 % of glass height
- The hinge location can be modified by max. 300 mm or < 30% of glass width

Corners

- The angle between the left hand wall and the glazing is called the starting angle
- The angle between two sides, is called the structure angle
- The angle between right hand wall and the glazing, is called the ending angle
- Corners are measured from the inside of the balcony
- In case any type of structure divides the glazing, the two parts of the glazing will be considered individually (the said structure gives either the starting or the ending angle, not a structure angle)
- Starting and ending angles can be 40°-140° (viewed from the inside)
- Opening angle for an openable glass is 80°-105° (note obstacles)
- Structure angles are 80°-280°

Over-a-corner glazing

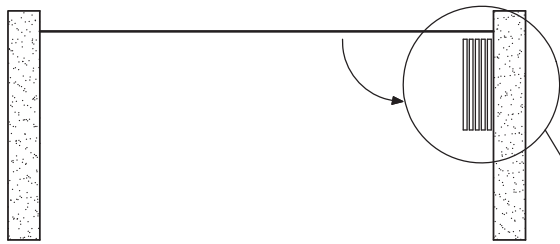
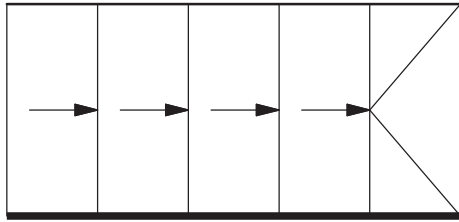
- 90°-180° angles are possible on over-a-corner glazing
- There can be up to 9 glass panes on one opening, including both sides (= 9 panes / pack)
- In corner bypasses an extended vent arm is used on the sides where panes need to slide over a system angle
- It is possible to have vent arms of different kinds in one balcony
- There only has to be one openable pane on the opening side

Glazing with System Angle and Different Glazing Heights on Sides

- It is possible to order glazings with a structure angle where glazing height is different from one side to another
- In this case is not possible to slide glass panes around corners
- There is a straight cut at end of profiles which are not on the same level (upper and/or lower profiles)
- The profiles to be positioned on the same level must be specified in the order (upper and/or lower profiles)

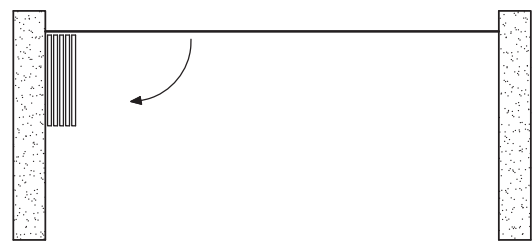
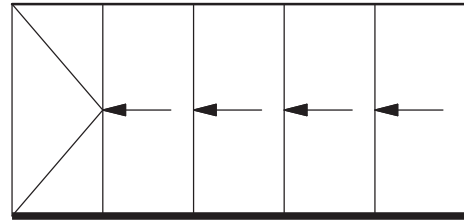
Opening to the right

to the left 0 panes, to the right 5 panes



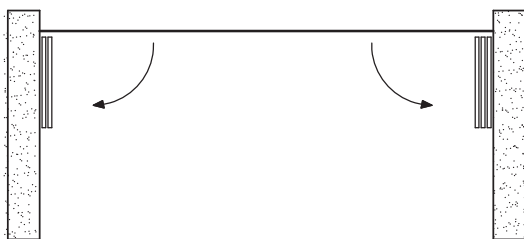
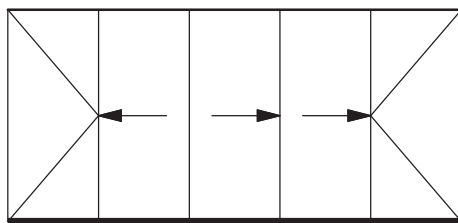
Opening to the left

to the left 5 panes, to the right 0 panes

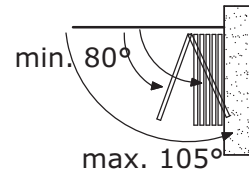


Opening to both directions

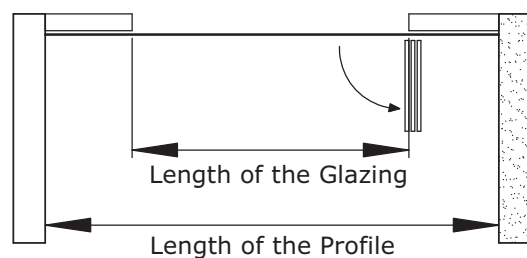
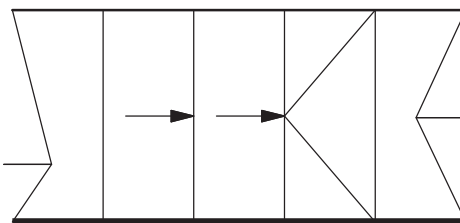
to the left 2 panes to the right 3 panes



Opening the stacked panes:

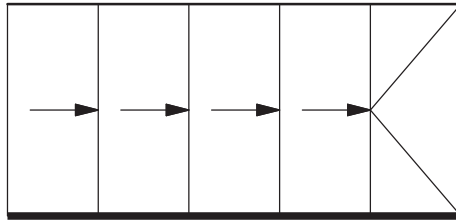


Extension:

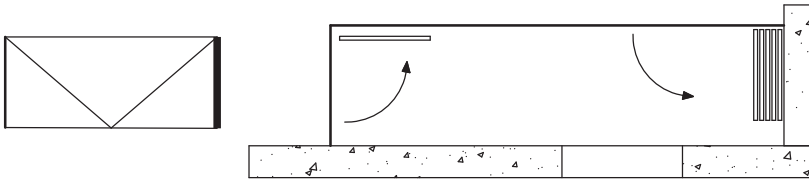


Corner glazing opening on two sides 90°

to the right 5 panes

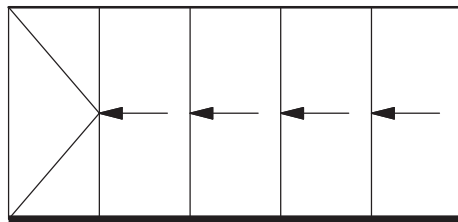


to the left 1 panes

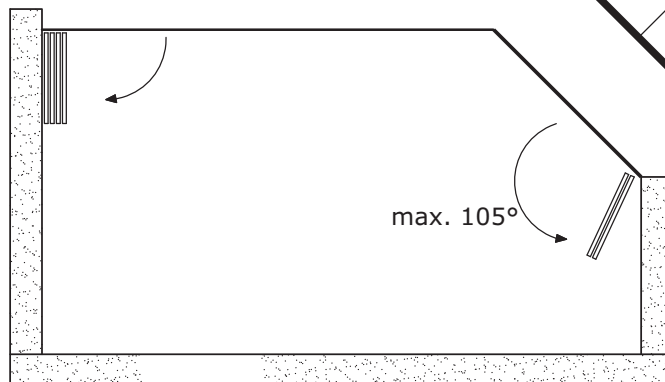
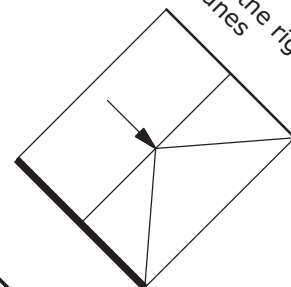


Corner glazing opening on two sides 135°

to the left 5 panes

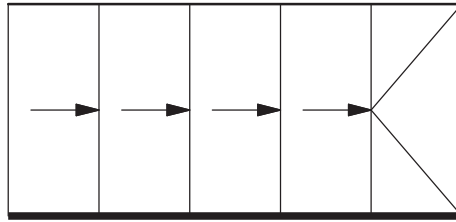


to the right 2 panes

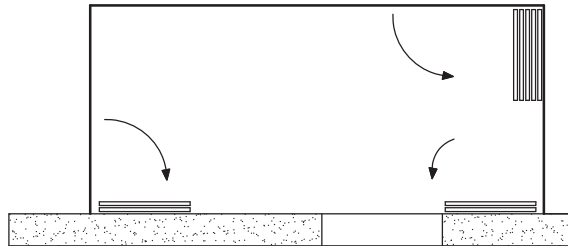
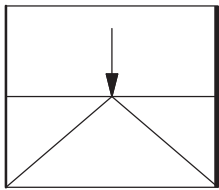


Corner glazing opening on three sides 90°

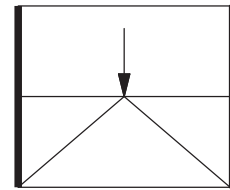
to the right 5 panes



to the left 2 panes



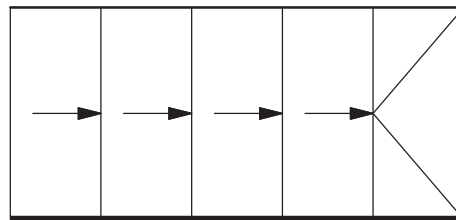
to the right 2 panes



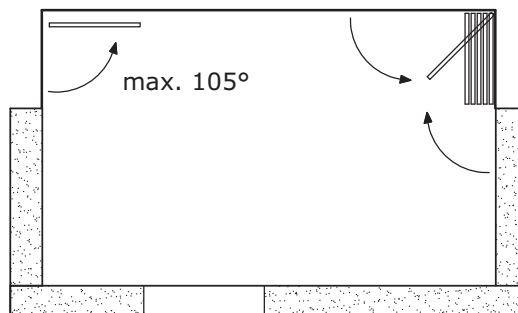
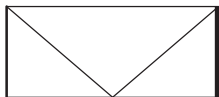
NB! Check the size of the panes and the possibility to open each of them despite the position of the panes on the other side!

Corner glazing opening on three sides 90°

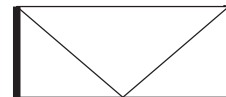
to the right 5 panes



to the right 1 pane



to the left 1 pane



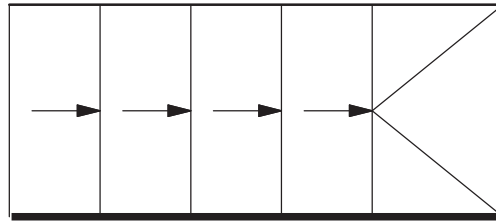
NB! The pane can be hinged the other way round, but an additional opening gap will be necessary. The manufacturer recommends the opening direction illustrated here.

NB! The pane on this side can be hinged the other way round. This option will necessitate an additional opening gap in the corner. The manufacturer recommends the opening direction illustrated in this picture. The pane will not open simultaneously with the panes of the façade.

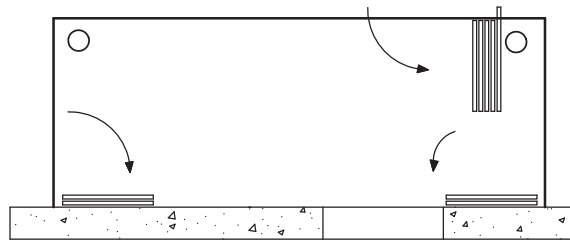
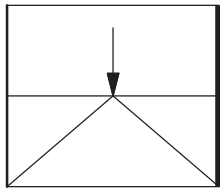
Glazing a space with an obstacle (e.g. a water pipe or a pillar)

Corner glazing opening on three sides 90°

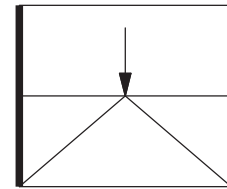
to the right 5 panes



to the left 2 panes

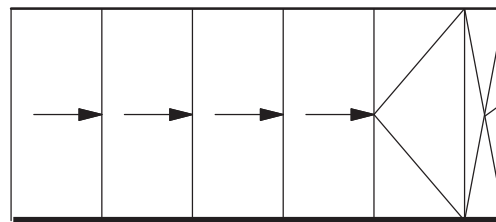


to the right 2 panes

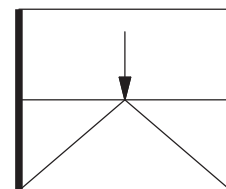
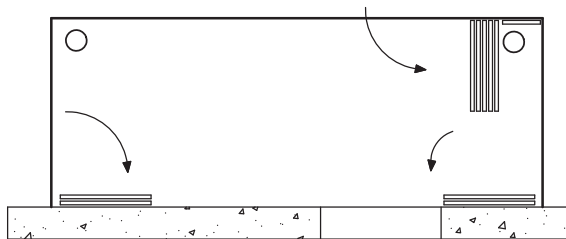
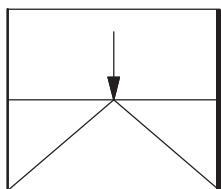


Should the obstacle be located at the opening end of the glazing, the first pane will have to be hinged differently. It can be moved up to 30 % of the pane width or up to 300 mm. NB! The first pane should be ordered with this much additional width.

Another alternative is to position a fixed pane in front of the obstacle as illustrated below.



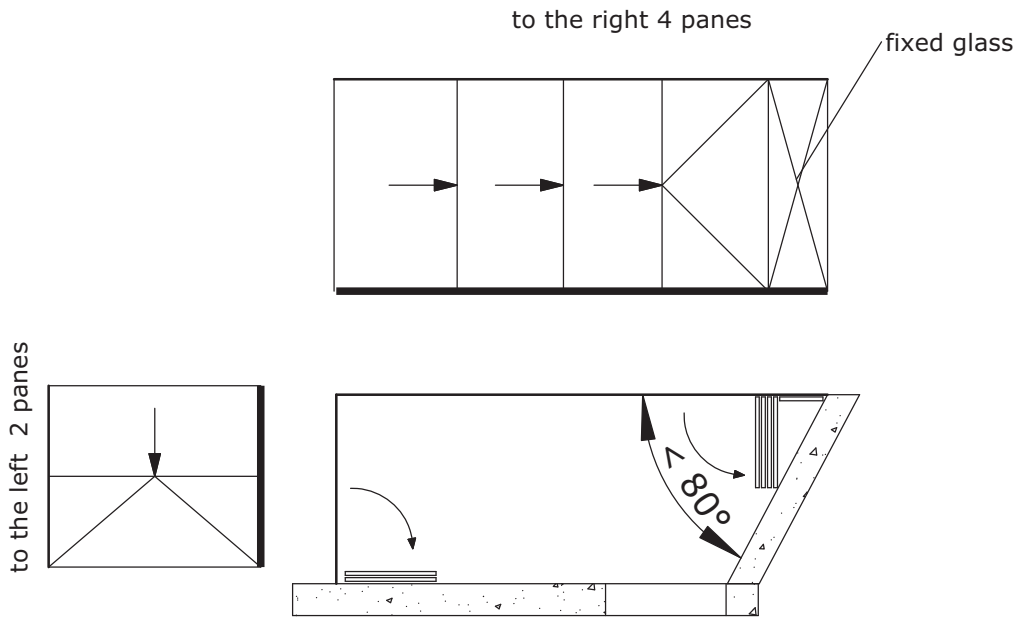
fixed pane



A fixed pane will be installed in front of the obstacle, if it is impossible to slide the panes over the corner and the obstacle or if the hinge cannot be positioned differently because of an external obstacle.♂ The width of the fixed pane must be at least 10 % of its height and at least 200 mm.

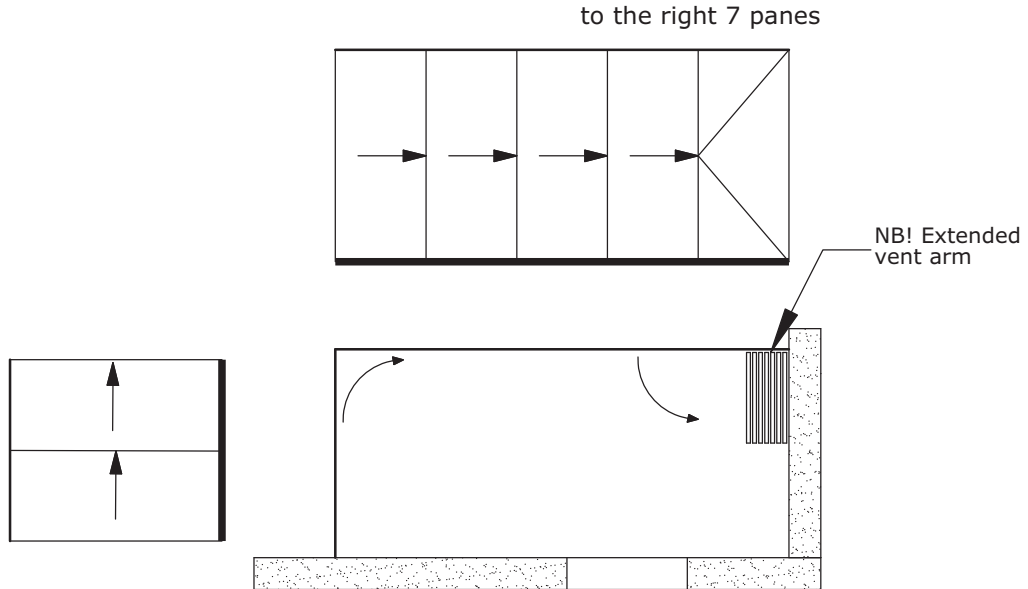
Should the initial or final angle of the opening end be < 80°, a fixed pane will be necessary at the end of the glazing. The fixed pane must be sufficiently wide to ensure a needed opening angle for the openable panes as well as their locking into each other.

Corner glazing opening on two sides
90°



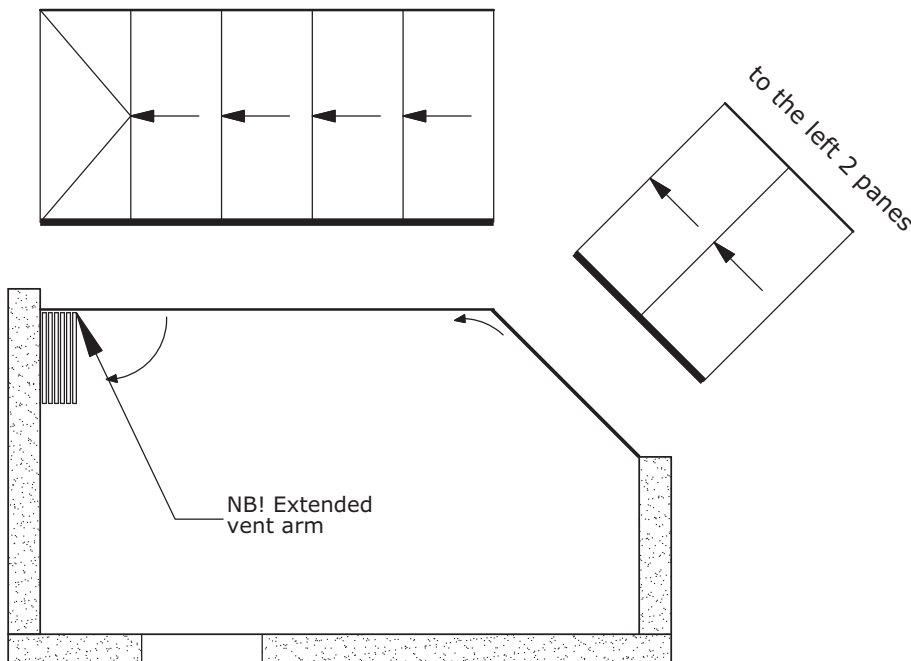
The width of the fixed pane must be at least 10 % of its height but also $\geq 200\text{mm}$.

Corner glazing opening on one side, with a corner bypass over a 90° angle

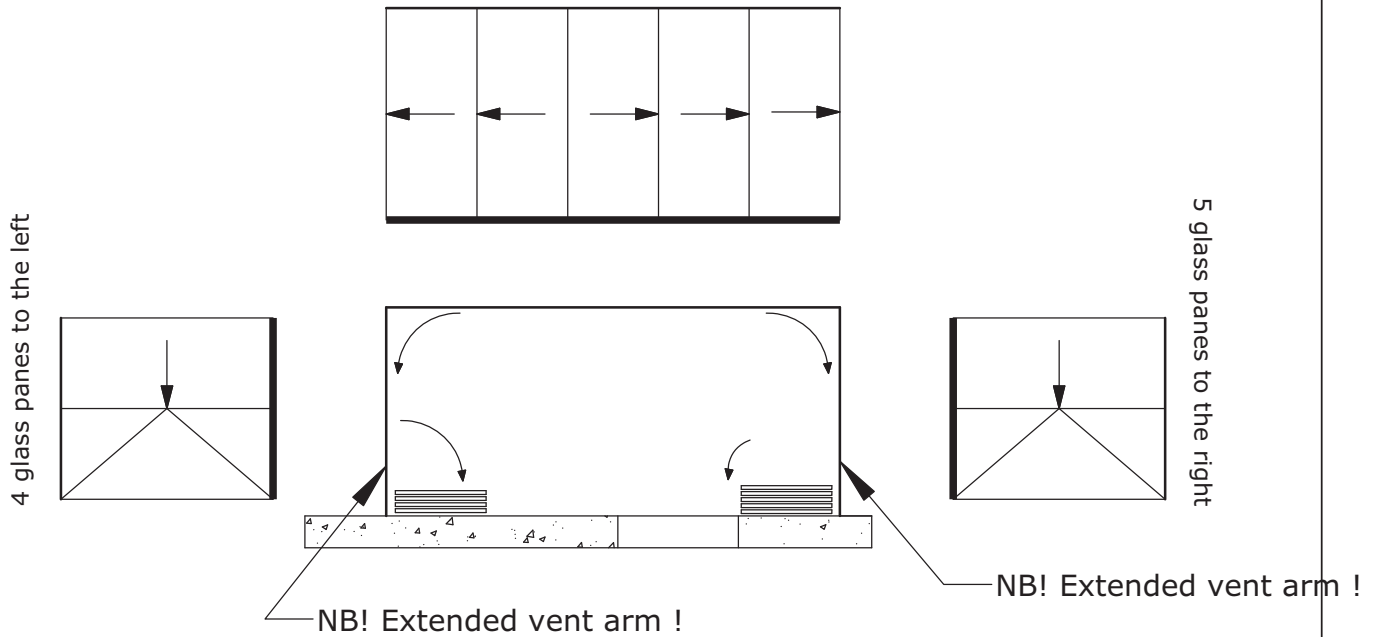


Corner glazing opening on one side, with a corner bypass over a 90° angle

to the left 5 panes
at the opening end 7 panes



Corner balcony or terrace that opens on two sides and there has panes that slides round a 90° corner

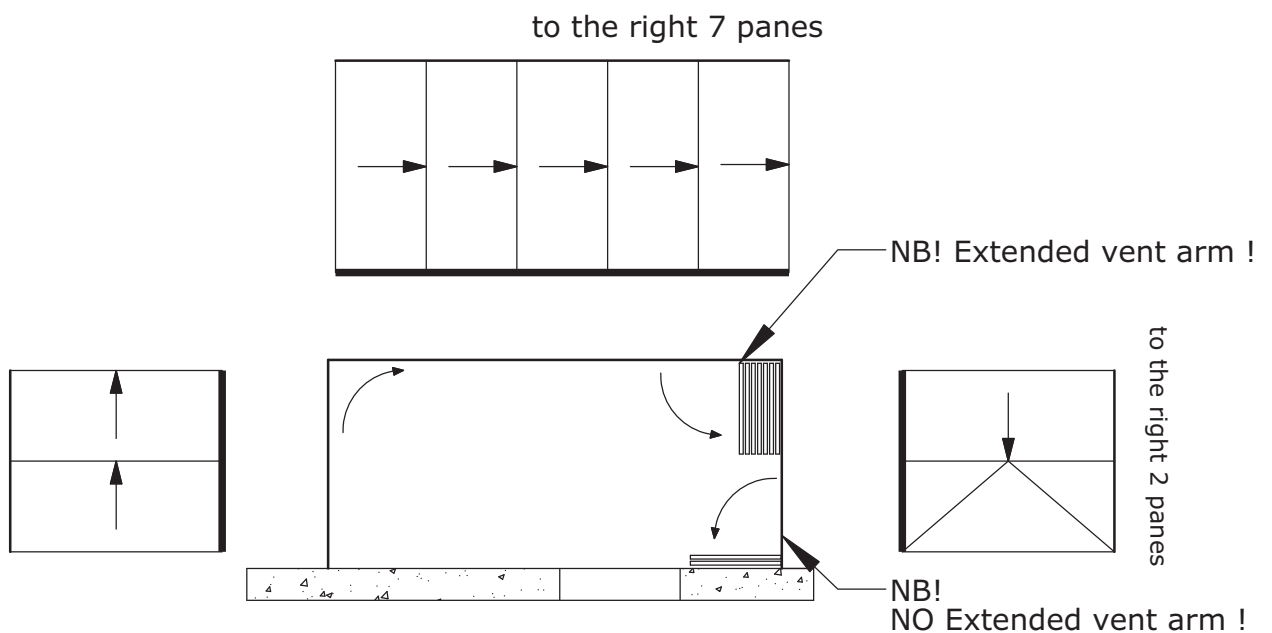


NB!

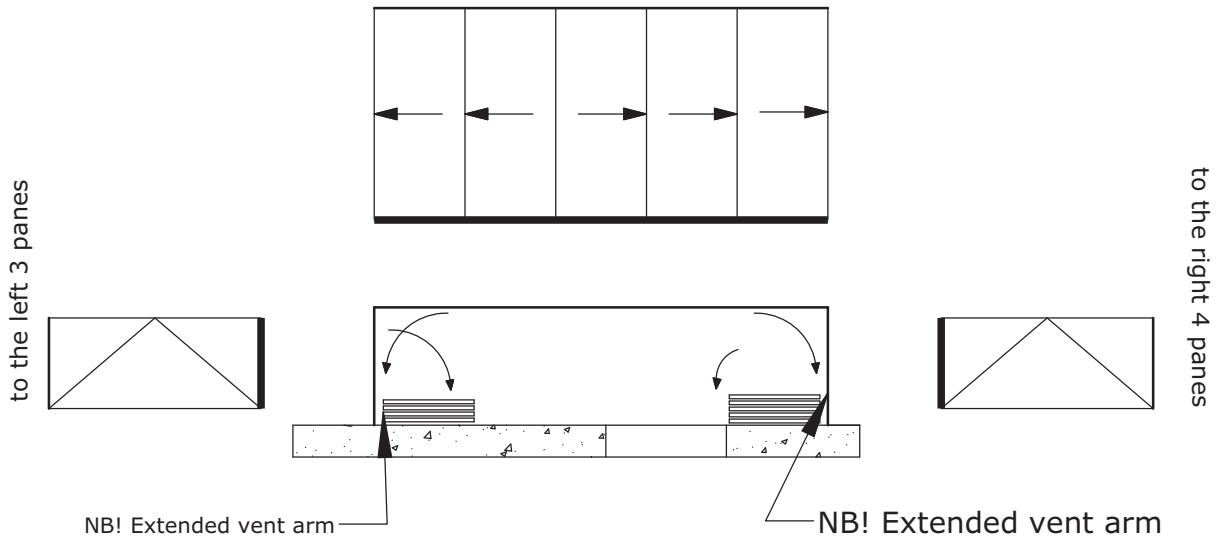
In corner bypasses, only one openable pane is needed on the opening side of the glazing.

On the corner bypass sides an extended vent arm is used; the glazing can comprise vent arms of different types at different opening ends

Corner glazing opening on two sides, with a corner bypass over a 90° angle



Corner glazing opening on two sides, with a corner bypass over a 90° angle

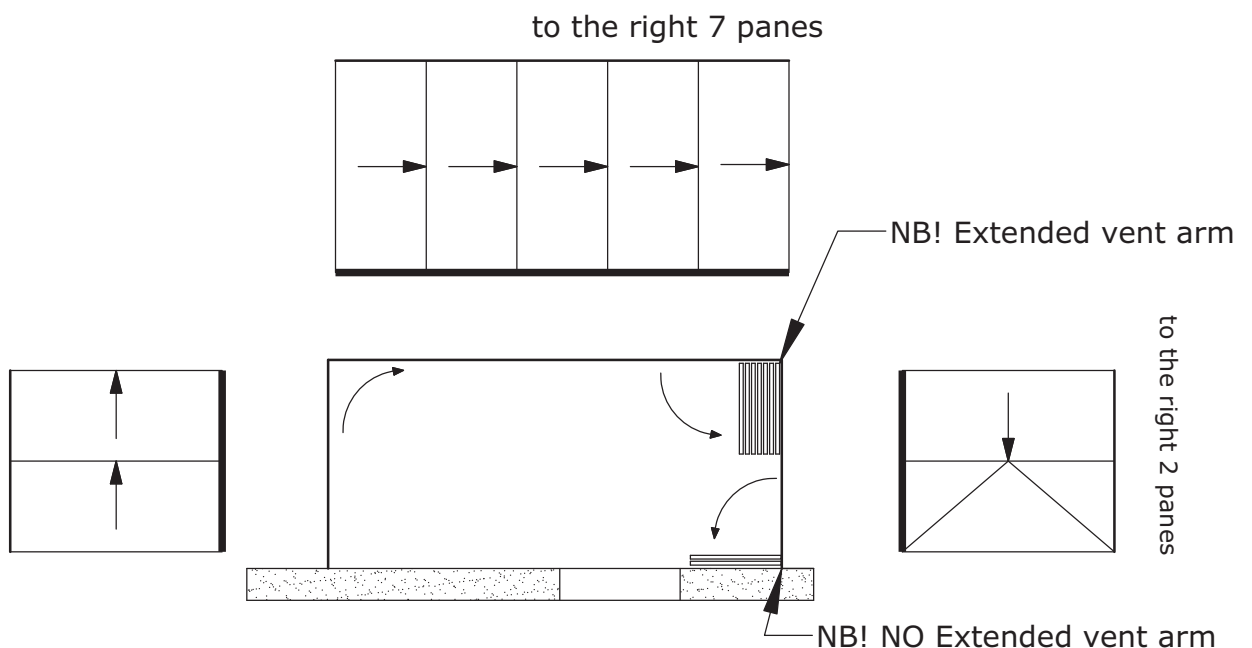


NB!

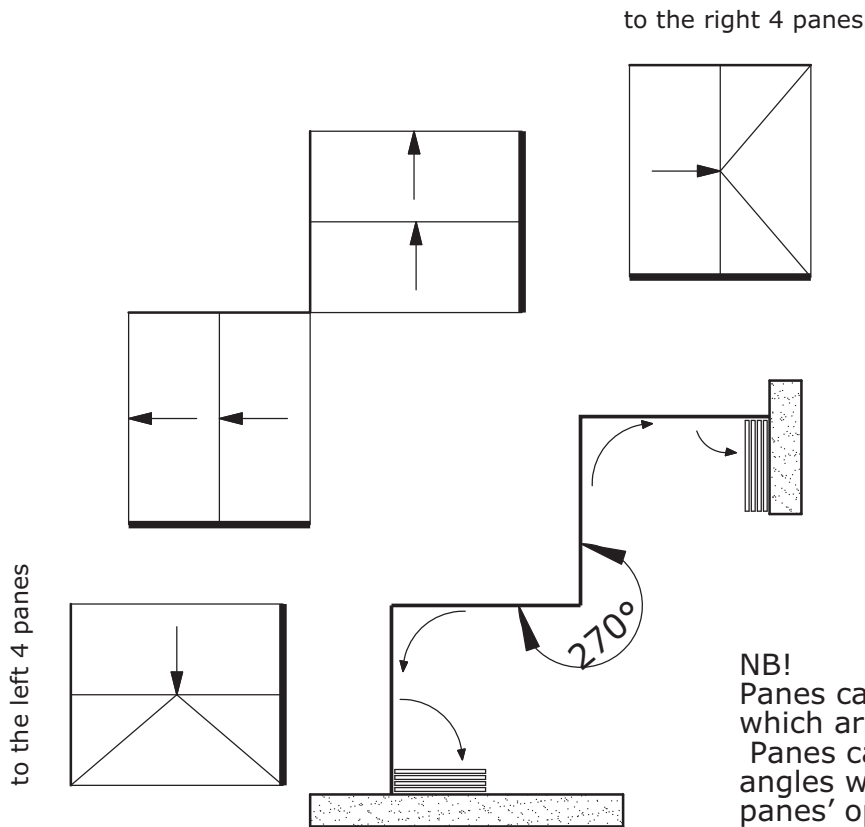
In corner bypasses, only one operable pane is needed on the opening side of the glazing. The opening gap at the system angle will however be greater than on a glazing which holds several panes on its opening side. Should the system angle be $> 135^\circ$, there will be no additional opening gap.

On the corner bypass sides an extended vent arm is used; the glazing can comprise vent arms of different types at different opening ends.

Corner glazing opening on two sides, with a corner bypass over a 90° angle



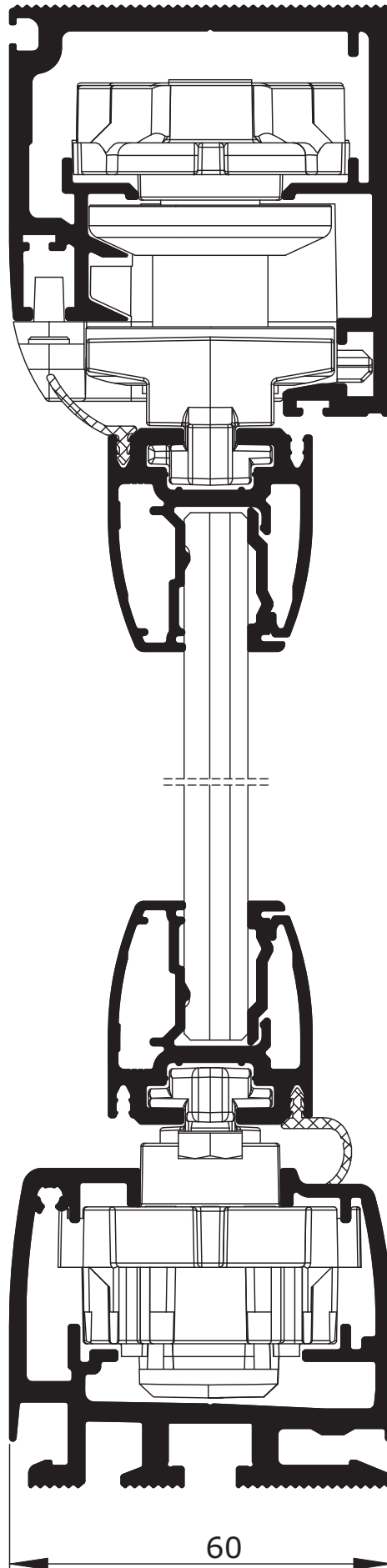
Corner balcony or terrace that opens on two sides and there has panes that slide round a 90° corner



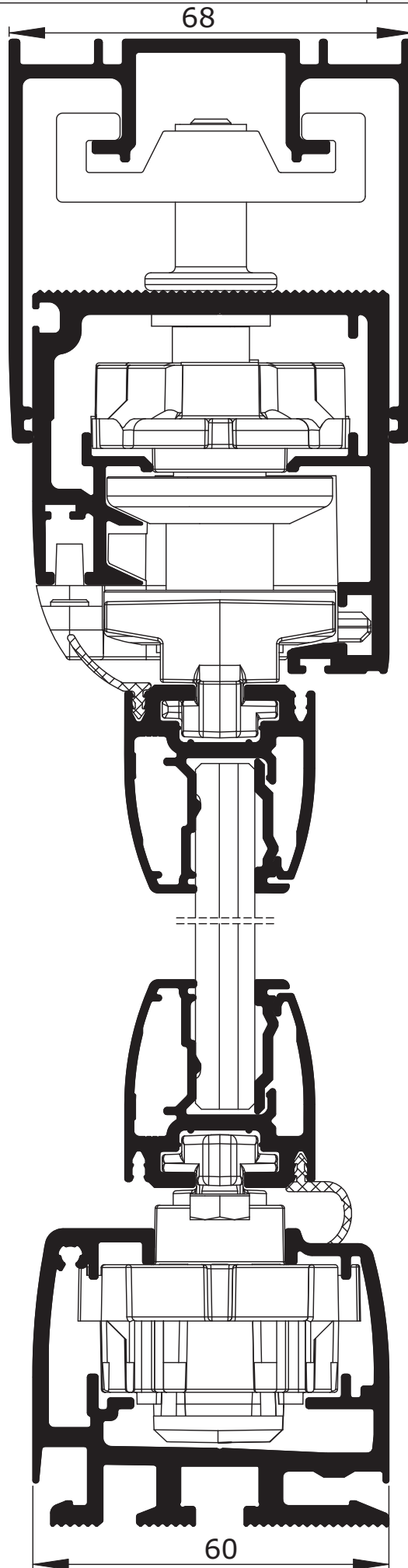
NB!
 Panes cannot slide over corners which are > 180°. Panes cannot slide over system angles which are < 90°, either. The panes' opening direction always changes when the system angle is either < 90° or > 180°.

NB!
 An extended vent arm is installed on the corner bypass side. Should the glazing include sides without corner bypass, vent arms will be different from one side to another.

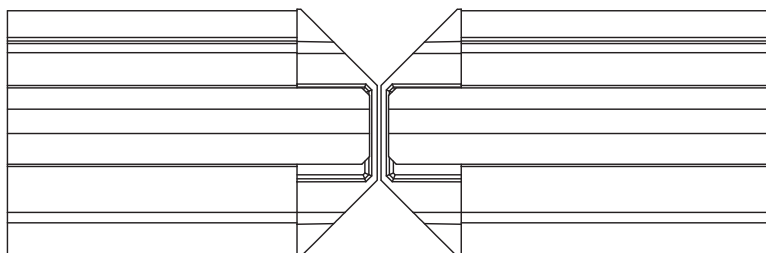
1:1



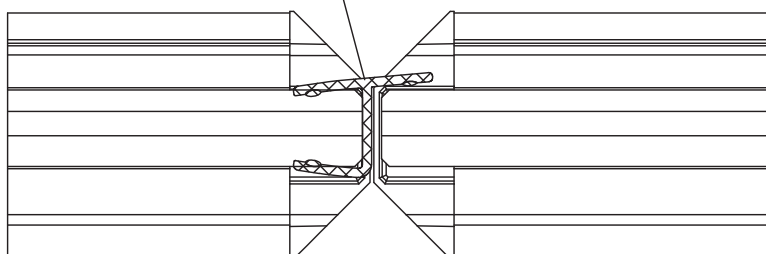
1:1



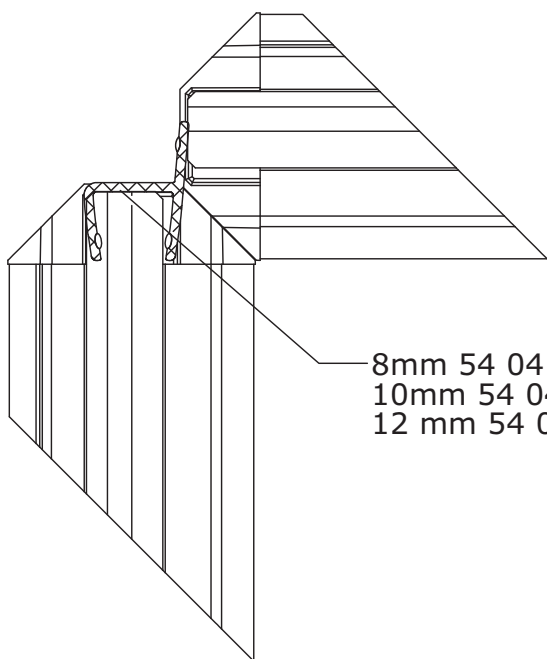
1:1



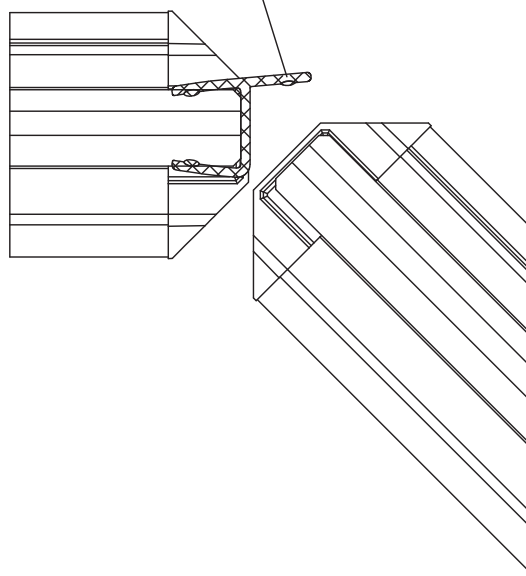
8mm 54 04 3044
10mm 54 04 3064
12 mm 54 04 3084

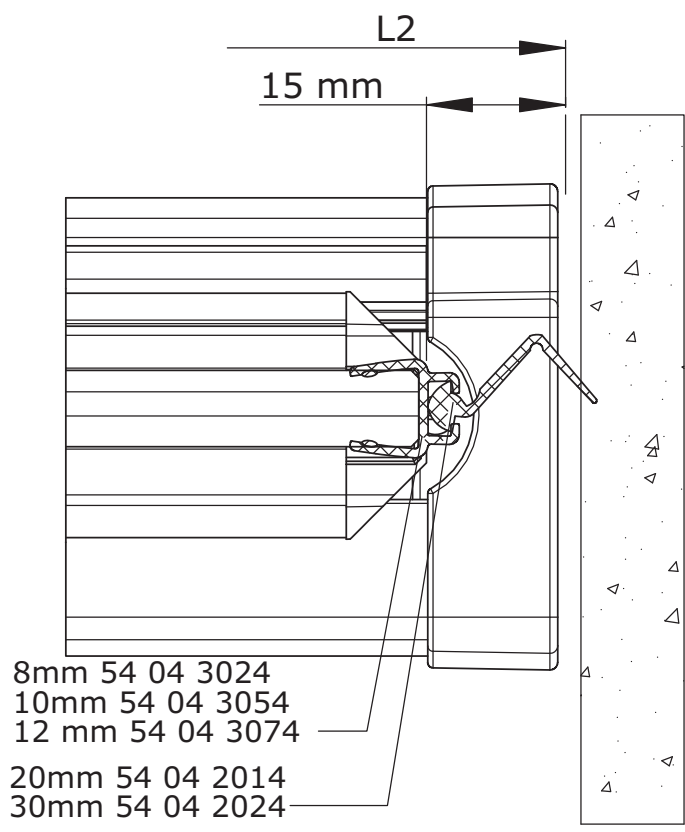
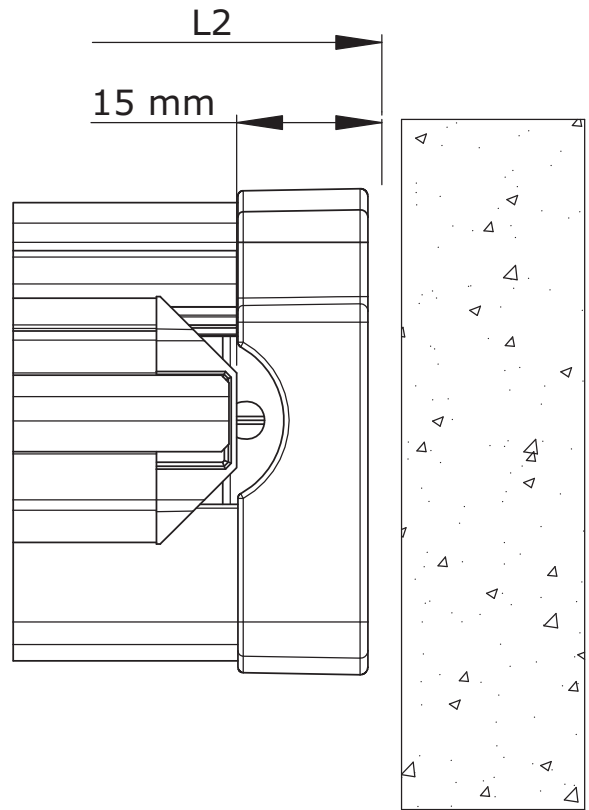


8mm 54 04 3044
10mm 54 04 3064
12 mm 54 04 3084



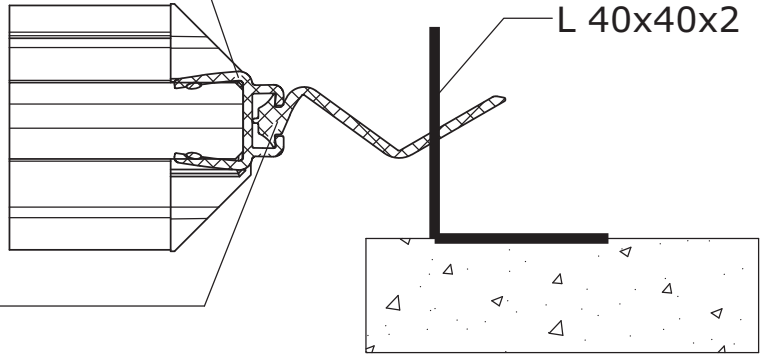
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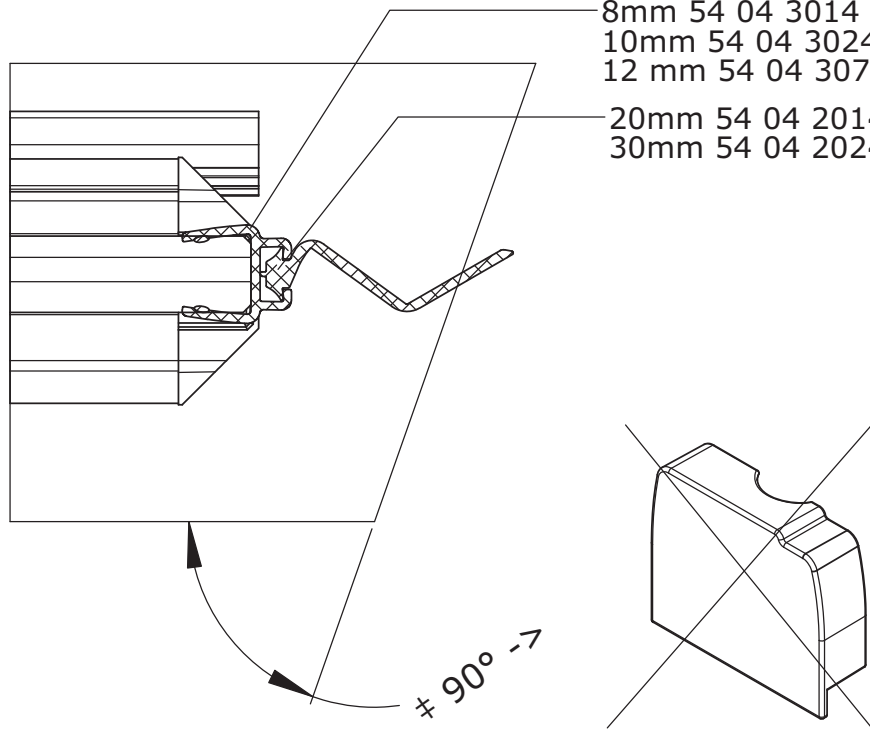


8mm 54 04 3024
 10mm 54 04 3054
 12 mm 54 04 3074

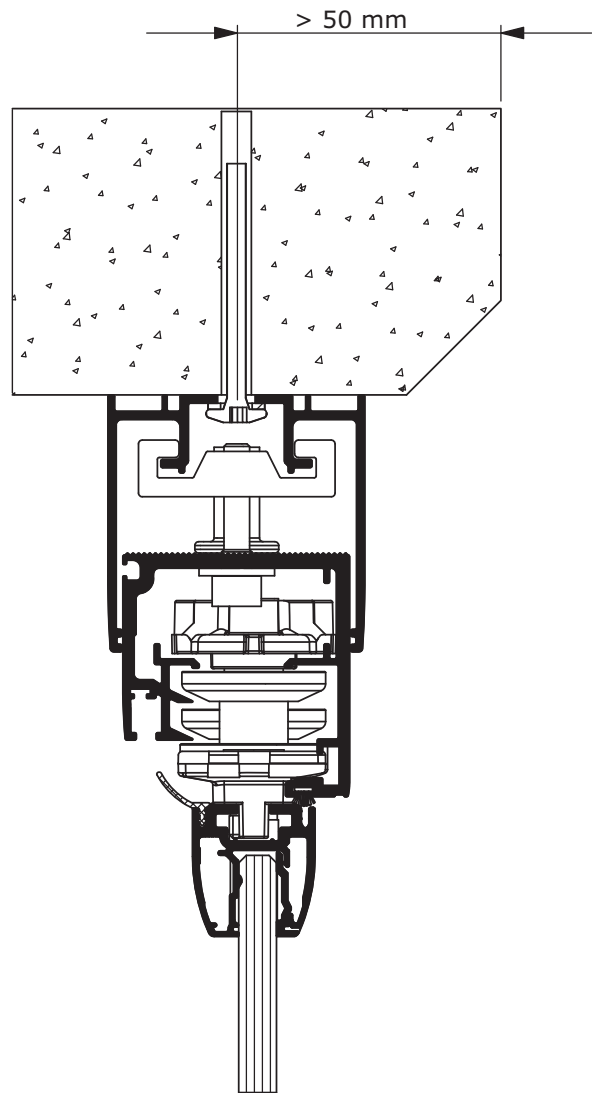
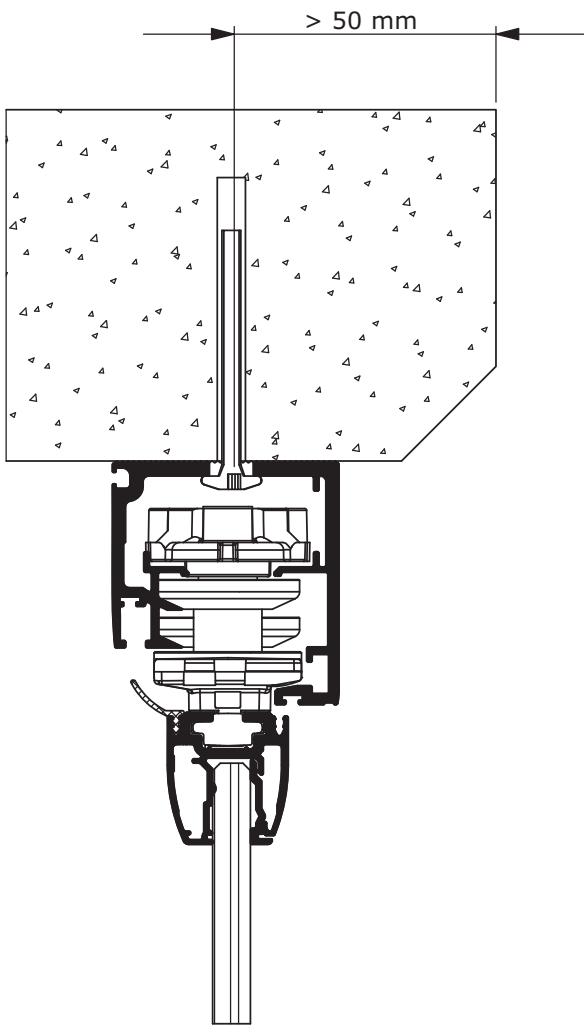
20mm 54 04 2014
 30mm 54 04 2024



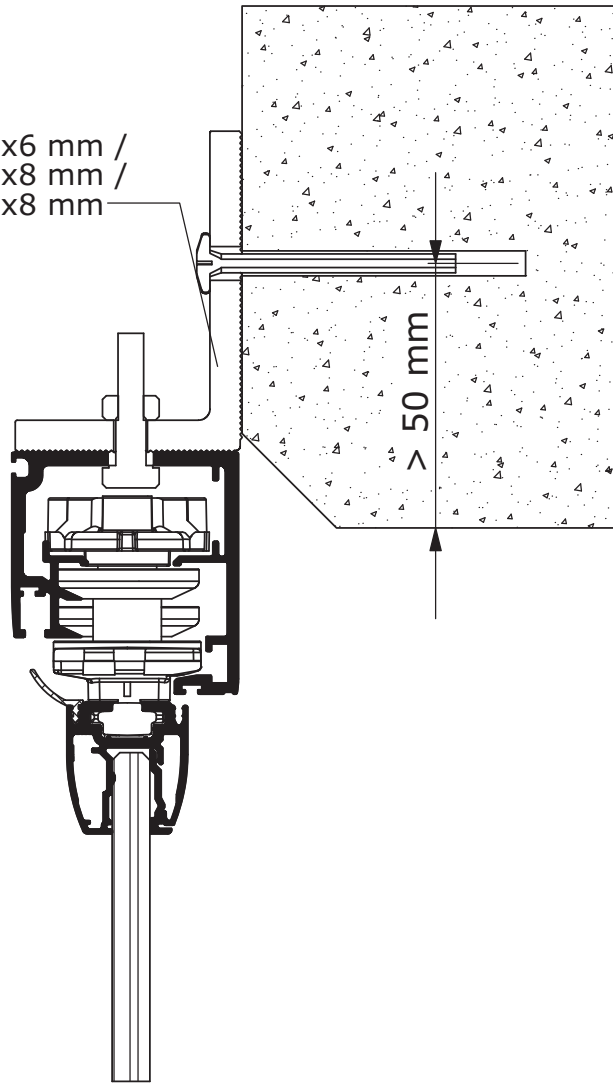
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 10mm 54 04 3024
 12 mm 54 04 3074
 20mm 54 04 2014
 30mm 54 04 2024

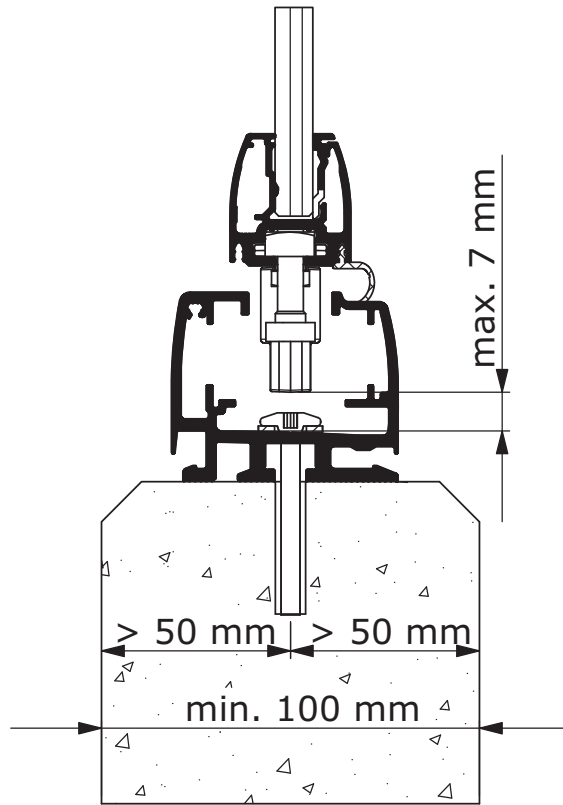


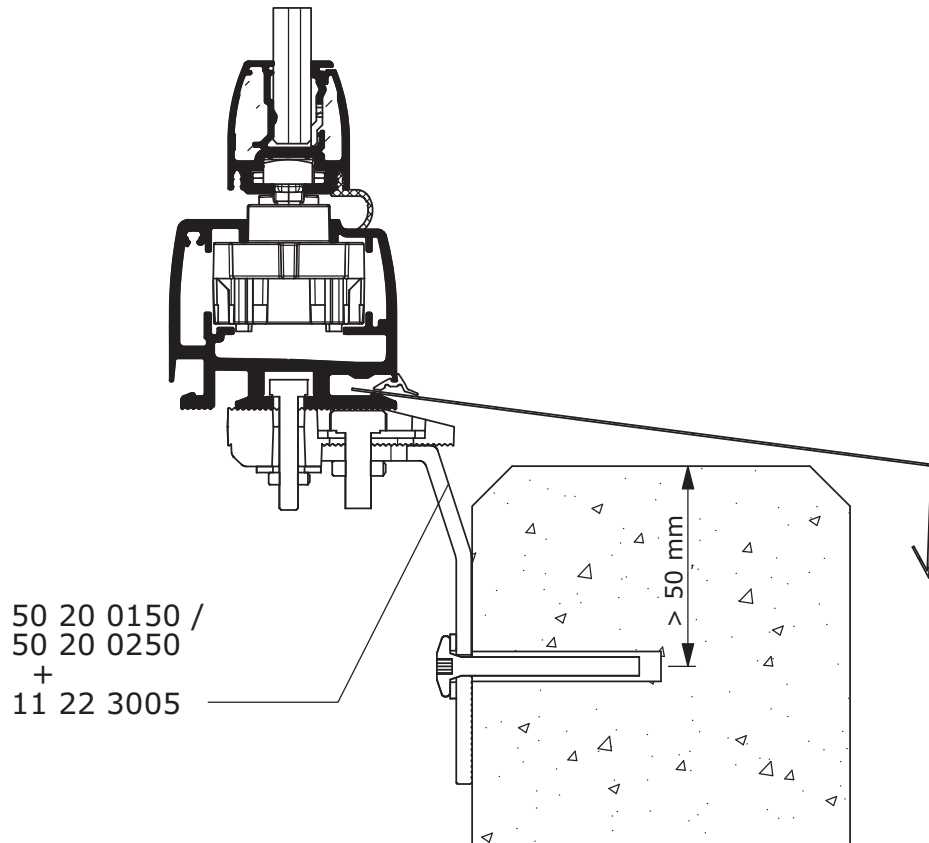
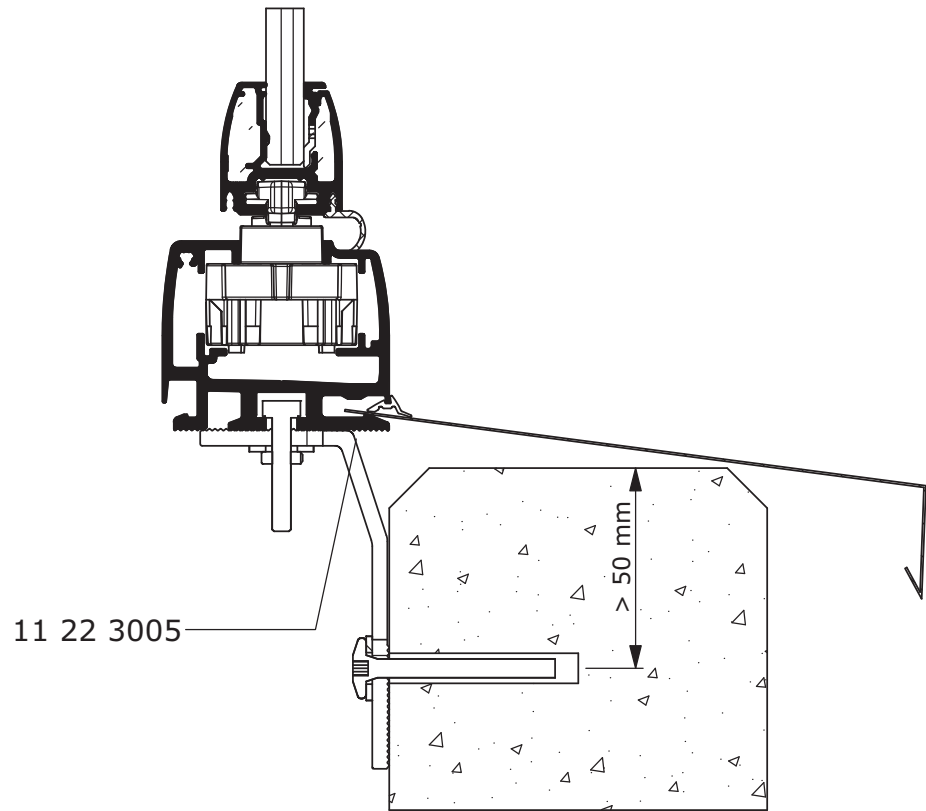
± 90° ->

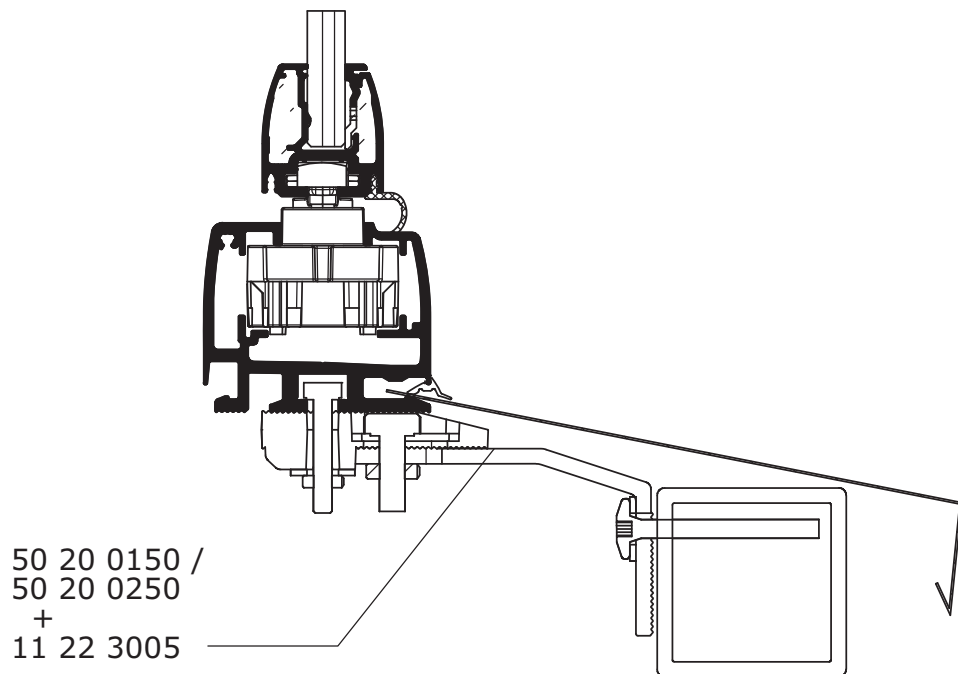
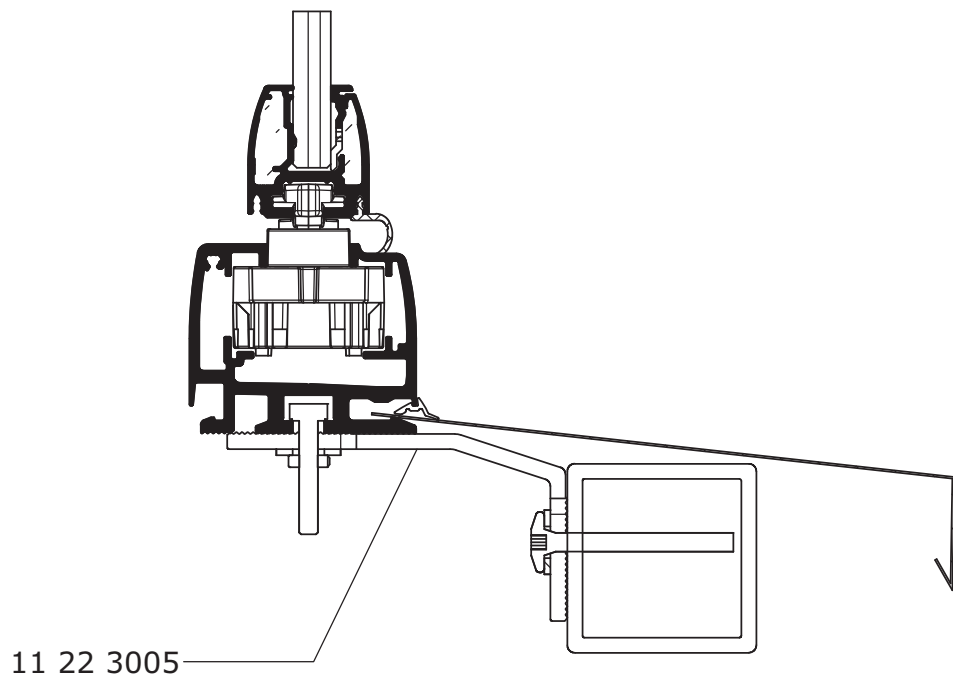


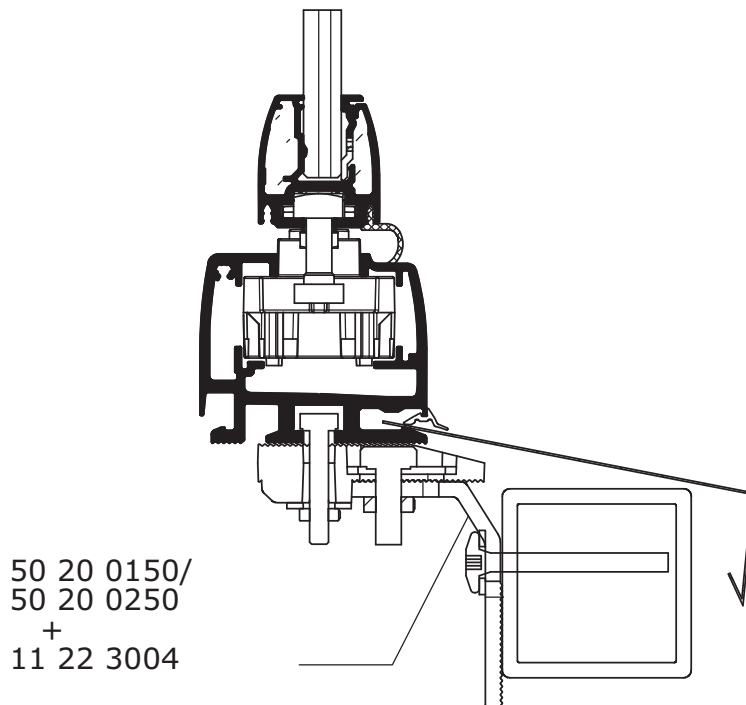
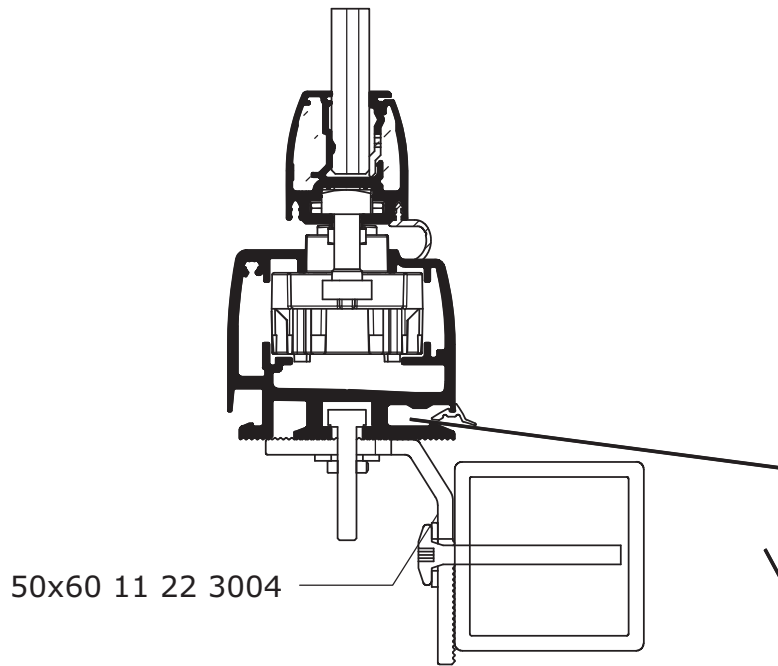
- 11 01 0705, Al, L 60x60x6 mm /
- 11 01 0707, Al, L 60x85x8 mm /
- 11 01 0707, Al, L 85x60x8 mm

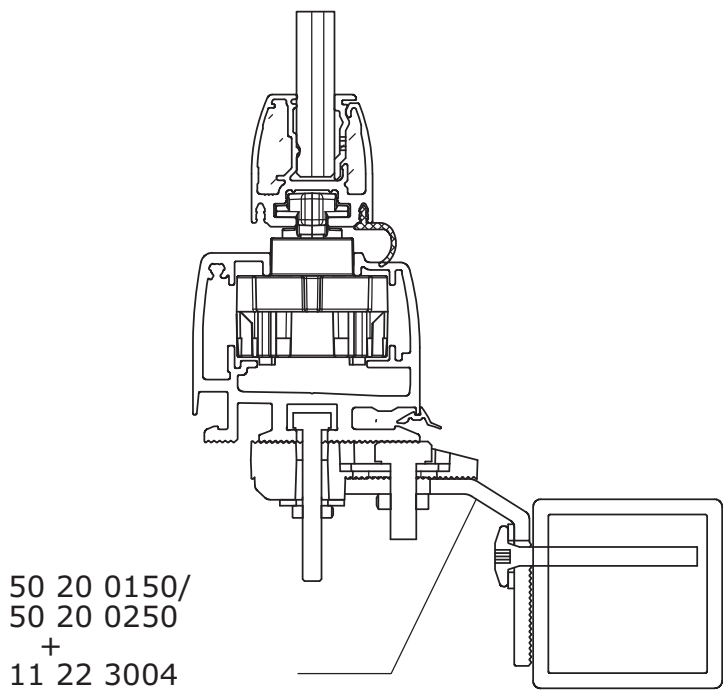
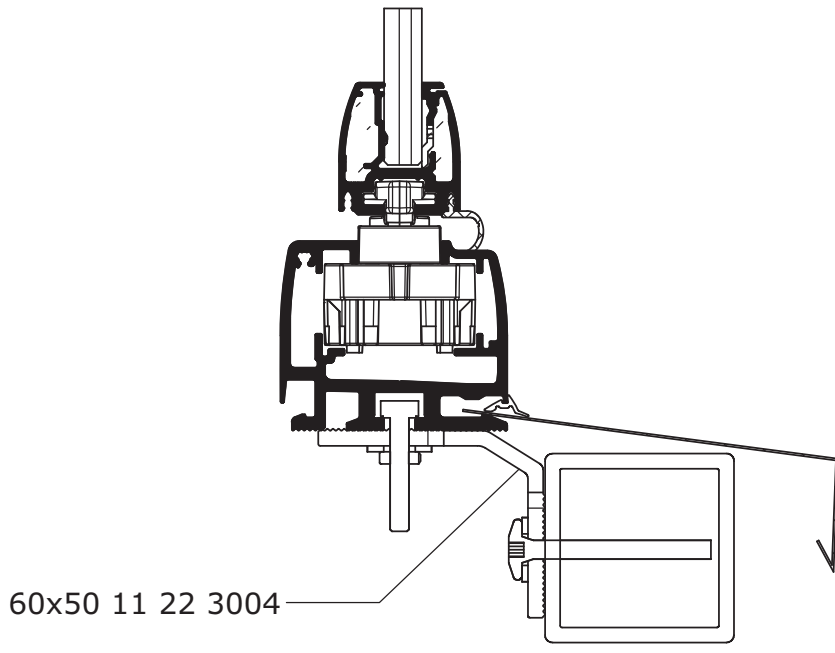


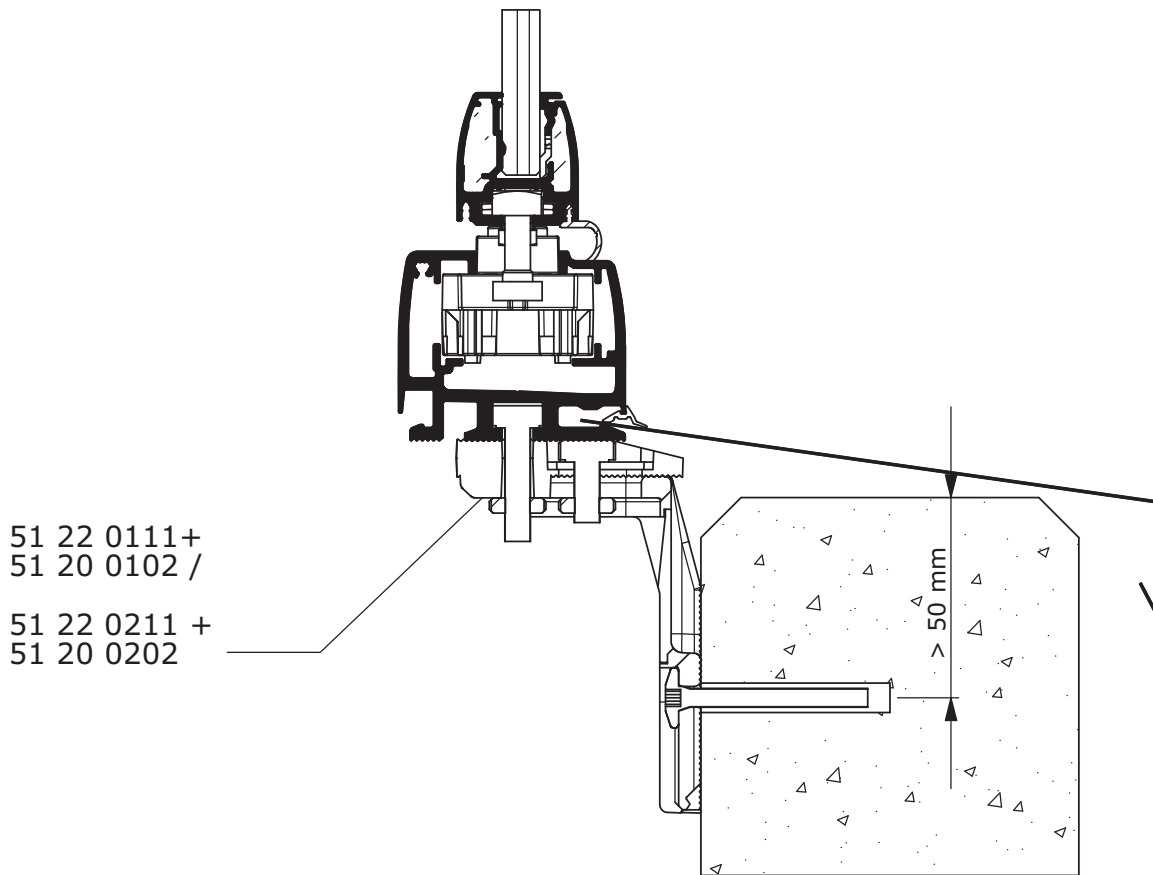
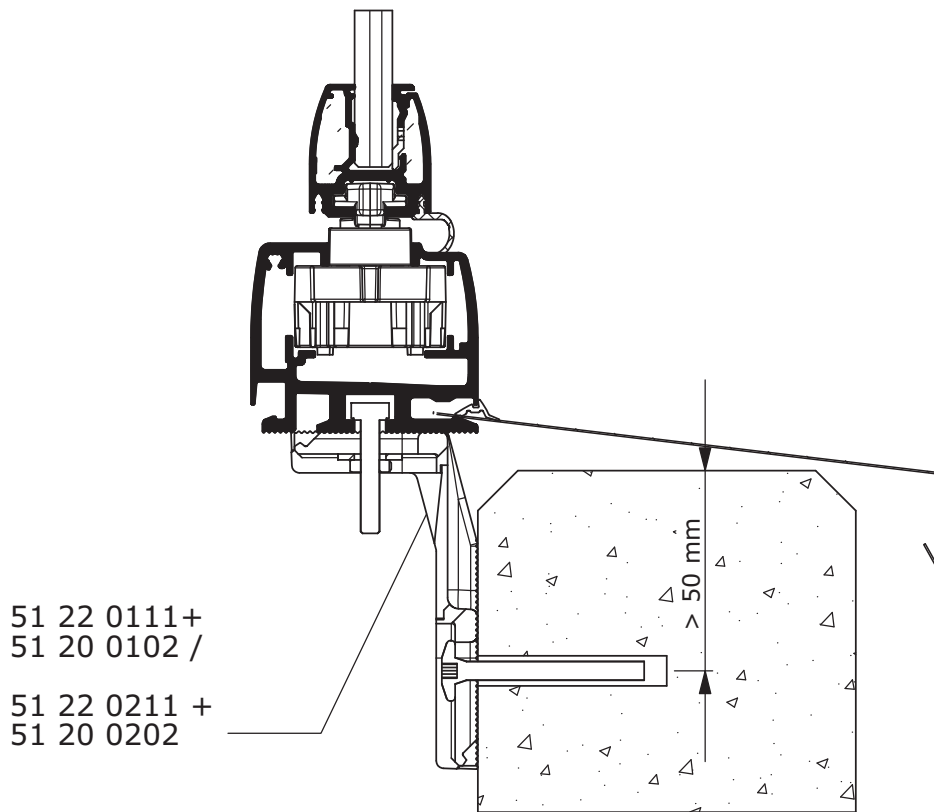


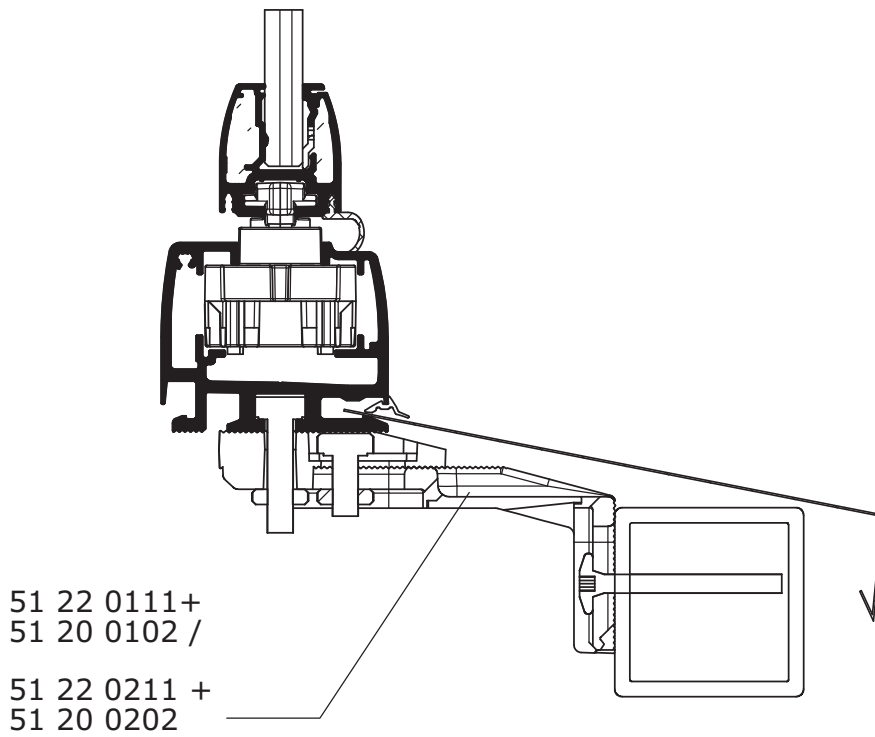
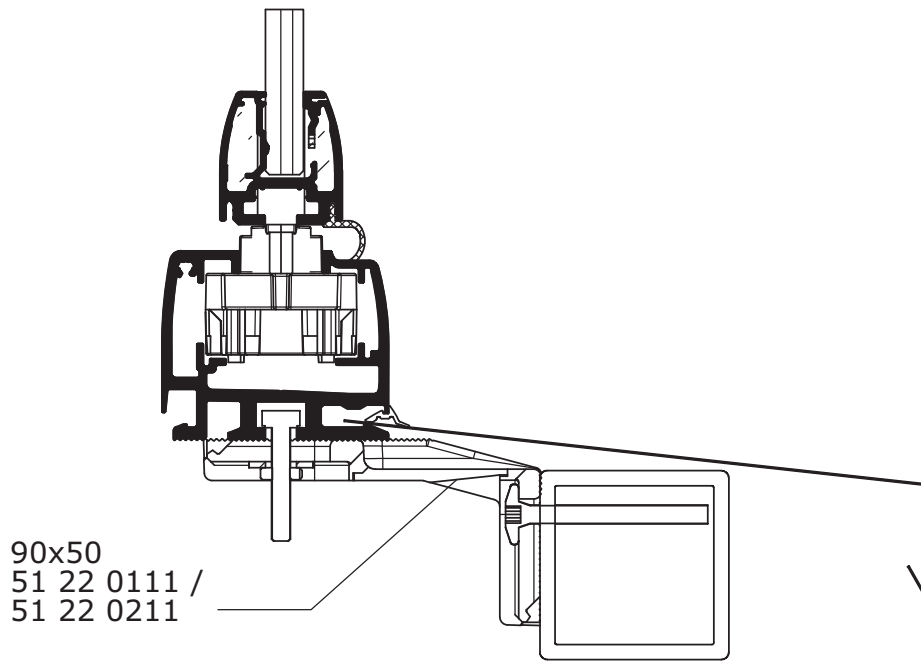


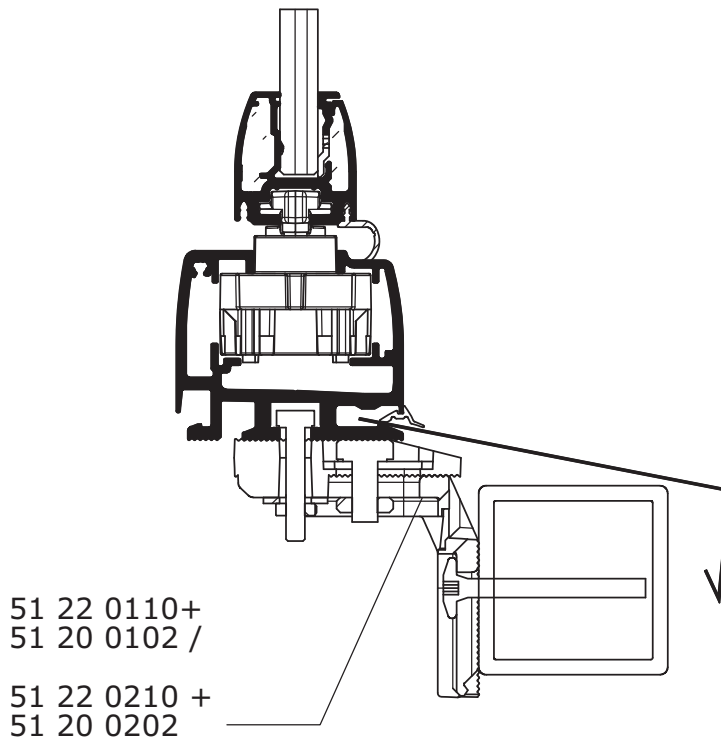
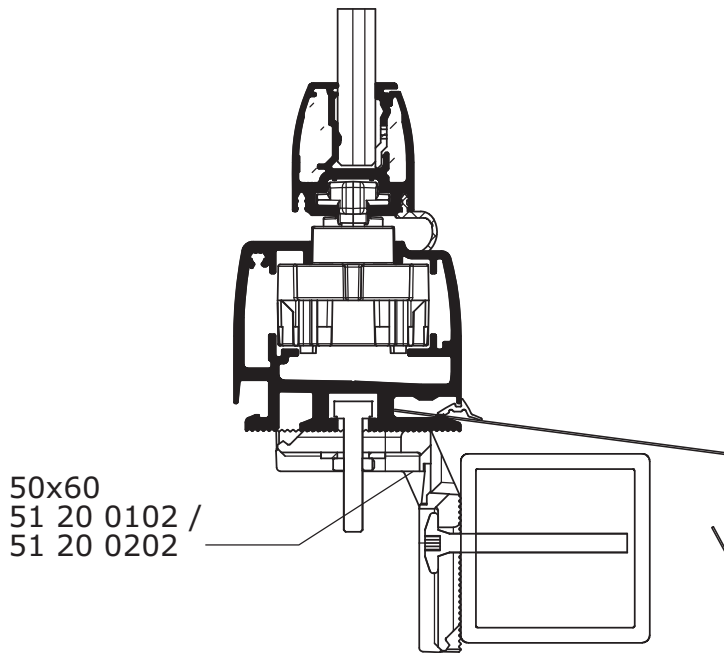


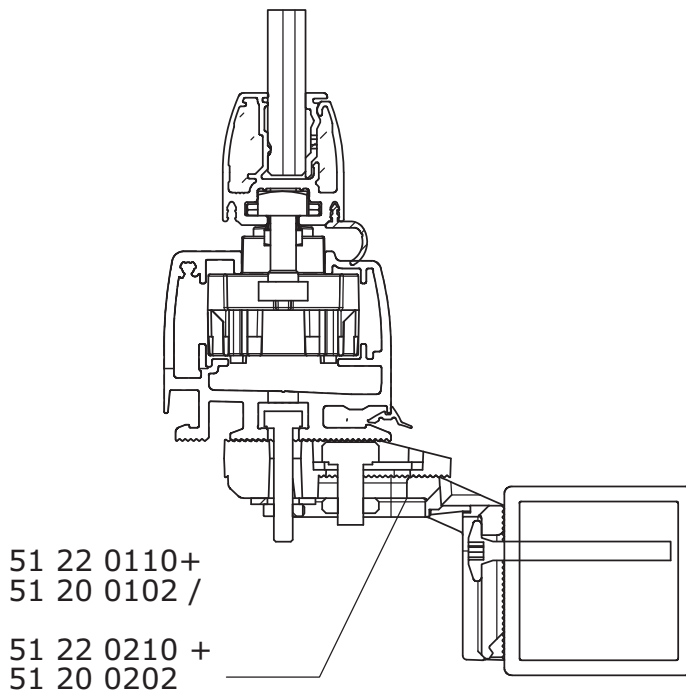
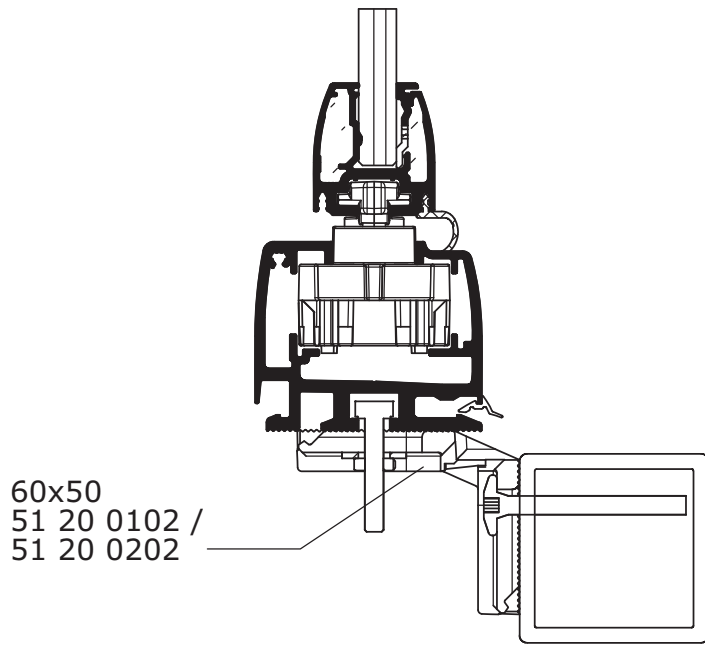












GENERAL NOTIONS:

Height of the opening H1: The height of the opening to be glazed. Each side should be measured at three different points, the distance between these points remaining within 1 m.

Width of the opening L1: The width of the opening to be glazed. The distance between the floor and ceiling structures should be measured at several points on each balcony side. Eventual structures limiting the width such as pillars or the railing must be taken into account in these measurements.

Glazing Height H2: The height of the glazing measured from the bottom surface of the lower profile to the top surface of the upper profile. The glazing height is obtained by reducing the installation measurements (lower reduction X and upper reduction Y) from the height of the glazing.

Glazing Length L2: The full length of the glazing system. It is obtained by reducing the installation measurements from the width of the opening: in straight glazing initial and final reductions (ca. 5 mm), in corner glazing initial reduction, deviation (Z) and final reduction. The glazing length L2 includes the end plugs at 90° initial and final angles (an end plug measuring ca. 3 mm).

End plugs have an additional length of 10 mm, which allows one to cover a 13mm gap (max.) between the wall and the profile.

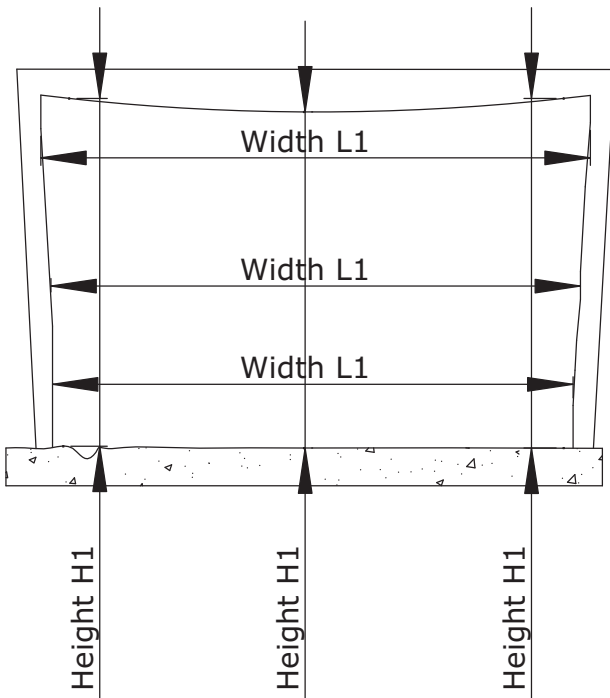
X = Lower Reduction; Please note that the lower reduction will be negative (-), if the bottom surface of the lower profile is located below the Measuring Line.

Y = Upper Reduction. Manufacturer's recommendation: 5 mm. With a telescopic profile, the upper reduction does not have to be taken into account.

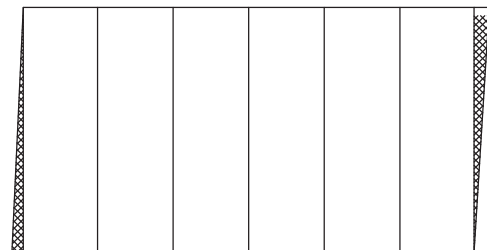
Z = Deviation. Distance between the Measuring Line and the outer surface of the lower profile. Please note that for retractable glazing it will be positive (+), and for glazing outside the Measuring Line it will be negative (-).

Each glazing will be measured separately and marked in the order.

The glazing measurements viewed from the façade

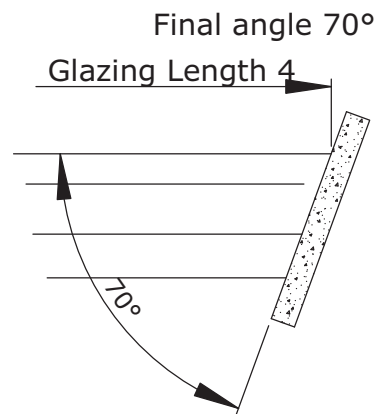
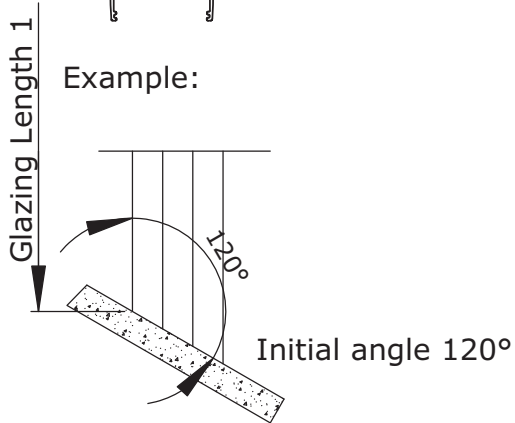
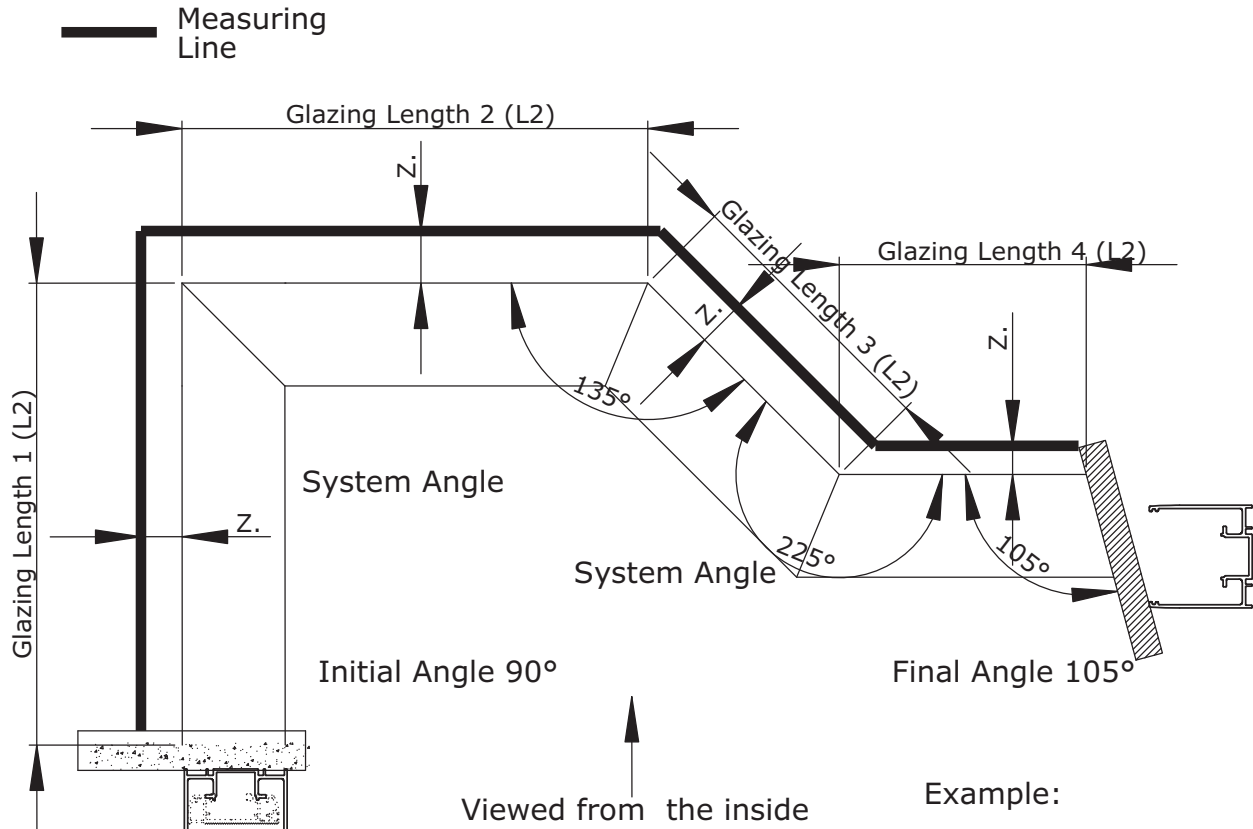


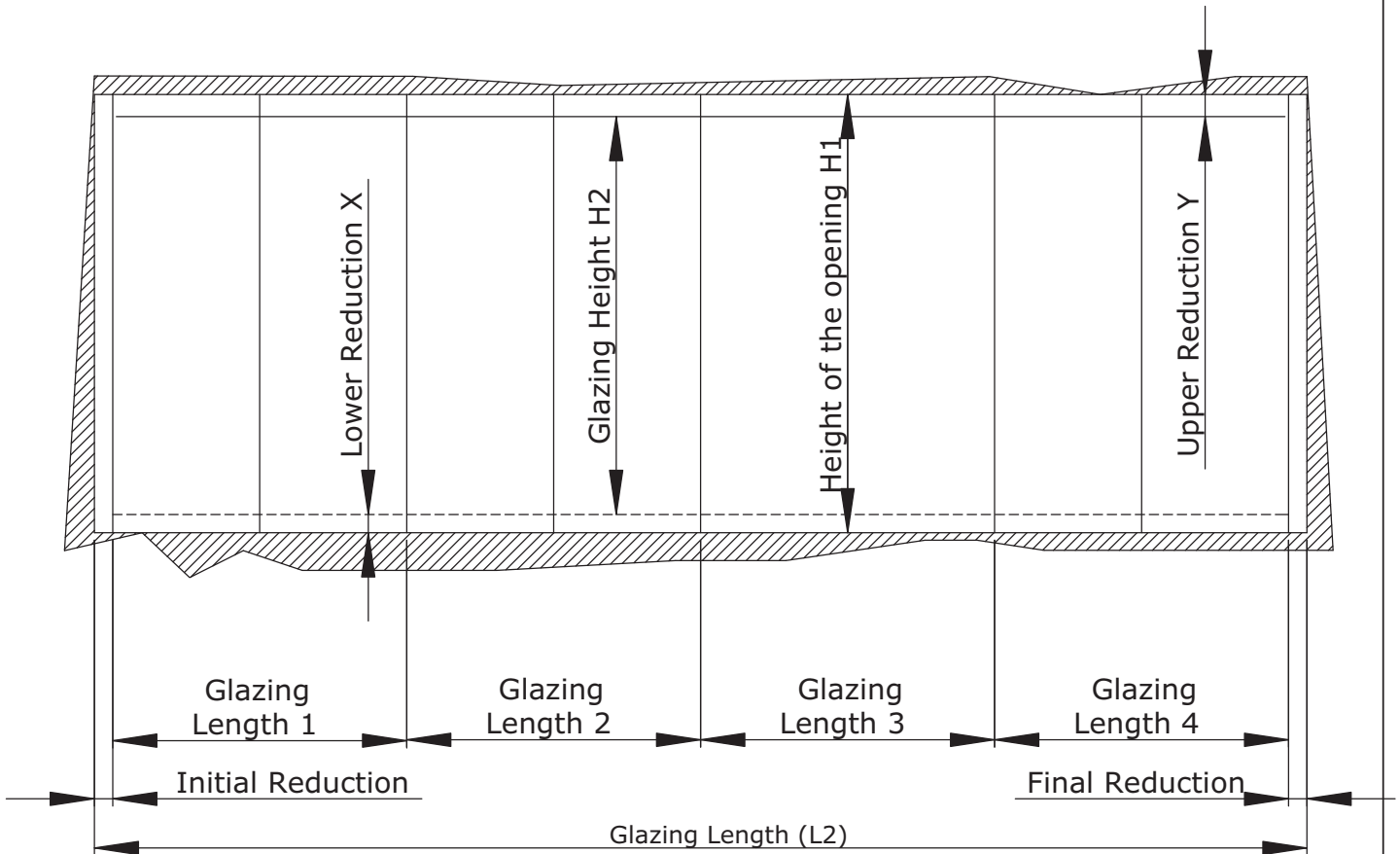
Make sure the opening is level and plumb.



Angles:

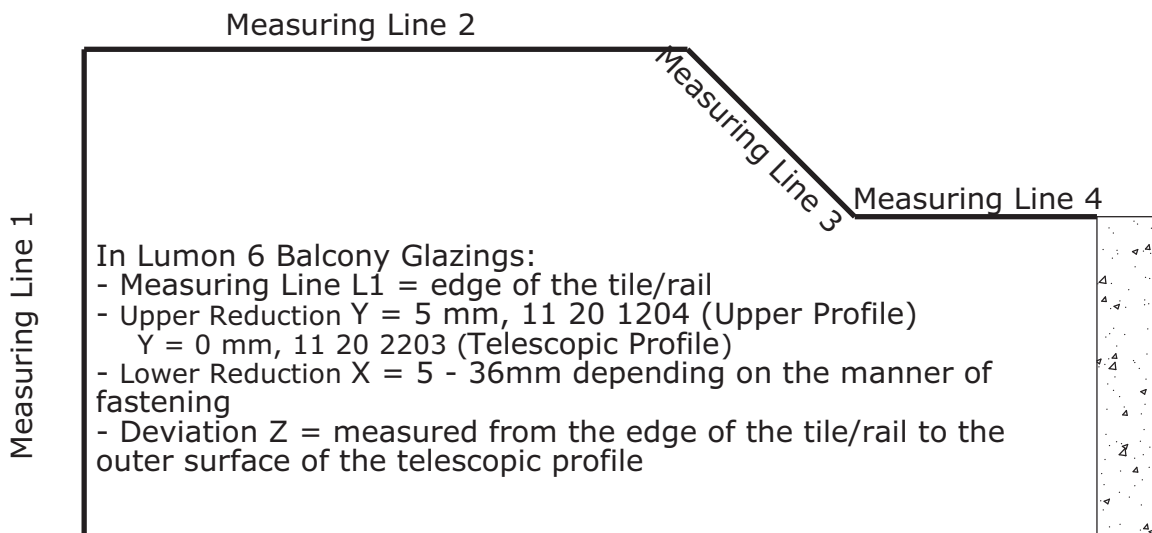
- The Initial, System and Final Angles must always be mentioned in the order.
- The Initial Angle and Final Angle are measured from the outer surface to the cut surface of a profile.
- The System Angle is measured between the outer surfaces of two profiles joined together.





NB!

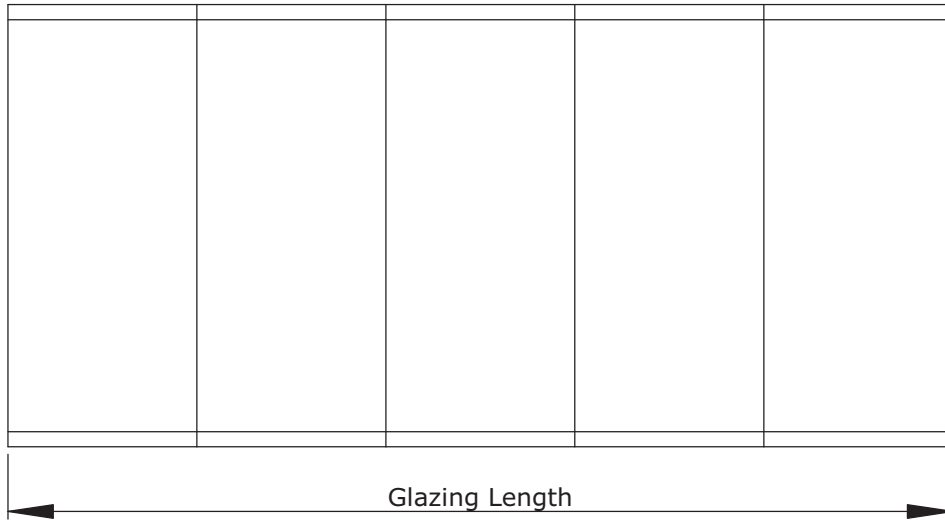
In initial and final angles of 90°, the Glazing Length includes the end plugs. In this case the upper and lower profiles will be delivered 3 mm shorter than the full Glazing Length. The plugs can be adjusted by max. 10 mm / end of profile (plugs measure 3-13 mm).



In Lumon 6 Balcony Glazings:

- Measuring Line L1 = edge of the tile/rail
- Upper Reduction Y = 5 mm, 11 20 1204 (Upper Profile)
Y = 0 mm, 11 20 2203 (Telescopic Profile)
- Lower Reduction X = 5 - 36mm depending on the manner of fastening
- Deviation Z = measured from the edge of the tile/rail to the outer surface of the telescopic profile

The recommended pane width is 700-800 mm.
The pane width can be calculated according to the following example.



Glazing length 3900mm, recommended pane width 800mm

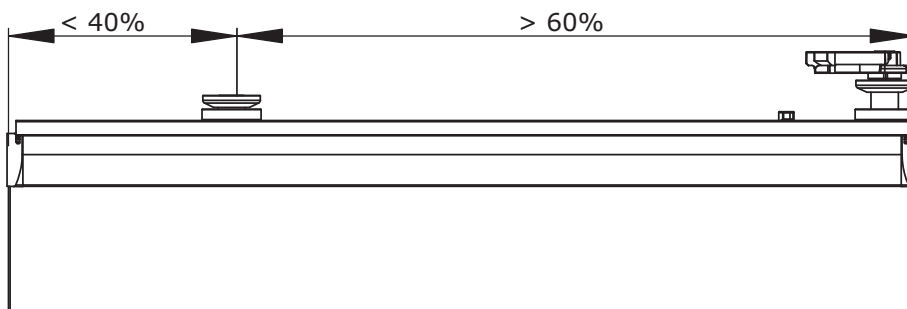
$$\text{Number of panes} = \frac{3900}{800} = 4,88 \text{ ---} > 5 \text{ pcs}$$

The number of panes is rounded up to the nearest whole number.
In this example the pane width is 780mm.
The number of panes on each side of the glazing is to be recorded.
In glazings with corner bypass, production planning may require an adaptation of the pane width.
IN THE EXAMPLE, NEITHER REDUCTIONS NOR GAPS BETWEEN PANES HAVE BEEN TAKEN INTO ACCOUNT.

The maximum number and width of the panes: the maximum number and width of panes that can be stacked at one end of the glazing are indicated in the **Table of Recommended Glass Pane Sizes** in Chapter 10.

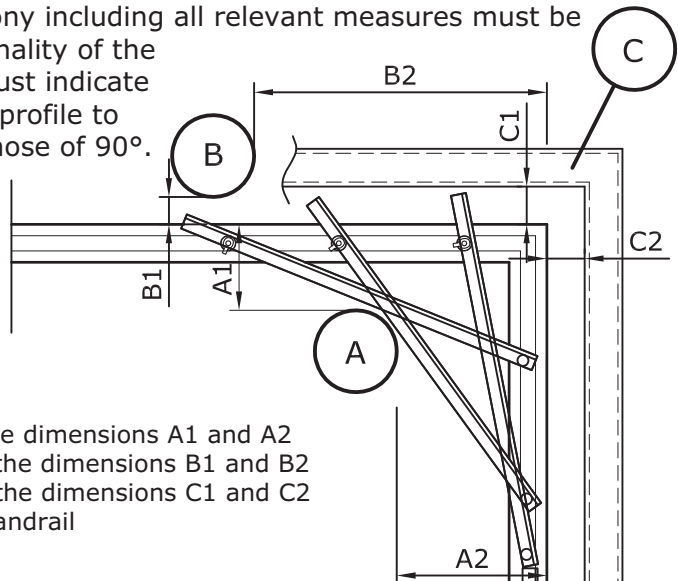
The 60% Principle

The distance between the upper rail guide and the upper hinge must be at least 60% of the pane width. The sizes indicated in the Table of Recommended Glass Pane Sizes comply with this principle.



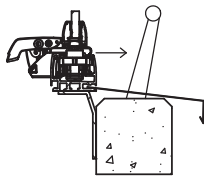
Things to take into consideration in corner bypasses:

Vertical poles, the railing, handrail or drainage pipes might prevent the panes from sliding over the corner. A separate drawing of the balcony including all relevant measures must be provided with the order, should the functionality of the product need examination. This drawing must indicate the dimensions from the outer edge of the profile to the obstacle as well as angles other than those of 90°.

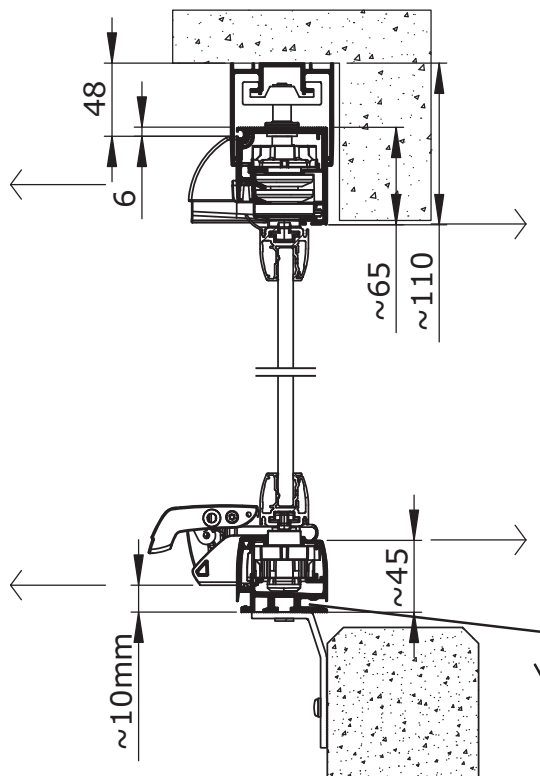
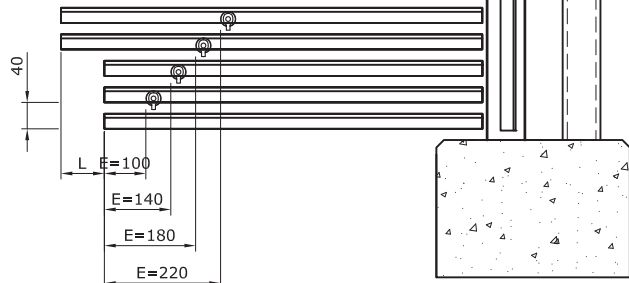


In the figure:

- A: obstacle inside the glazed space -> record the dimensions A1 and A2
- B: obstacle outside the glazed space -> record the dimensions B1 and B2
- C: obstacle outside the glazed space -> record the dimensions C1 and C2 as well as the height of the top surface of the handrail



Note that the handrail bracket may be askew. Cf. the turning level described below.



Check that no obstacle on the railing or ceiling hinders the panes from turning properly. Make sure also that there is enough space for your fingers for opening the panes.

SOUND INSULATION**TAUBERT und RUHE**

Research report 1675 / 94

Audio-technical test report DIN 52210

Abstract: A Lumon balcony glazing system was tested in Hamburg on a balcony with inside dimensions of 4,900 x 1,550 mm. The width of the 6 mm balcony glazing was 5,350 mm, and its height was 1,450 mm. The test was carried out using sound-wave measuring methods so that the level of noise caused outside the balcony was measured from inside the balcony glazing. The gaps in the balcony glazing were closed for the test. The difference between the noise volume outside and inside the balcony was 12 dB. A 10 dB decrease means that the perceived noise level is lowered by 50 %; therefore, the balcony glazing had a considerable effect on the noise level.

VIATEK Tampere

Field measurements in 2000

Sound insulation of a balcony glazing system

Abstract: Lumon balcony glazing systems were tested in the city of Tampere on five balconies against road traffic noise and on four balconies against rail traffic noise. The glazing systems included straight balconies with glazing on one side only and corner balconies. Glass thicknesses were 6 or 8 mm. The noise measured was real noise. The number of panes and the shape of the balcony (straight vs. corner balcony), the tightness of the structures and the materials used on the balconies had some effect on the measurement results. The difference between the road traffic noise levels measured outside and inside the balconies was 8-10 dB, and for rail traffic it was 8-12 dB. The change of glass thickness from 6 mm to 8 mm has an average effect of 1.8 dB.

ENGINEERING OFFICE Heikki Helimäki Oy

Research report 3371 / 06

Sound insulation of Lumon 3 balcony glazing system

Abstract: Lumon 3 balcony glazing system was tested in the city Vantaa close to the busy road Kehä III. The test was carried out using sound wave measuring methods. Measuring was made according to standard ISO 140-5. The gaps between balustrade facing panels were closed for the test. The difference between the noise levels measured outside and inside the balconies was 15-20 dB.

Warranty Clauses for Lumon Balcony Glazing System

Scope of Warranty

The warranty includes repair of defects caused by material and workmanship and the materials used in the repair.

Warranty Preconditions

The warranty is valid provided that the customer approves the delivery. If the customer is not present at the time of installing and does not make a complaint within seven (7) days of the installation, the delivery is considered as accepted and the warranty period begins.

Warranty Period

The warranty period begins once the warranty preconditions are fulfilled. The warranty period is five (5) years for materials, workmanship and two (2) years for installation (installation only by Lumon Companies) starting from the product acceptance or introduction.

The manufacturer guarantees availability of spare parts for 10 years after having stopped producing the product.

Warranty period of blinds is two (2) years. Blind manufacturer grant a warranty.

Restrictions of Warranty

Warranty does not cover

- cleaning after delivery of work results or actual introduction
- work resulting from the balcony glazing and the associated structures getting dirty in course of time
- breaking caused by incorrect use or malicious damage
- adjustments, repair and replacement of parts due to normal wear and tear, negligence on behalf of the customer or the resident, or incompliance with the user instructions.
- damage due to subsidence of structures, abnormal strain to the glazing, a sudden unpredictable event effecting the product, or a natural catastrophe.
- alterations, repair or re-installation unapproved by the manufacturer or the retailer
- blinds or other accessories, or separate complementing structures
- patterns that may occur in the surface of toughened glass
- solutions that do not comply with Lumon technical file

It is not allowed to coat toughened safety glass with film. If the film is attached Lumon Oy is not in charge of costs and damages which is caused of glass panes breaking or dropping.

Glass has been toughened according to standards EN 12150-1 and EN 572-8.

Lumon Oy
Kaitilankatu 11
45130 Kouvola
Finland
Company ID: FI2254449-8
Registered Office: Kouvola

Manufacturer's Warranty Clauses for Lumon Balcony Glazing System

Scope of Warranty

Warranty covers defects resulting from the materials and manufacturing of Lumon Balcony Glazing System. A compensatory components will be shipped free of charge and carriage through standard delivery channels without delay.

Lumon reserves the right to

- inspect the faulty components at the installation site, in the retailer's premises
- send the components on request to the manufacturing plant, carriage forward
- get involved into repair work, product replacement or other related decisions
- charge the costs of any groundless complaints

Warranty preconditions

The warranty is valid provided that the retailer approves the delivery. The delivery is considered as accepted if a complaint report has not been submitted in writing in seven (7) days of the acceptance of the product.

Warranty period

The warranty period begins once the warranty preconditions are fulfilled. The warranty period is five (5) years for materials and workmanship. The manufacturer guarantees availability of spare parts for 10 years after having stopped producing the product.

Restrictions of warranty

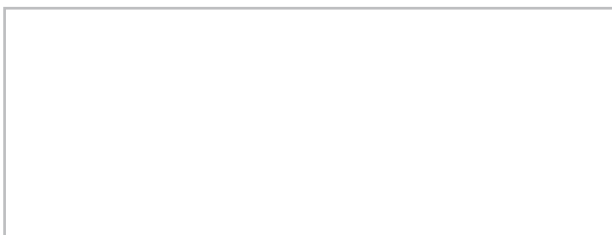
Warranty does not cover

- damages to the product after the delivery
- original installing work
- breaking or malfunction of components as a result of incorrect installation
- alterations unapproved by the manufacturer
- damage due to subsidence or shifting of structures, abnormal strain to the glazing, a sudden non-predictable event effecting the product, or a natural catastrophe.
- damages due to negligent or incorrect use of the product
- warranty repair work or the related travel costs or other indirect costs
- solutions that do not comply with Lumon technical file
- patterns that occur in the surface of toughened glass

It is not allowed to coat toughened safety glass with film. If the film is attached Lumon Oy is not in charge of costs and damages which is caused of glass panes breaking and dropping.

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Valmistaja / Tillverkare / Produsent / Producent / Framleiðandi /
Producer / Fabricante / Producent / Fabricante / Fabriqué par /
Производитель

Lumon Oy, Kaitilankatu 11, FIN-45130 Kouvola, Finland,
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