

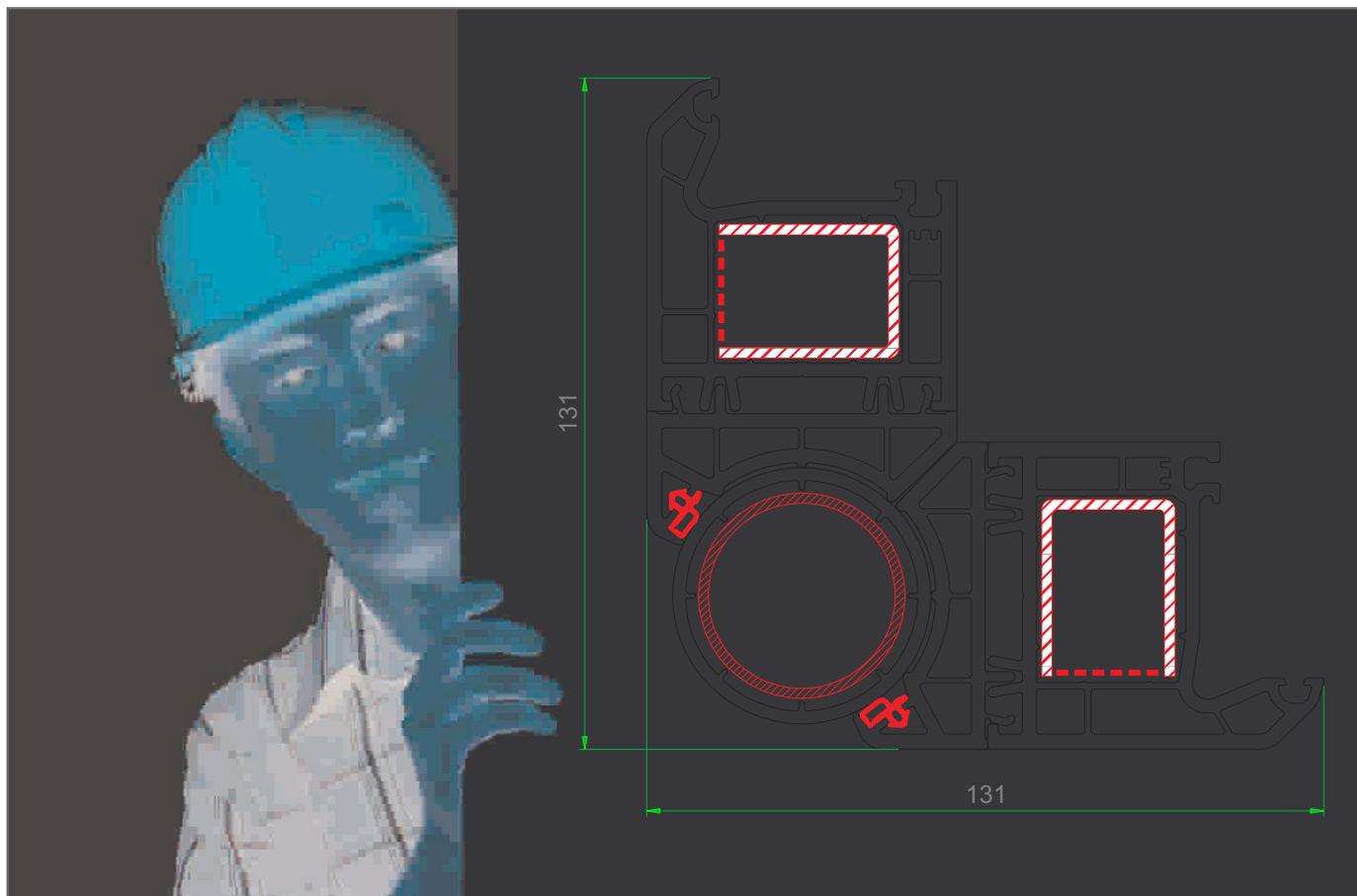
VISTA BEST®

Best of the Best

UPVC Profile Producer

ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی



3 Chamber Profile System

VISTA BEST[®]

Best of the Best

UPVC Profile Producer



We offer a gem for you to create a jewel to adorn your buildings.

VISTA BEST a brand which is deeply embedded in everybody's mind.

VISTA BEST is a young team supported by a long line of production experience. Our products are produced on the basis of high quality, innovation and durability.

By implementing the best designs, the latest German and Austrian machinery and technology, employing the strongest professionals and using top European materials, we have been able to produce products that are easily approved by both European and Iranian research centers.

High market share in a short period and at a time of overwhelming foreign import has proven our ability to reach our goals. The use of our products by experienced UPVC window fabricators enforces us to continue and exceed all that we have achieved so far.

By complying with all the technical and production standards of high quality manufacturing we hope to boost our customers' confidence in Iranian quality.

ما گوهری در اختیار شما می‌گذاریم تا از آن جواهری بر سینه ساختمان‌ها بسازید.

«ویستا بست» برندی است که خود را در اعماق اذهان حک می‌کند.

«ویستا بست» متشکل از گروهی متخصص با تکیه بر تجربیات تولیدی طولانی بوده و محصولات خود را بر اصل مهم کیفیت، نوآوری و استمرار بنا نهاده است.

«ویستا بست» با بکار بردن طراحی مدرن روز، ماشین‌آلات و تکنولوژی پیشرفته کشورهای آلمان و اتریش، همراه با پرسنل متخصص و مواد اولیه برتر اروپایی توانسته است محصولاتی را تولید نماید که کیفیت آن‌ها توسط مراکز تحقیقاتی مرجع ایرانی و اروپایی به تایید رسیده است.

بدست آوردن سهم قابل توجهی از بازار در زمانی کوتاه در مقابله با سیل عظیم محصولات وارداتی؛ سندی بر تحقق اهداف «ویستا بست» بوده و بکار گرفتن این محصولات توسط سازندگان توانمند در ب و پنجره‌های یو پی وی سی باعث تقویت انگیزه‌های «ویستا بست» برای استمرار و ارائه محصولات جدید می‌باشد.

امید است با رعایت نکات فنی و اصول ساخت، اعتماد مصرف‌کنندگان به محصولات با کیفیت ایرانی را افزون نماییم.

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UPVC Profile Producer

ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی



With
Technology of 
greiner
EXTRUSION
KRAUSSMAFFEI
Germany

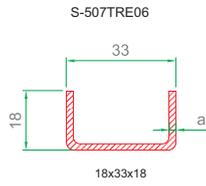
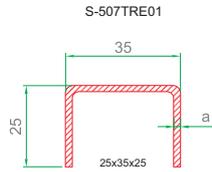
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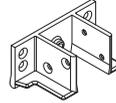
UPVC Profile Producer

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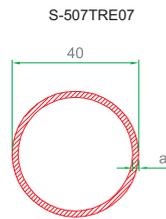
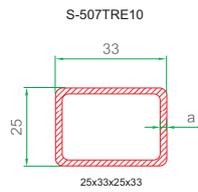
System Profiles And Auxiliary Products



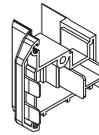
Mullion Conector



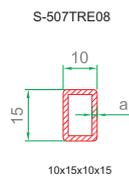
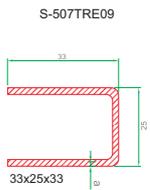
Water drainage cover



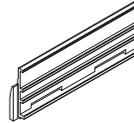
Overhung cover



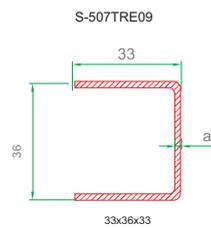
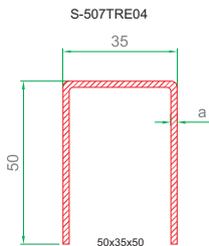
Gaskets 01



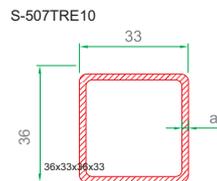
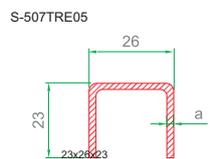
Glazing Bridge



Gaskets 02



Glazing Block 01



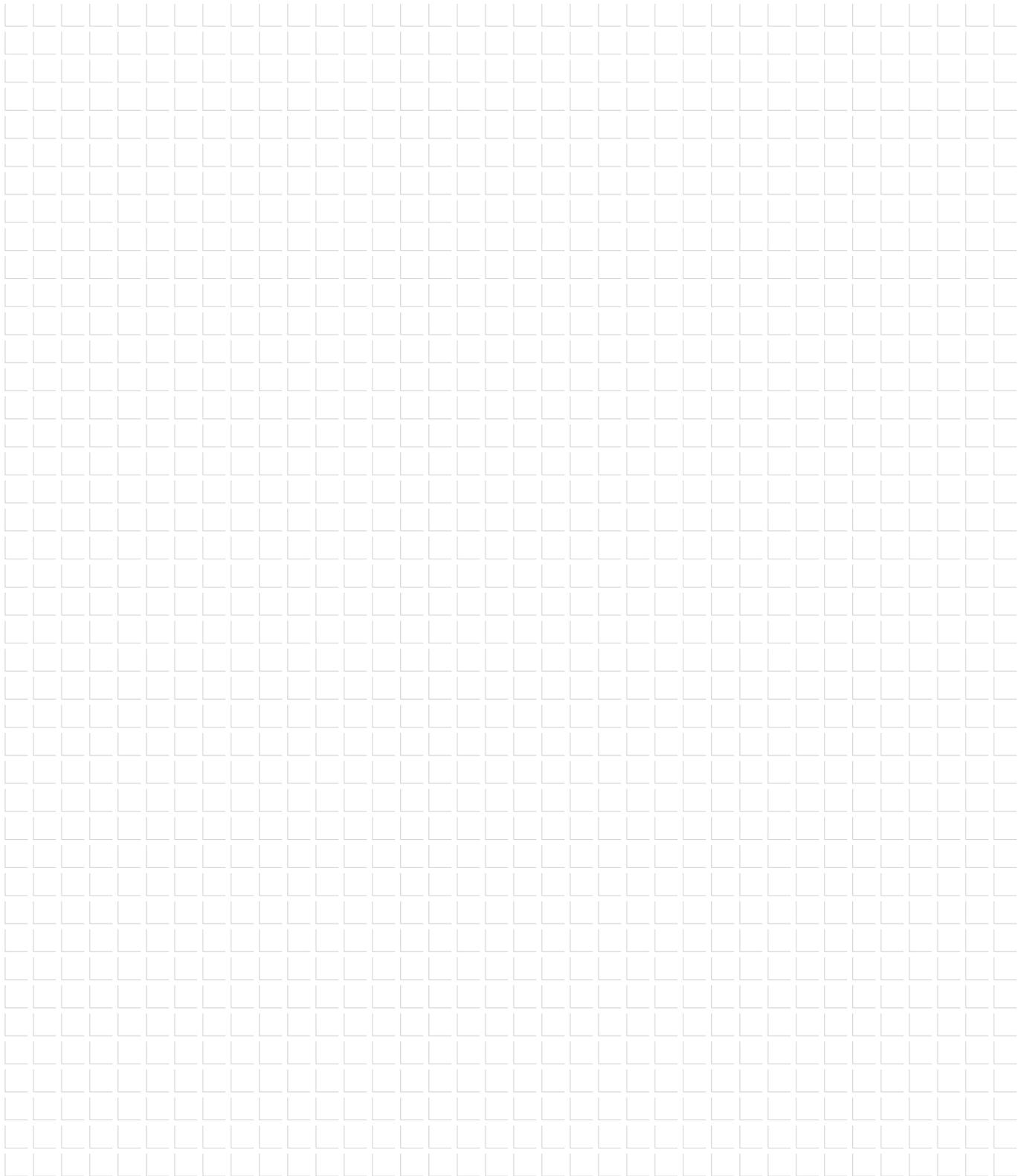
Glazing Block 02



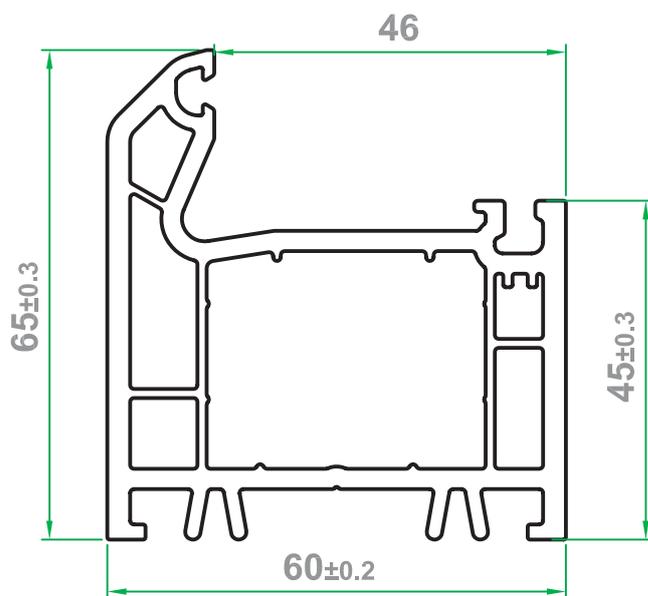
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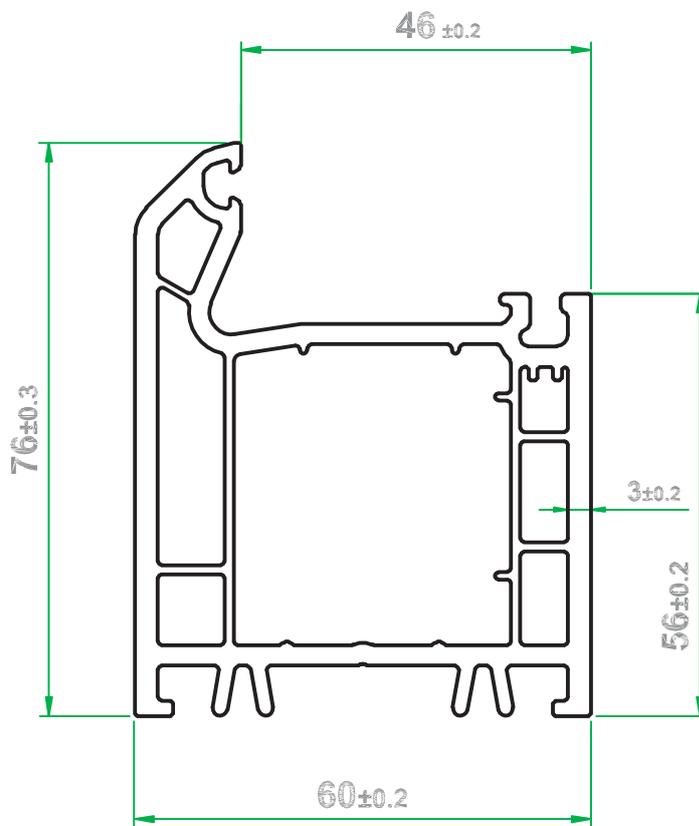
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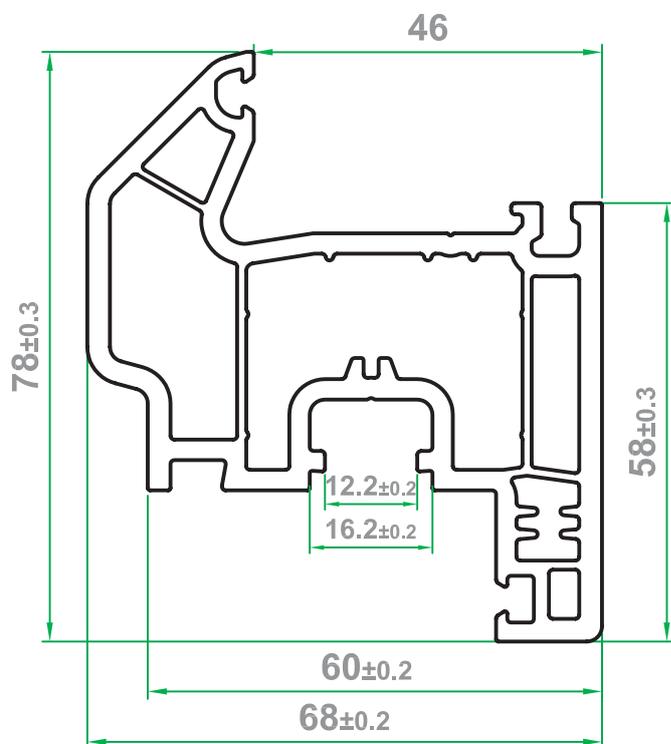
Main Profiles



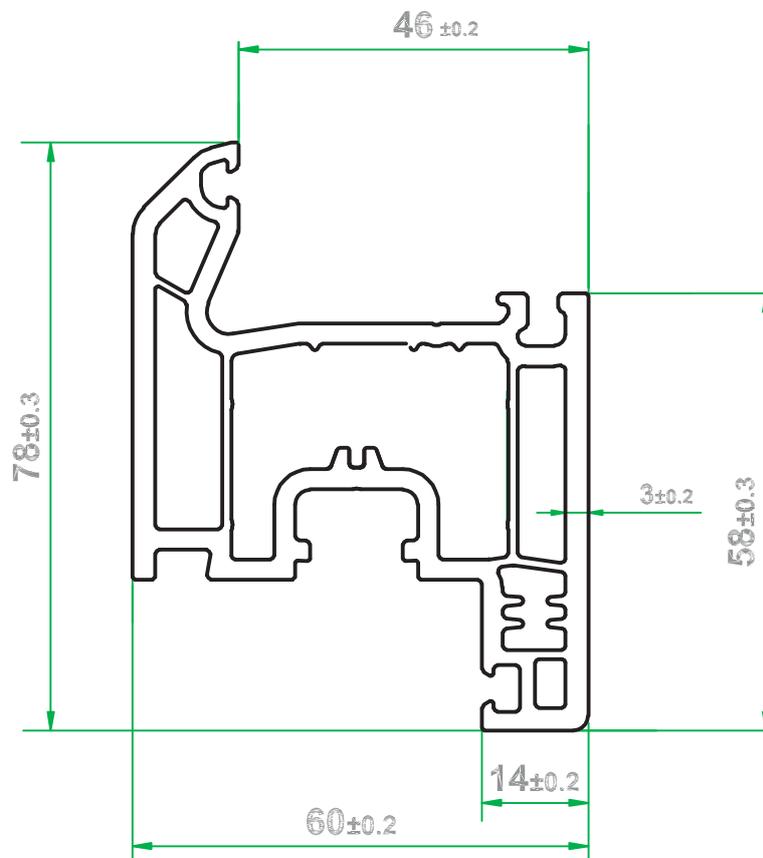
Frame S-507.01
1.24 kg/m



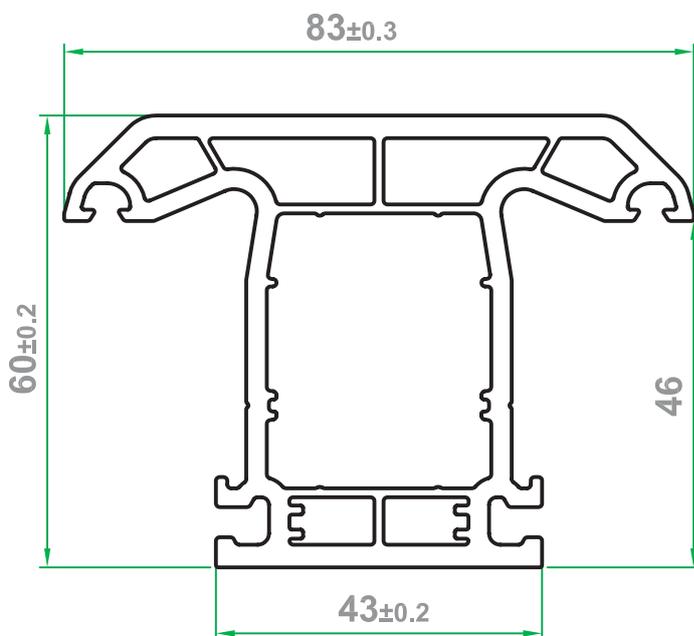
Frame S-507.18
1.38 kg/m



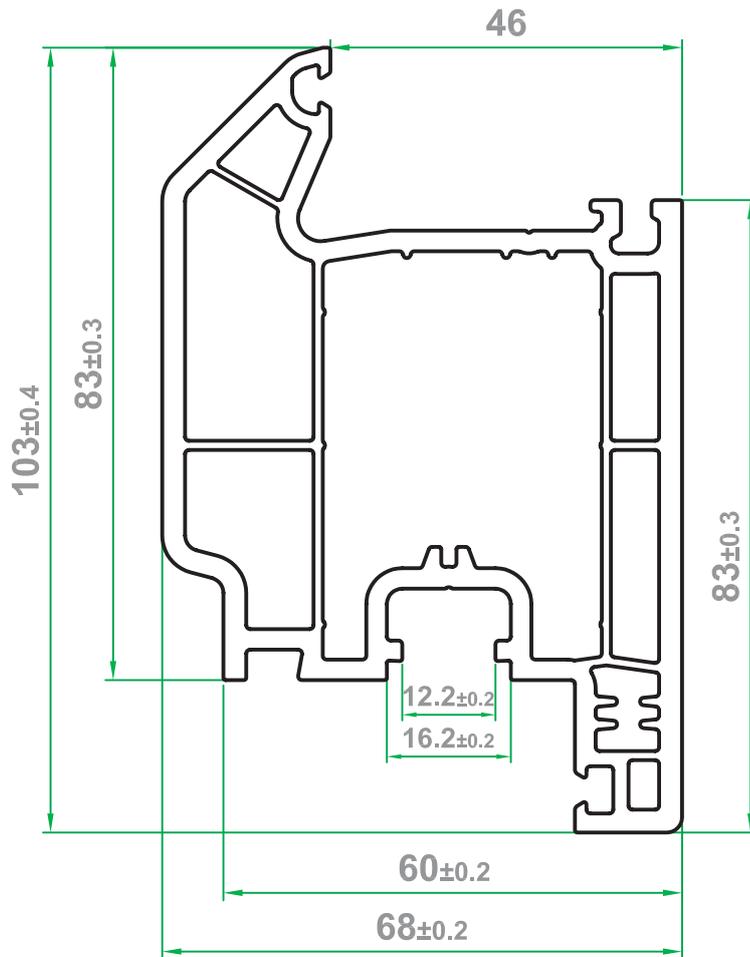
Sash S-507.02
1.43 kg/m



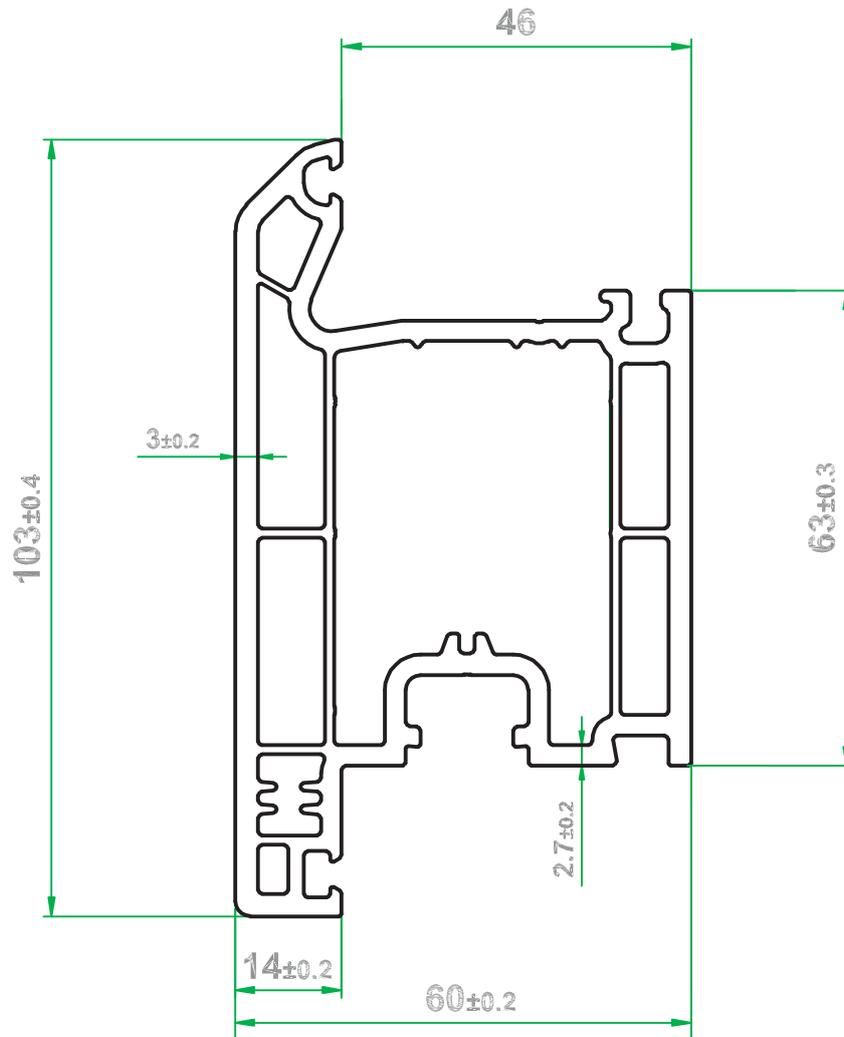
Sash S-507.16
1.39 kg/m



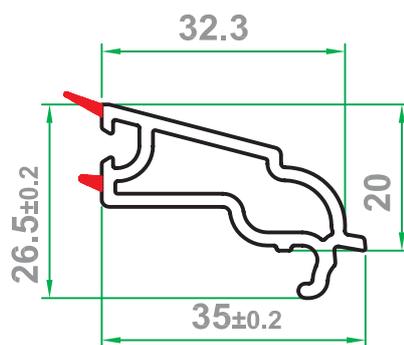
Mullion S-507.03
1.35 kg/m



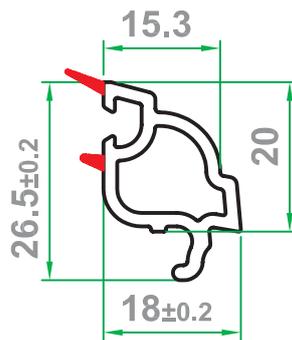
Door sash S-507.04
1.77 kg/m



Outside opening door sash S-507.17
1.72 kg/m



Glassbead 5 mm S-507.07
0.26 kg/m; Soft PVC 12.8 g/m

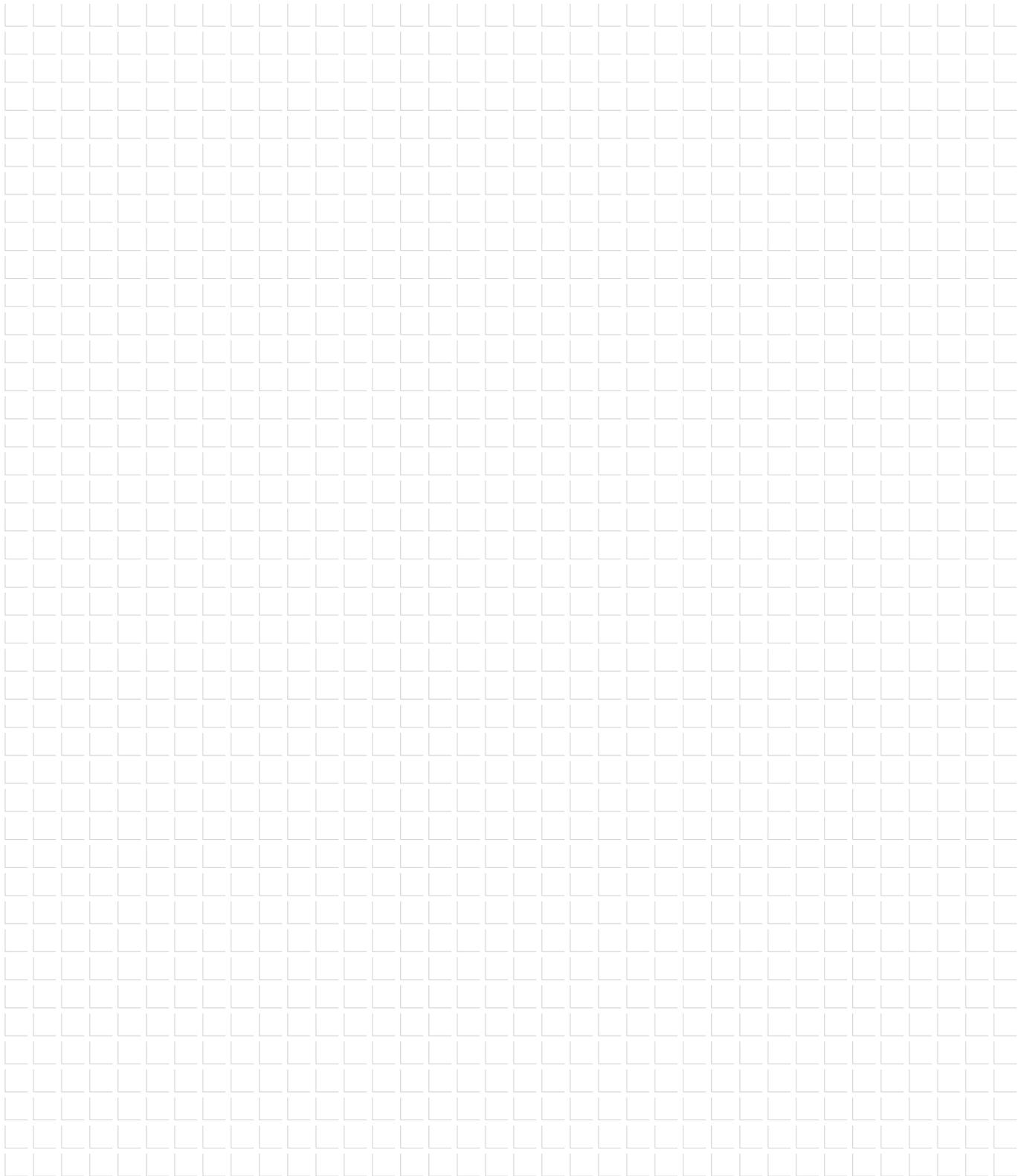


Glassbead 22 mm S-507.06
0.19 kg/m; Soft PVC 12.8 g/m

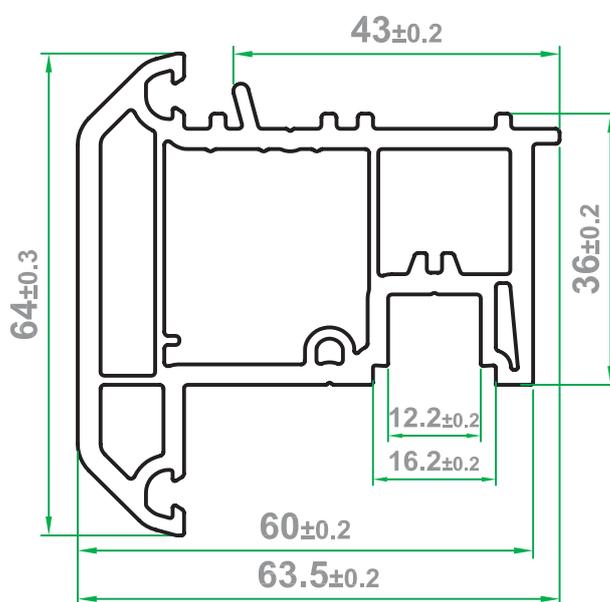
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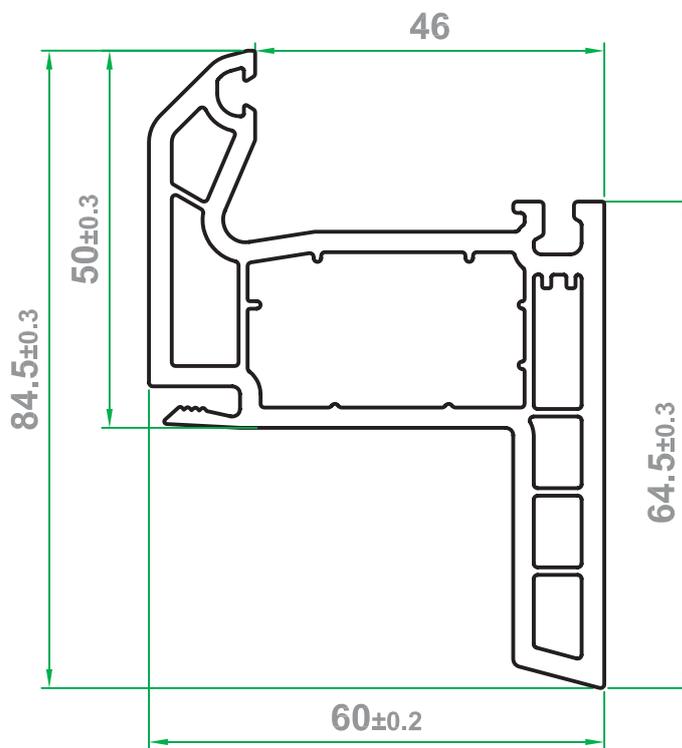
UPVC Profile Producer



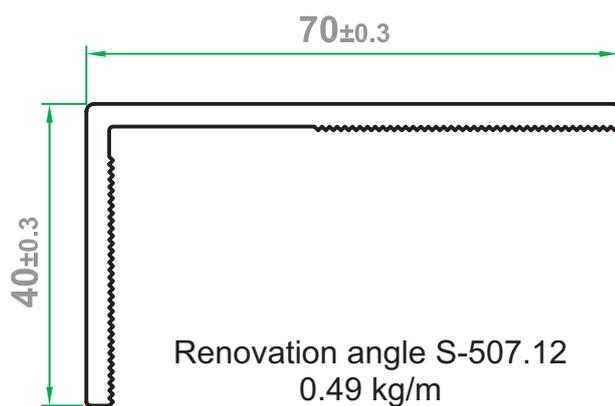
Auxiliary Profiles

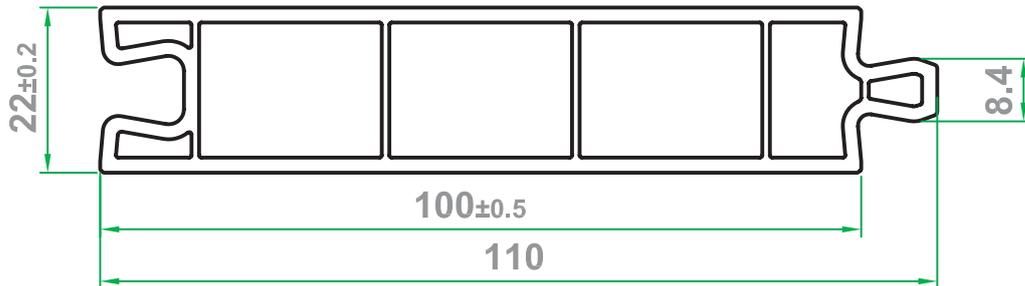


Overhung S-507.05
1.16 kg/m

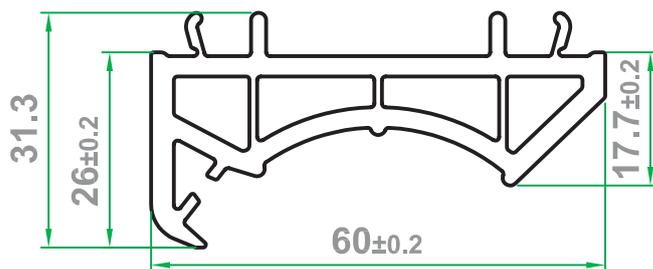


Renovation frame S-507.09
1.28 kg/m

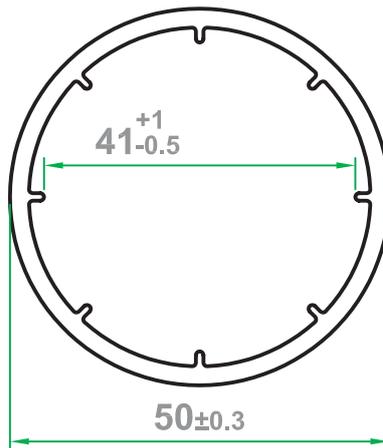




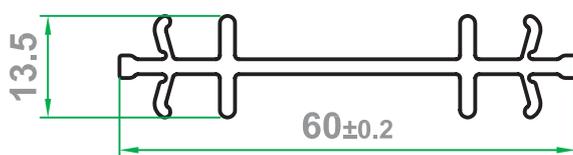
Panel S-507.15
0.89 kg/m



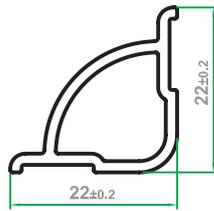
Bay & bow adaptor S-507.10
0.71 kg/m



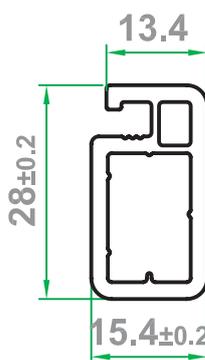
Bay & bow pole S-507.11
0.56 kg/m



Coupling S-507.13
0.29 kg/m

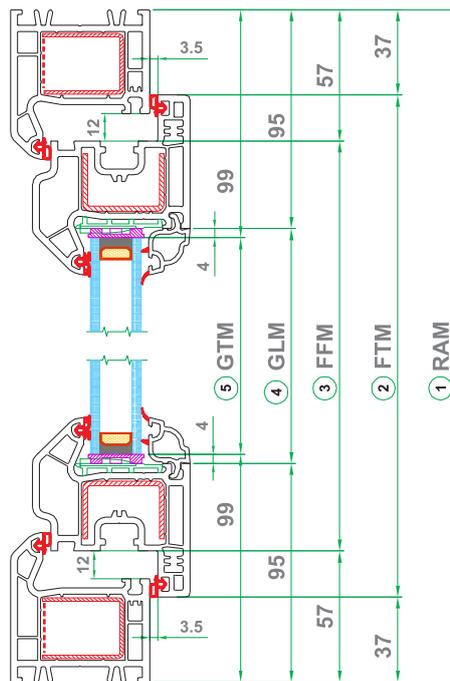
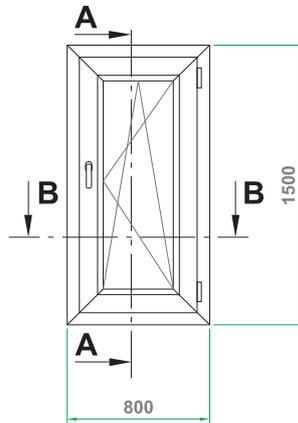


Cover S-507.14
0.14 kg/m



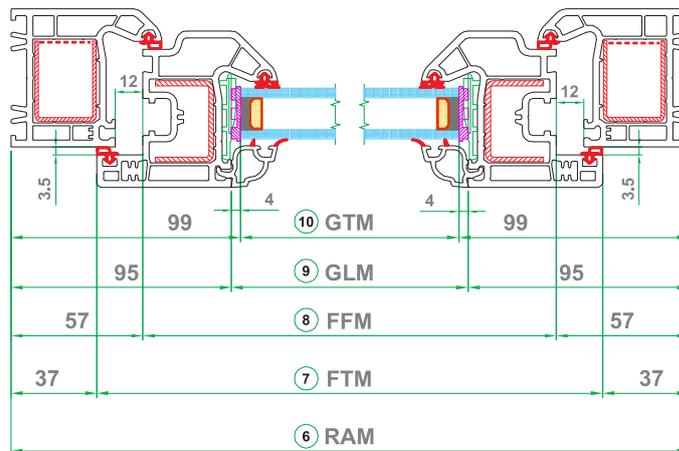
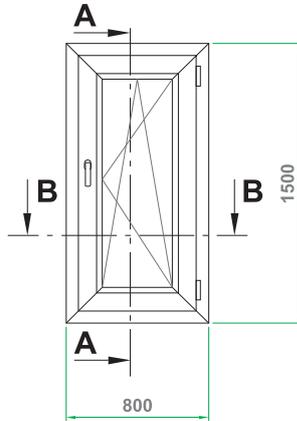
Mosquito sash S-507.08
0.26 kg/m

Section A-A



1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash reference size	= RAM - 74	= 1426
3	FFM = Rebate size	= RAM - 114	= 1386
4	GLM = Glassbead reference size	= RAM - 190	= 1310
5	GTM = Glass reference size	= RAM - 198	= 1302
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

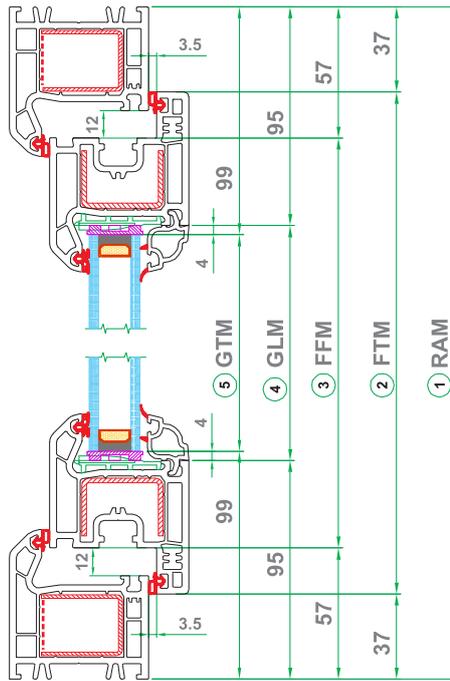
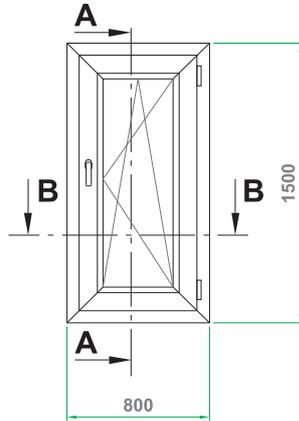
Section B-B



6	RAM = Frame reference size		e.g. 800
7	FTM = Sash reference size	= RAM - 74	= 726
8	FFM = Rebate size	= RAM - 114	= 686
9	GLM = Glassbead reference size	= RAM - 190	= 610
10	GTM = Glass reference size	= RAM - 198	= 602
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

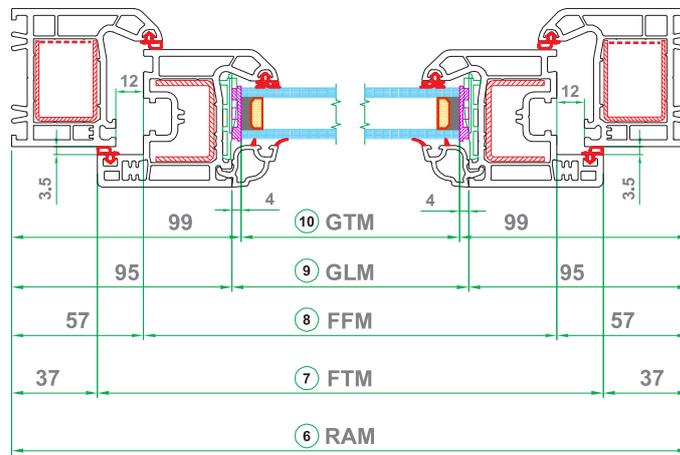
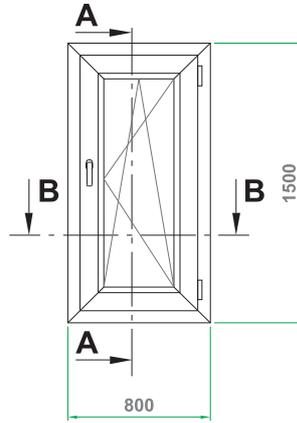
Cutting dimensions WITHOUT melting loss! Check measurement table!

Section A-A



1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash reference size	= RAM - 74	= 1426
3	FFM = Rebate size	= RAM - 114	= 1386
4	GLM = Glassbead reference size	= RAM - 190	= 1310
5	GTM = Glass reference size	= RAM - 198	= 1302
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

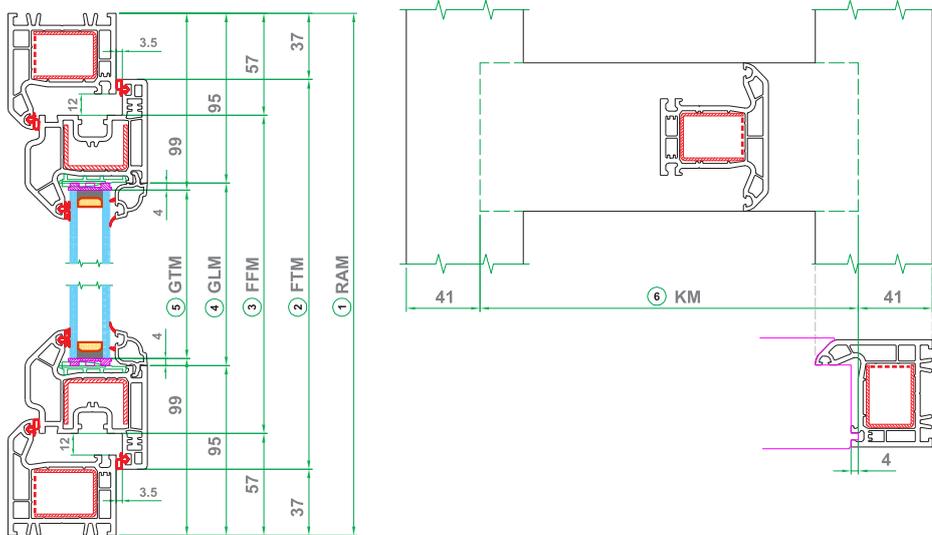
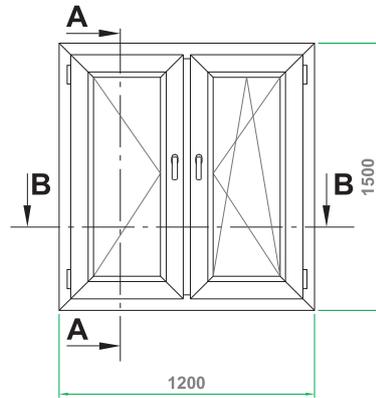
Section B-B



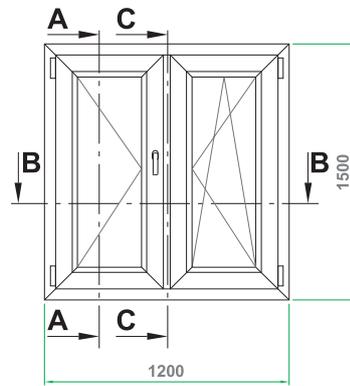
6	RAM = Frame reference size		e.g. 800
7	FTM = Sash reference size	= RAM - 74	= 726
8	FFM = Rebate size	= RAM - 114	= 686
9	GLM = Glassbead reference size	= RAM - 190	= 610
10	GTM = Glass reference size	= RAM - 198	= 602
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

Cutting dimensions WITHOUT melting loss! Check measurement table!

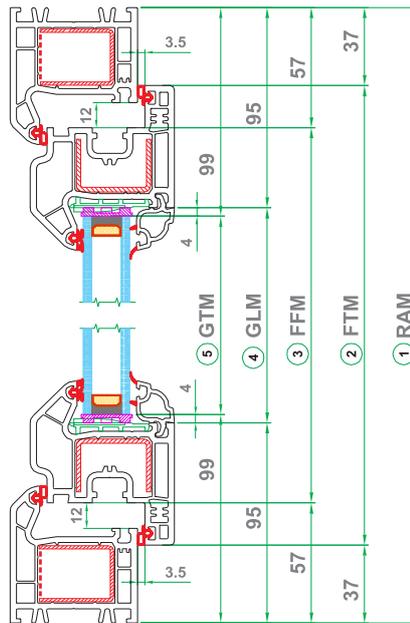
Section A-A



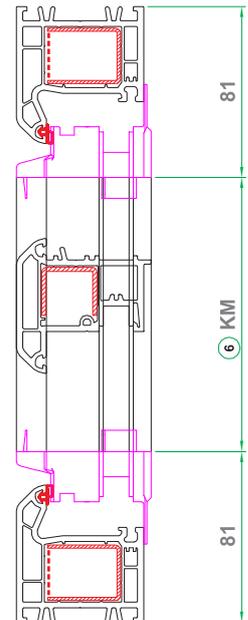
1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash reference size	= RAM - 74	= 1426
3	FFM = Rebate size	= RAM - 114	= 1386
4	GLM = Glassbead reference size	= RAM - 190	= 1310
5	GTM = Glass reference size	= RAM - 198	= 1302
6	KM = Mullion size	= RAM - 82	= 1418
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			



Section A-A

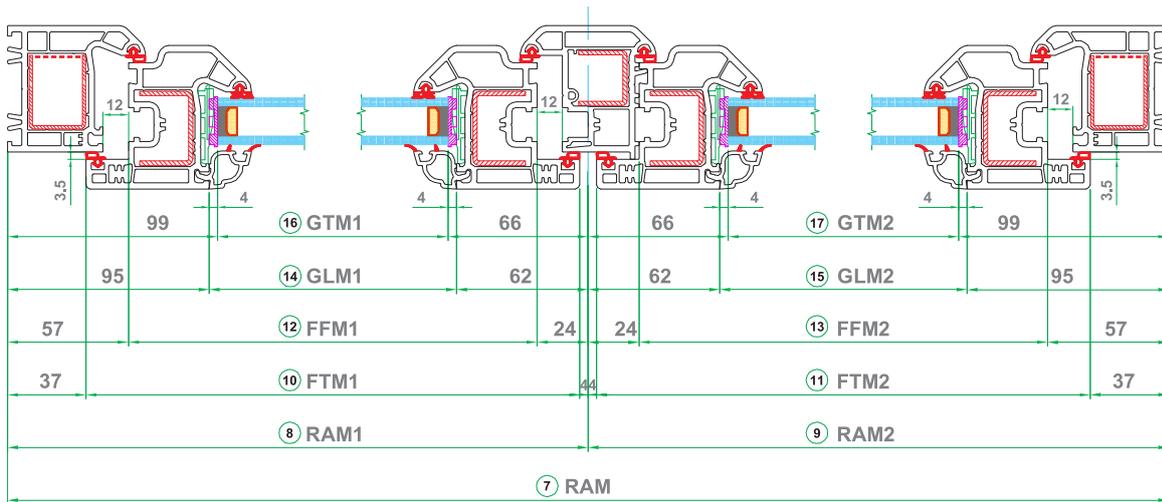
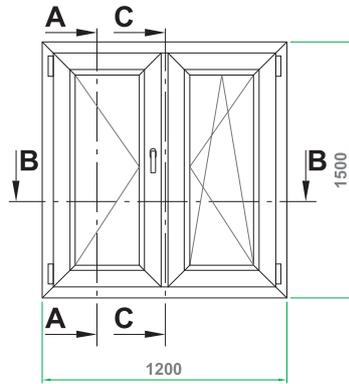


Section C-C



1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash reference size	= RAM - 74	= 1426
3	FFM = Rebate size	= RAM - 114	= 1386
4	GLM = Glassbead reference size	= RAM - 190	= 1310
5	GTM = Glass reference size	= RAM - 198	= 1302
6	KM = Overhung size	= RAM - 162	= 1338
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

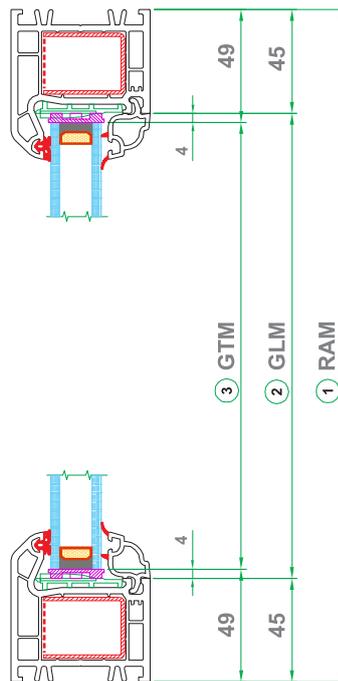
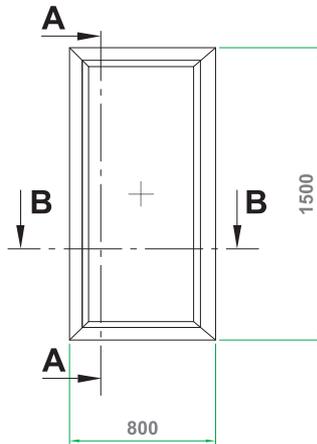
Section B-B



7	RAM = Frame reference size		e.g. 1200
8	RAM 1		e.g. 600
9	RAM 2		e.g. 600
10	FTM 1 = Sash reference size	= RAM1 - 41.0	= 559.0
11	FTM 2 = Sash reference size	= RAM2 - 41.0	= 559.0
12	FFM 1 = Rebate size	= RAM1 - 81.0	= 519.0
13	FFM 2 = Rebate size	= RAM2 - 81.0	= 519.0
14	GLM 1 = Glassbead reference size	= RAM1 - 157.0	= 443.0
15	GLM 2 = Glassbead reference size	= RAM2 - 157.0	= 443.0
16	GTM 1 = Glass reference size	= RAM1 - 165.0	= 435.0
17	GTM 2 = Glass reference size	= RAM2 - 165.0	= 435.0
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

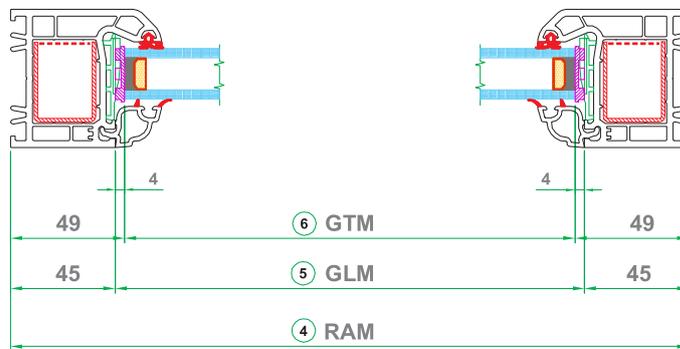
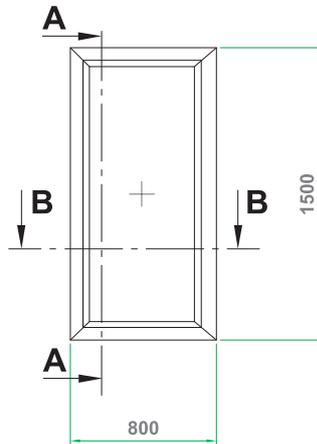
Cutting dimensions WITHOUT melting loss! Check measurement table!

Section A-A



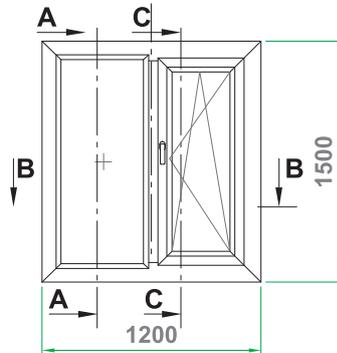
1	RAM = Frame reference size		e.g. 1500
2	GLM = Glassbead reference size	= RAM - 90	= 1410
3	GTM = Glass reference size	= RAM - 98	= 1402
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B

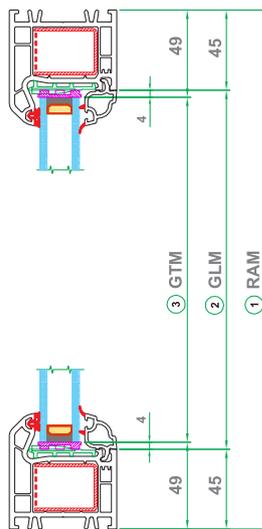


4	RAM = Frame reference size		e.g. 800
5	GLM = Glassbead reference size	= RAM - 90	= 710
6	GTM = Glass reference size	= RAM - 98	= 702
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

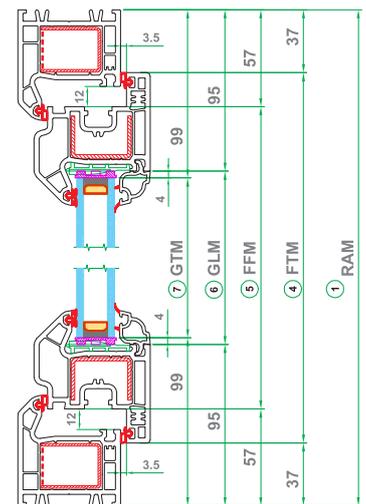
Cutting dimensions WITHOUT melting loss! Check measurement table!



Section A-A

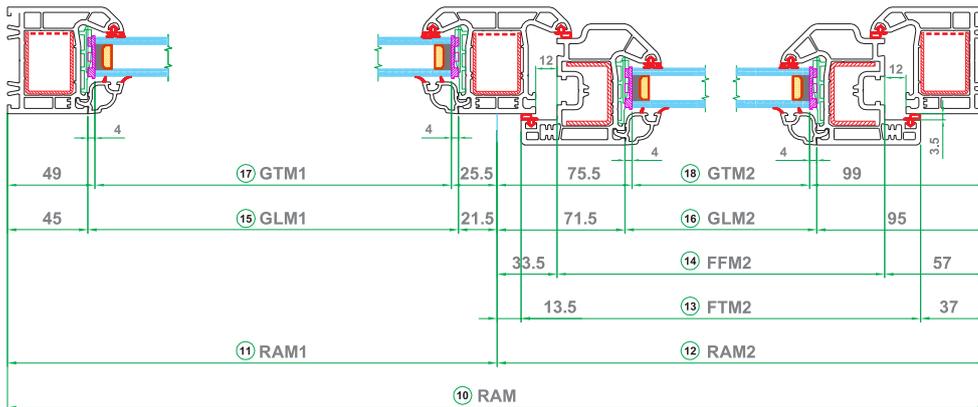
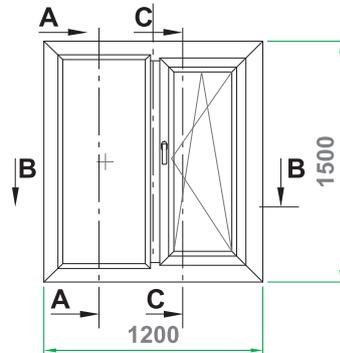


Section C-C



1	RAM = Frame reference size		e.g. 1500
2	GLM = Glassbead reference size	= RAM - 90	= 1410
3	GTM = Glass reference size	= RAM - 98	= 1402
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			
4	FTM = Sash reference size	= RAM - 74	= 1426
5	FFM = Rebate size	= RAM - 114	= 1386
6	GLM = Glassbead reference size	= RAM - 190	= 1310
7	GTM = Glass reference size	= RAM - 198	= 1302
8	KM = Mullion size (S-507AZE02)	= RAM - 82	= 1418
Pos.	Description	Formula	mm
Cutting dimensions - Section C-C			

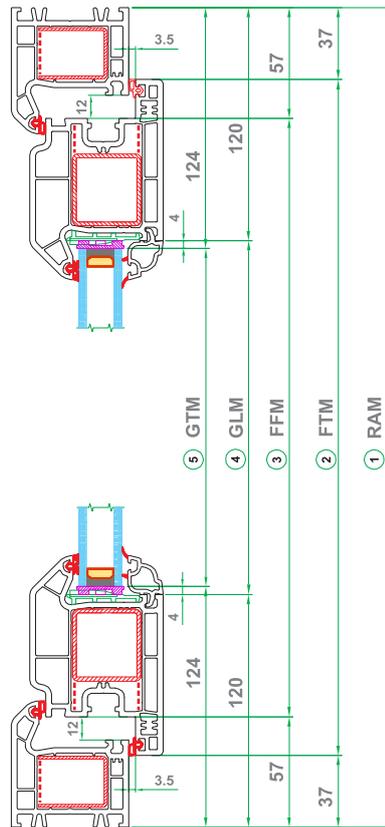
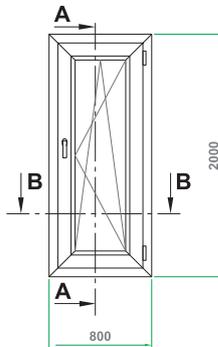
Section B-B



10	RAM = Frame reference size		e.g. 1200
11	RAM 1		e.g. 600
12	RAM 2		e.g. 600
13	FTM 2 = Sash reference size	= RAM2 - 50.5	= 549.5
14	FFM 2 = Rebate size	= RAM2 - 90.5	= 509.5
15	GLM 1 = Glassbead reference size	= RAM1 - 66.5	= 533.5
16	GLM 2 = Glassbead reference size	= RAM2 - 166.5	= 433.5
17	GTM 1 = Glass reference size	= RAM1 - 74.5	= 525.5
18	GTM 2 = Glass reference size	= RAM2 - 174.5	= 425.5
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

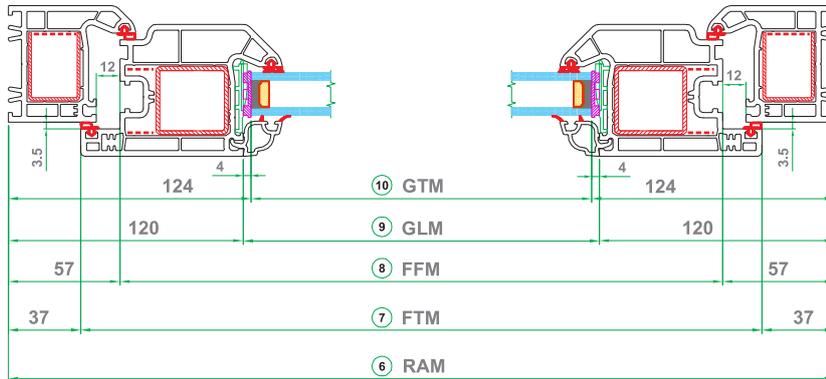
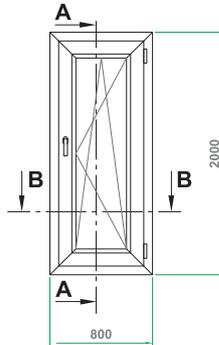
Cutting dimensions WITHOUT melting loss! Check measurement table!

Section A-A



1	RAM = Frame reference size		e.g. 2000
2	FTM = Sash reference size	= RAM - 74	= 1926
3	FFM = Rebate size	= RAM - 114	= 1886
4	GLM = Glassbead reference size	= RAM - 240	= 1760
5	GTM = Glass reference size	= RAM - 248	= 1752
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

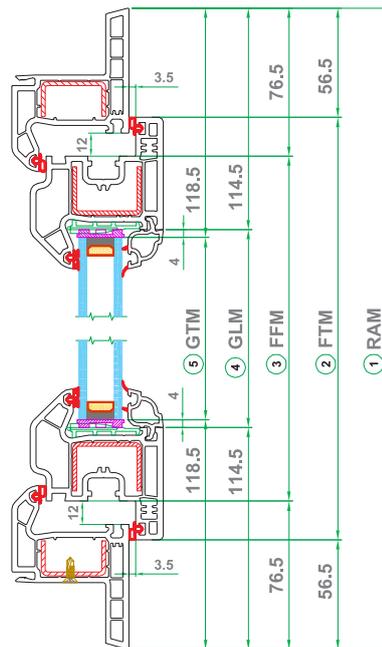
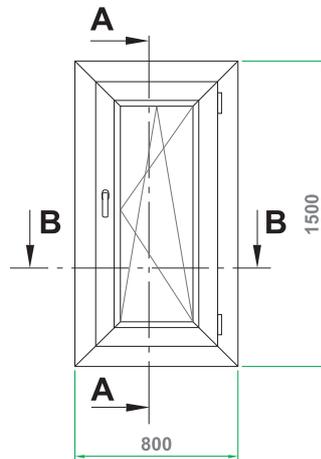
Section B-B



6	RAM = Frame reference size		e.g. 800
7	FTM = Sash reference size	= RAM - 74	= 726
8	FFM = Rebate size	= RAM - 114	= 686
9	GLM = Glassbead reference size	= RAM - 240	= 560
10	GTM = Glass reference size	= RAM - 248	= 552
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

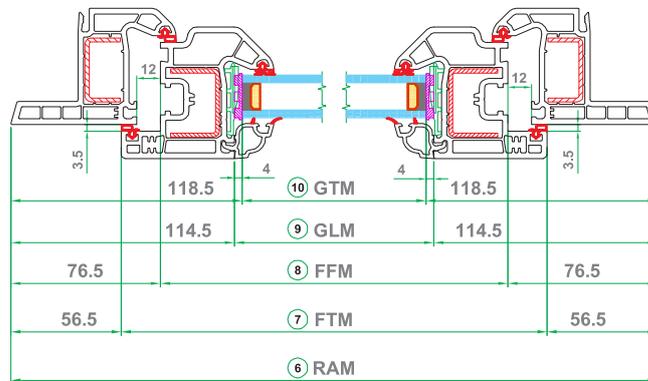
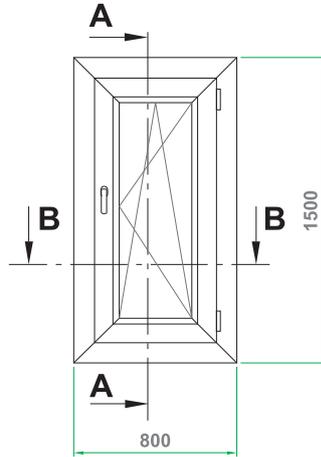
Cutting dimensions WITHOUT melting loss! Check measurement table!

Section A-A



1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash reference size	= RAM - 113	= 1387
3	FFM = Rebate size	= RAM - 153	= 1347
4	GLM = Glassbead reference size	= RAM - 229	= 1271
5	GTM = Glass reference size	= RAM - 237	= 1263
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B



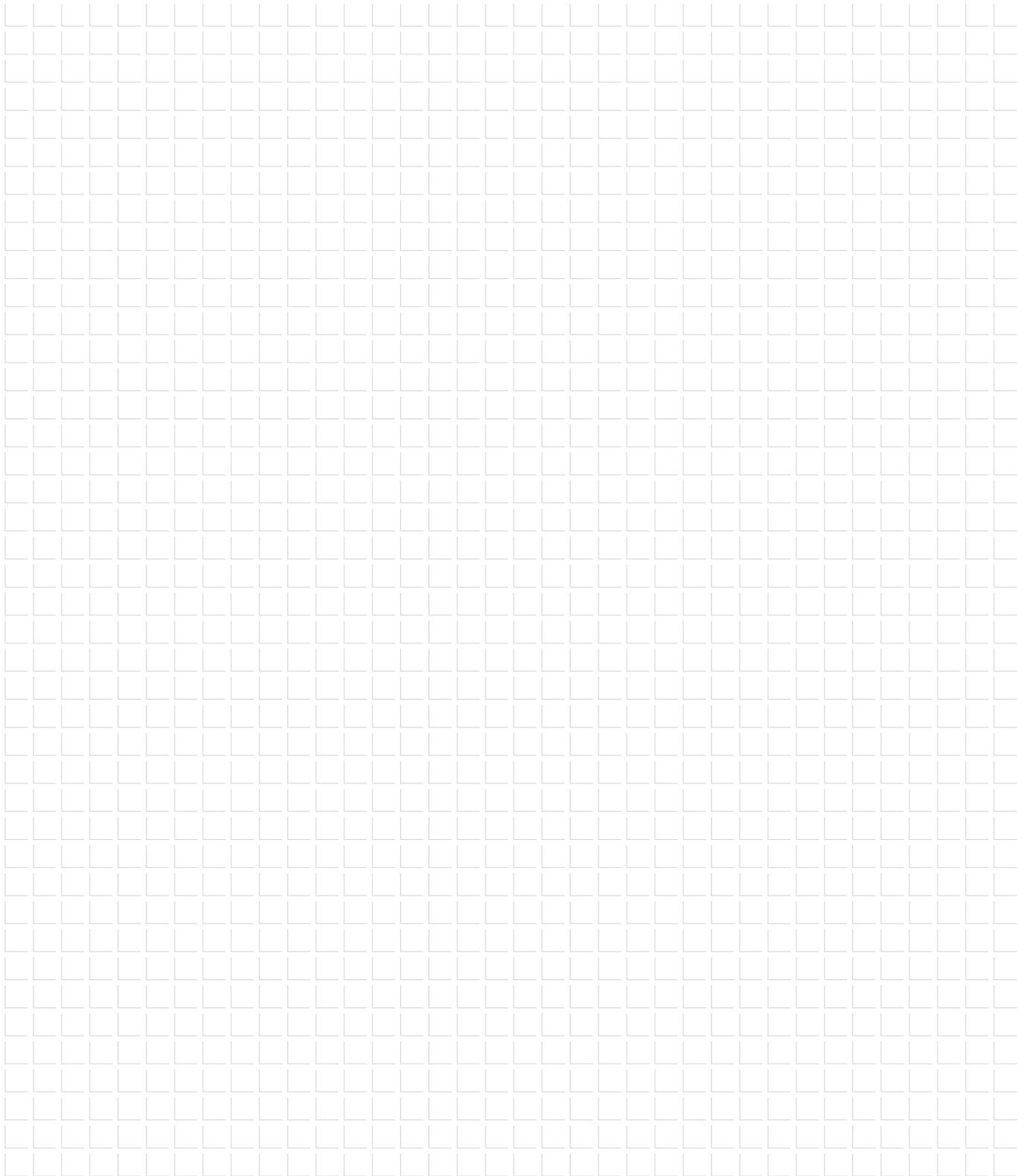
Pos.	Description	Formula	mm
6	RAM = Frame reference size		e.g. 800
7	FTM = Sash reference size	= RAM - 113	= 687
8	FFM = Rebate size	= RAM - 153	= 647
9	GLM = Glassbead reference size	= RAM - 229	= 571
10	GTM = Glass reference size	= RAM - 237	= 563
Cutting dimensions - Section B-B			

Cutting dimensions WITHOUT melting loss! Check measurement table!

VISTA BEST®

Best of the Best

UPVC Profile Producer



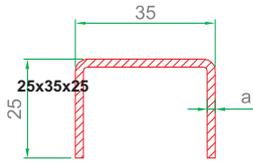
Reinforcement (Info & Cutting Dimensions)

VISTA BEST®

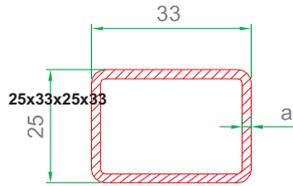
Best of the Best

UPVC Profile Producer

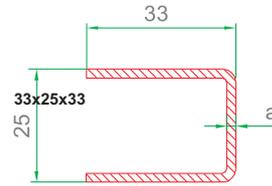
S-507TRE01



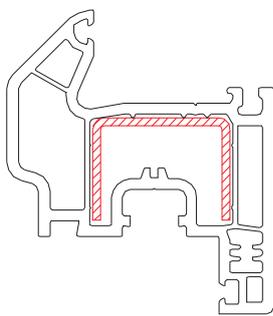
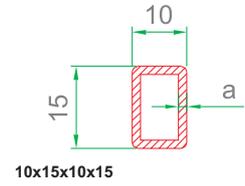
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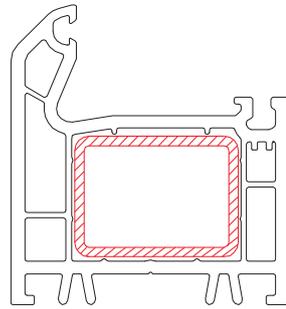
S-507TRE09



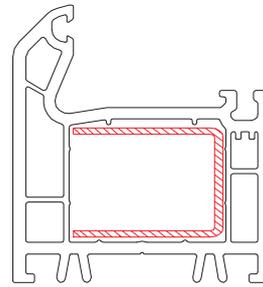
S-507TRE08



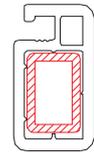
Sash S-507.02



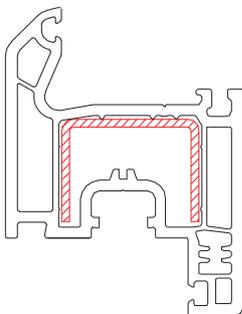
Frame S-507.01



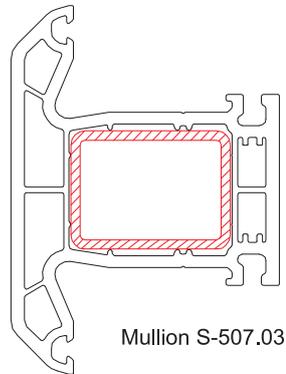
Frame S-507.01



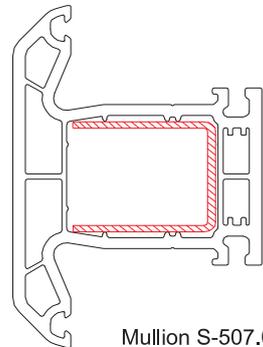
Mosquito sash S-507.08



Sash S-507.06



Mullion S-507.03



Mullion S-507.03

Reinforcement

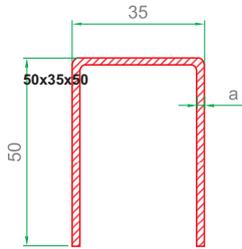
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2,00	1,22
2,50	1,50
3,00	1,76

thickness a [mm]	weight [kg/m]
1,50	1,19
2,00	1,56
2,50	1,93
3,00	2,27

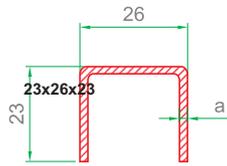
thickness a [mm]	weight [kg/m]
1,50	0,99
2,00	1,31
2,50	1,63
3,00	1,93

thickness a [mm]	weight [kg/m]
1,00	0,33
1,50	0,47

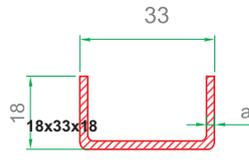
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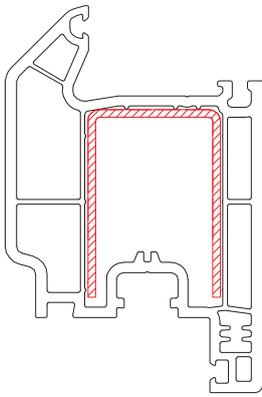
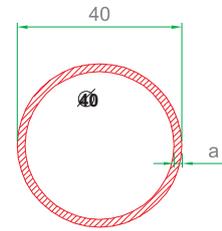
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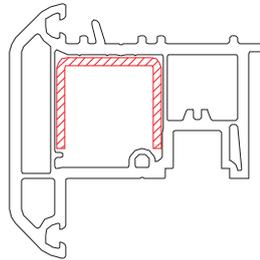
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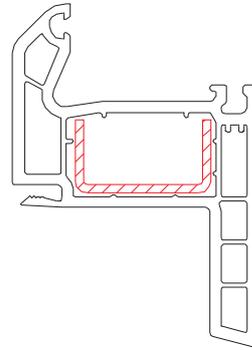
S-507TRE07



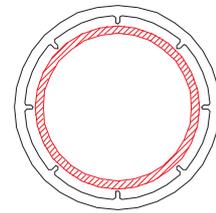
Door sash S-507.04



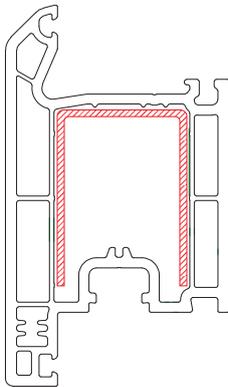
Overhung S-507.05



Renovation frame S-507.09



Bay&bow pole S-507.11



Outside opening door sash S-507.17

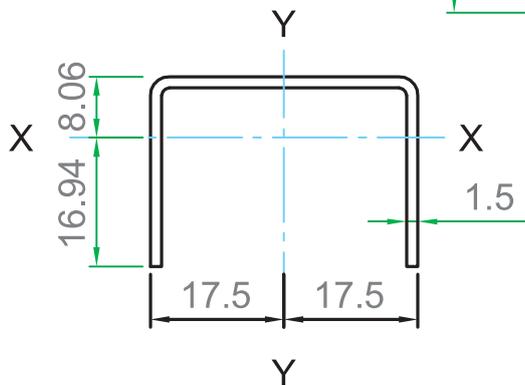
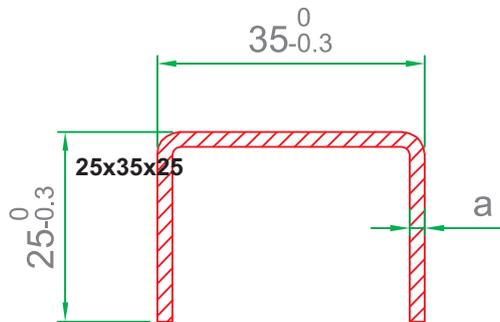
thickness a [mm]	weight [kg/m]
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2,00	1,99
2,50	2,47
3,00	2,93

thickness a [mm]	weight [kg/m]
1,50	0,78
2,00	1,02
2,50	1,25
3,00	1,48

thickness a [mm]	weight [kg/m]
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2,00	0,97
2,50	1,19
3,00	1,41

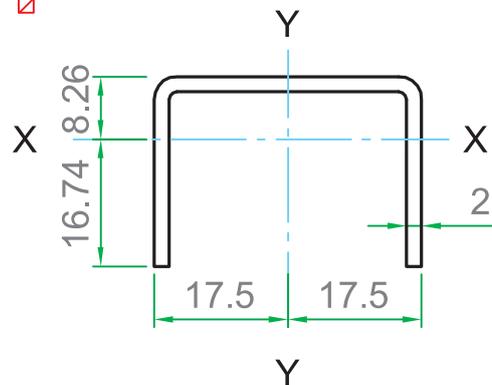
thickness a [mm]	weight [kg/m]
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2,50	2,27
3,00	2,69

S-507TRE01



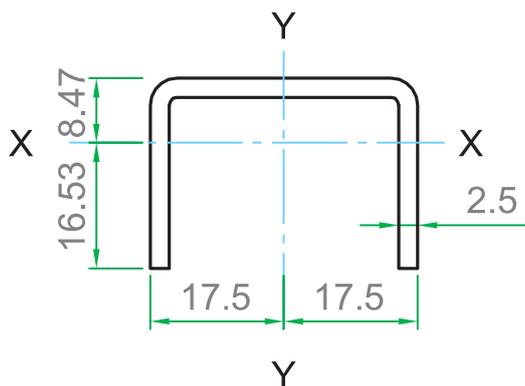
$$I_x = 0.78 \text{ [cm}^4\text{]}$$

$$I_y = 2.45 \text{ [cm}^4\text{]}$$



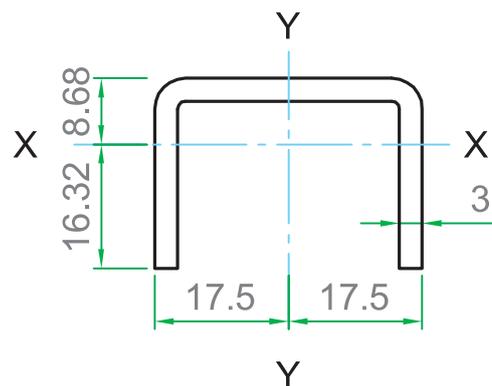
$$I_x = 1.01 \text{ [cm}^4\text{]}$$

$$I_y = 3.12 \text{ [cm}^4\text{]}$$



$$I_x = 1.22 \text{ [cm}^4\text{]}$$

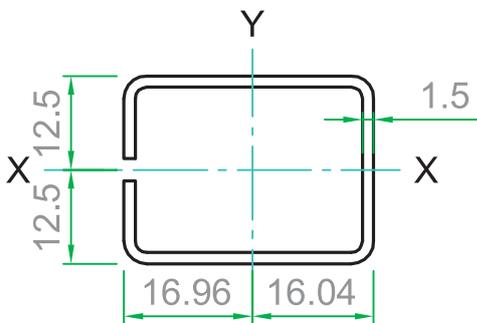
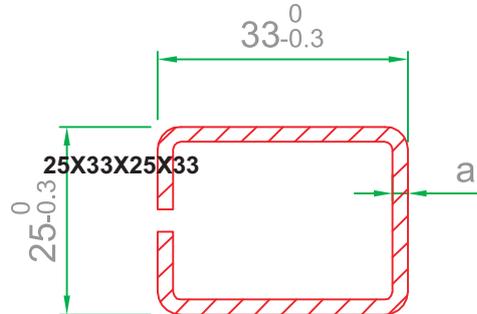
$$I_y = 3.73 \text{ [cm}^4\text{]}$$



$$I_x = 1.41 \text{ [cm}^4\text{]}$$

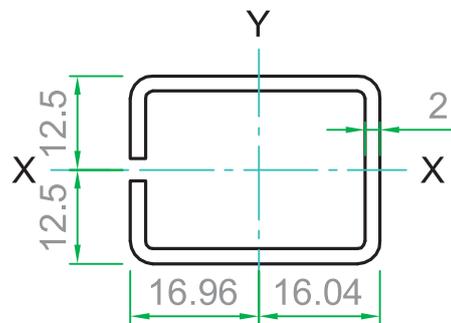
$$I_y = 4.28 \text{ [cm}^4\text{]}$$

S-507TRE10



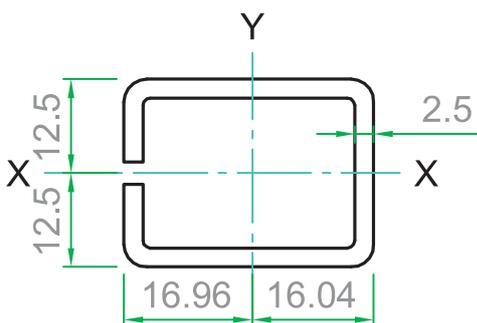
$$I_x = 1.55 \text{ [cm}^4\text{]}$$

$$I_y = 2.27 \text{ [cm}^4\text{]}$$



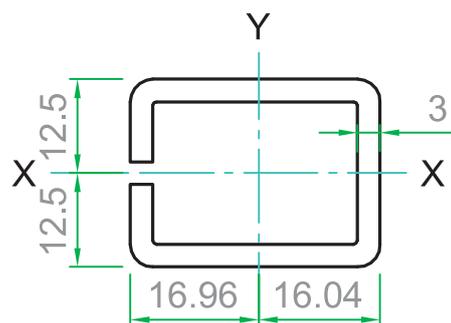
$$I_x = 1.96 \text{ [cm}^4\text{]}$$

$$I_y = 2.89 \text{ [cm}^4\text{]}$$



$$I_x = 2.33 \text{ [cm}^4\text{]}$$

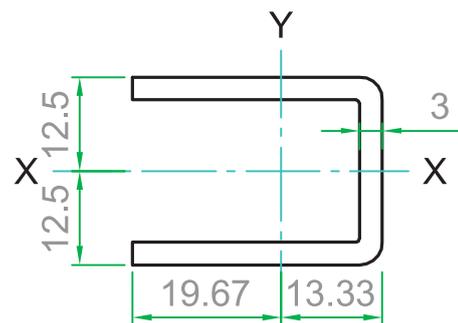
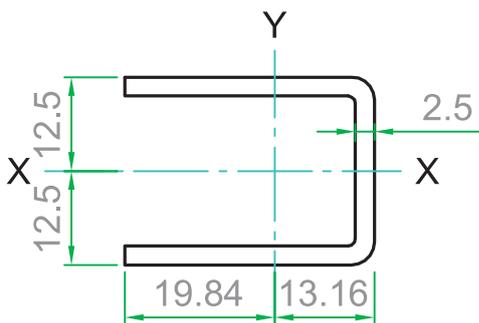
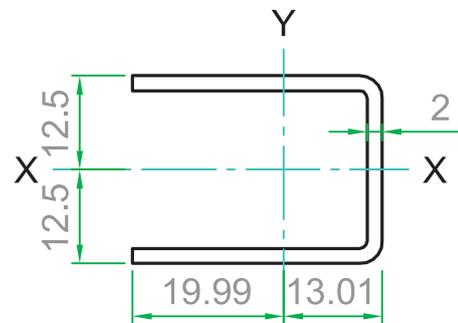
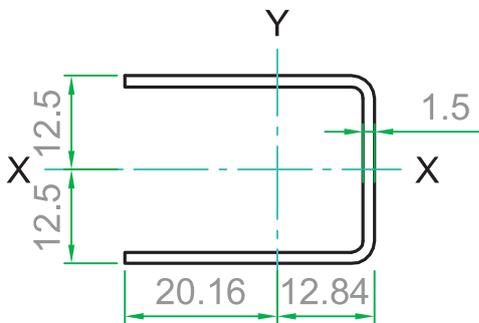
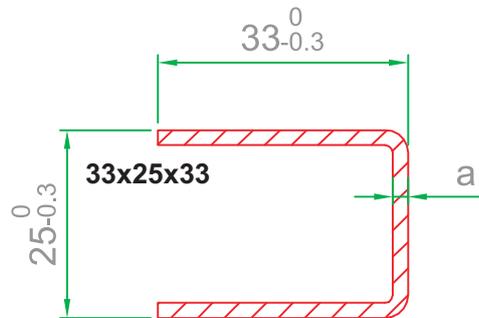
$$I_y = 3.47 \text{ [cm}^4\text{]}$$



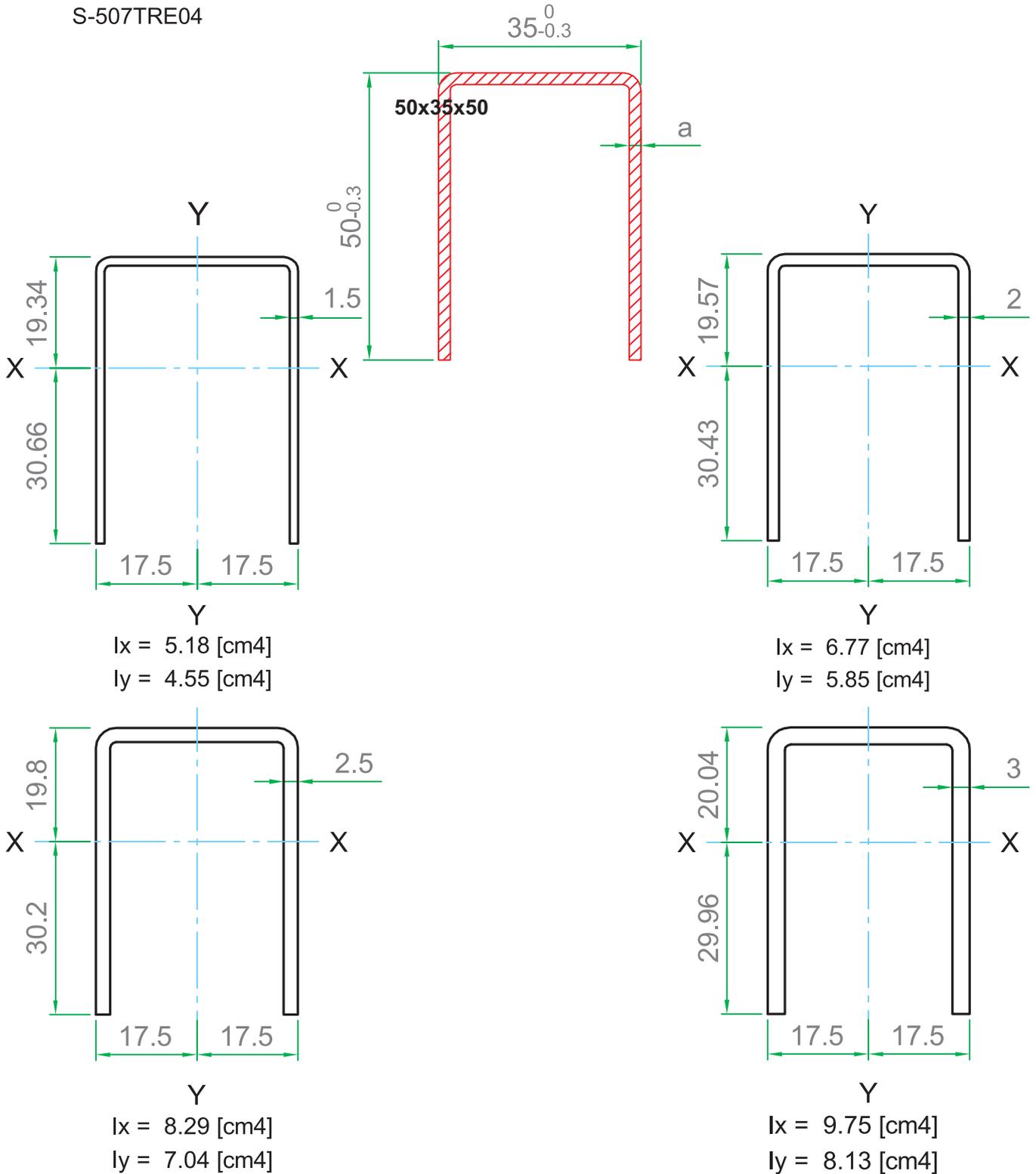
$$I_x = 2.65 \text{ [cm}^4\text{]}$$

$$I_y = 3.97 \text{ [cm}^4\text{]}$$

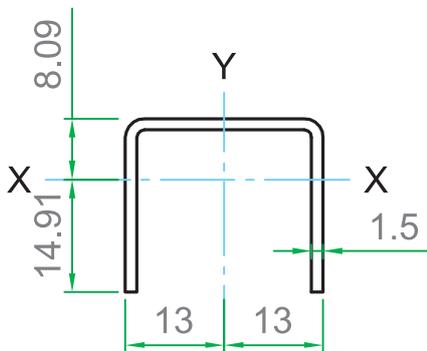
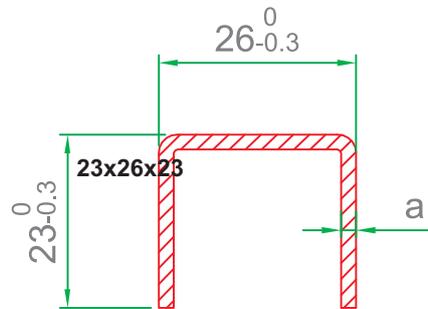
S-507TRE09



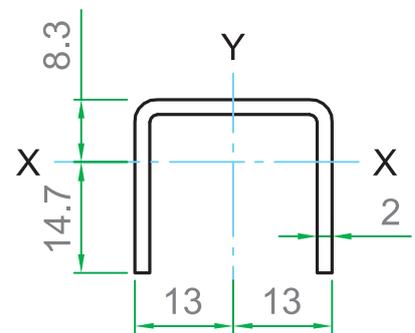
S-507TRE04



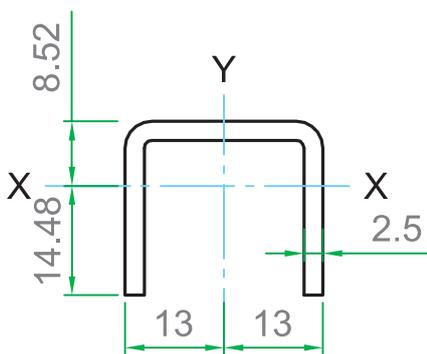
S-507TRE05



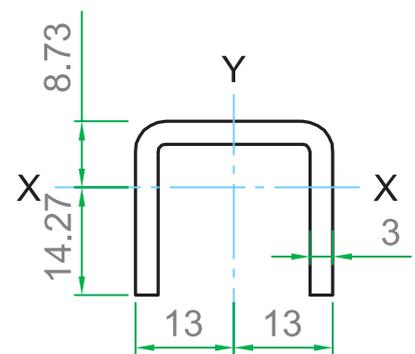
$I_x = 0.56 \text{ [cm}^4\text{]}$
 $I_y = 1.15 \text{ [cm}^4\text{]}$



$I_x = 0.71 \text{ [cm}^4\text{]}$
 $I_y = 1.45 \text{ [cm}^4\text{]}$

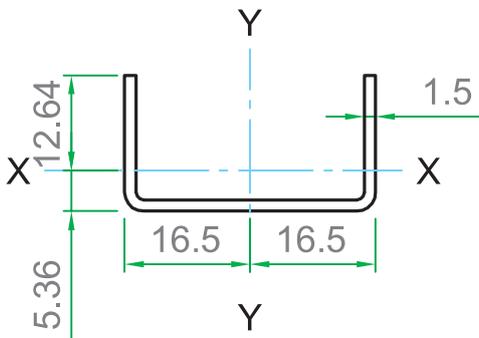
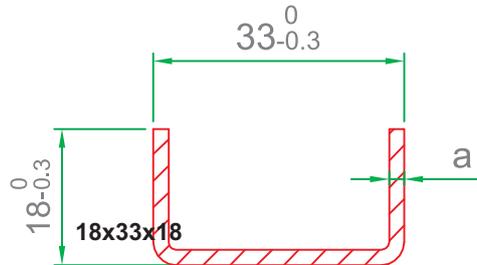


$I_x = 0.86 \text{ [cm}^4\text{]}$
 $I_y = 1.71 \text{ [cm}^4\text{]}$



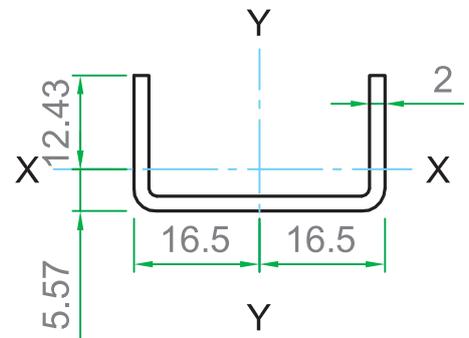
$I_x = 0.99 \text{ [cm}^4\text{]}$
 $I_y = 1.94 \text{ [cm}^4\text{]}$

S-507TRE06



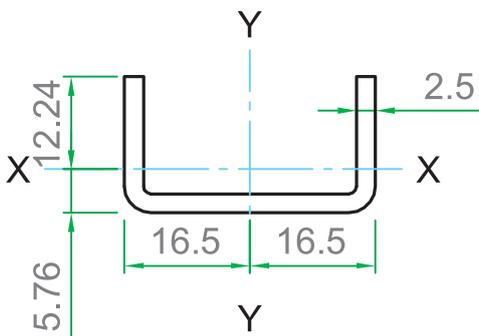
$$I_x = 0.31 \text{ [cm}^4\text{]}$$

$$I_y = 1.62 \text{ [cm}^4\text{]}$$



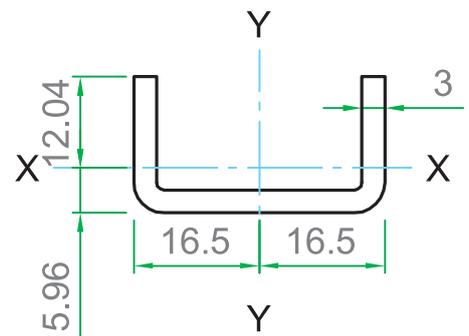
$$I_x = 0.39 \text{ [cm}^4\text{]}$$

$$I_y = 2.05 \text{ [cm}^4\text{]}$$



$$I_x = 0.47 \text{ [cm}^4\text{]}$$

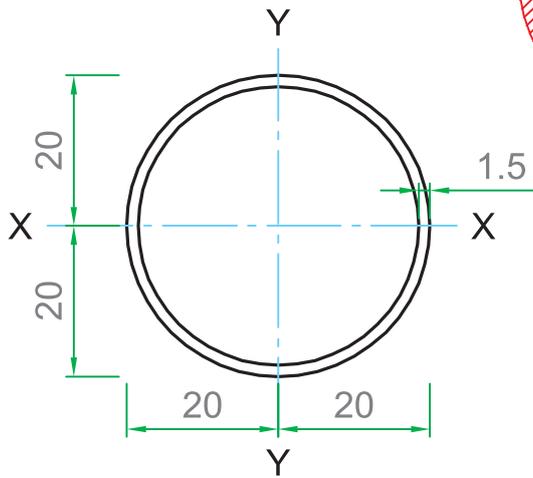
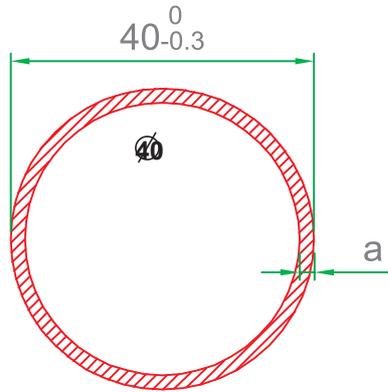
$$I_y = 2.43 \text{ [cm}^4\text{]}$$



$$I_x = 0.54 \text{ [cm}^4\text{]}$$

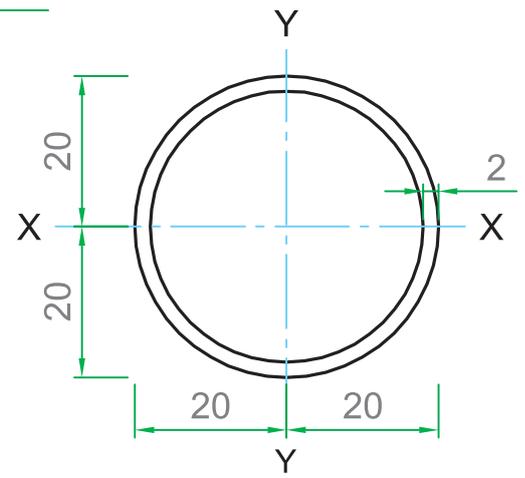
$$I_y = 2.77 \text{ [cm}^4\text{]}$$

S-507TRE07



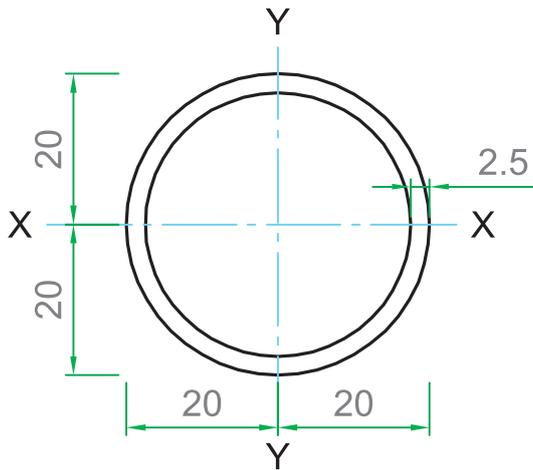
$$I_x = 3.37 \text{ [cm}^4\text{]}$$

$$I_y = 3.37 \text{ [cm}^4\text{]}$$



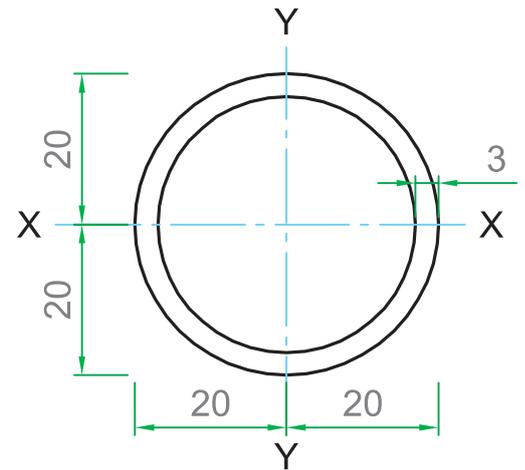
$$I_x = 4.32 \text{ [cm}^4\text{]}$$

$$I_y = 4.32 \text{ [cm}^4\text{]}$$



$$I_x = 5.2 \text{ [cm}^4\text{]}$$

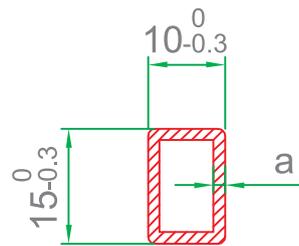
$$I_y = 5.2 \text{ [cm}^4\text{]}$$



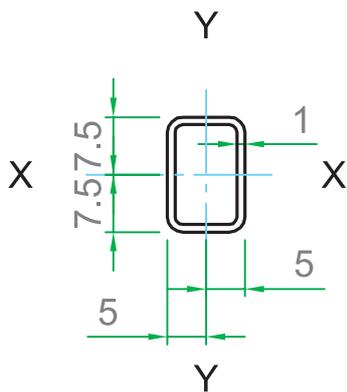
$$I_x = 6.01 \text{ [cm}^4\text{]}$$

$$I_y = 6.01 \text{ [cm}^4\text{]}$$

S-507TRE08

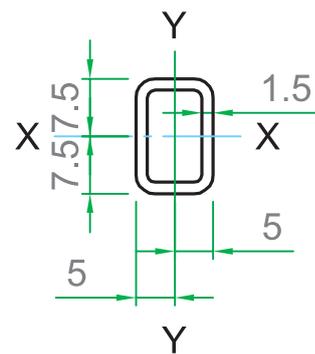


10x15x10x15



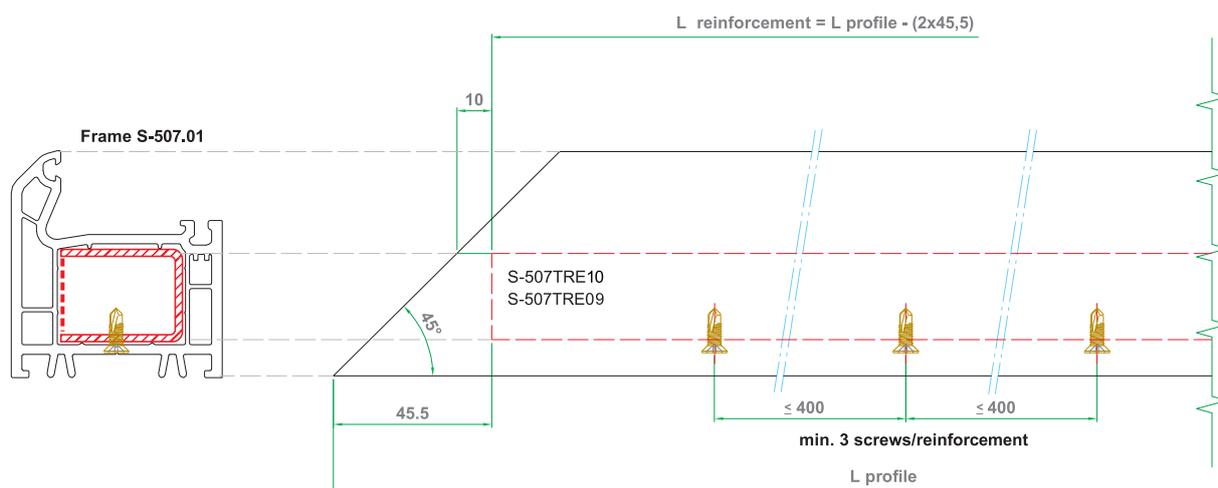
$$I_x = 0.12 \text{ [cm}^4\text{]}$$

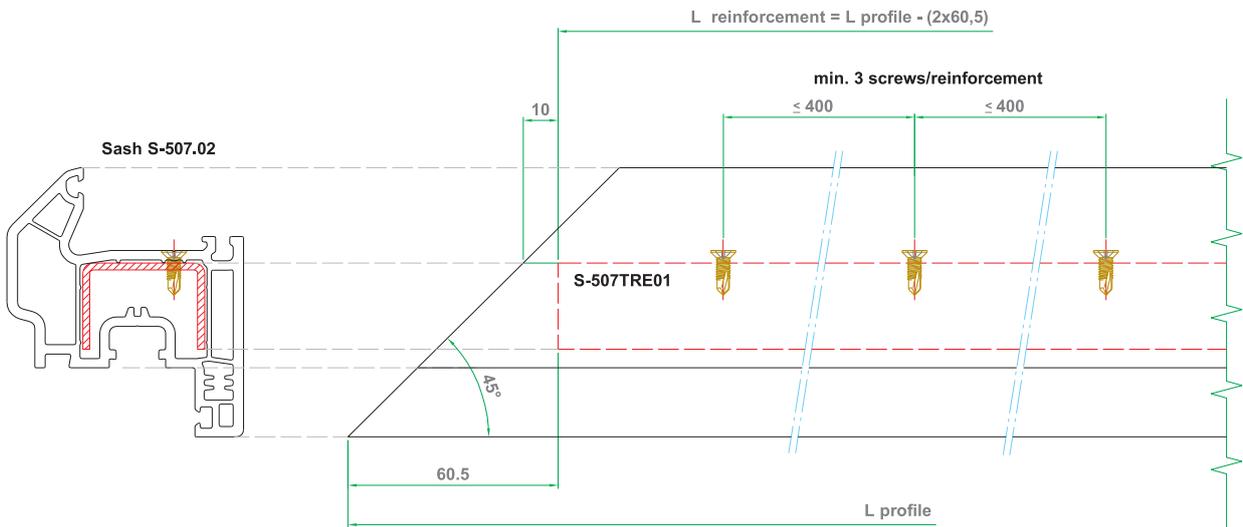
$$I_y = 0.06 \text{ [cm}^4\text{]}$$

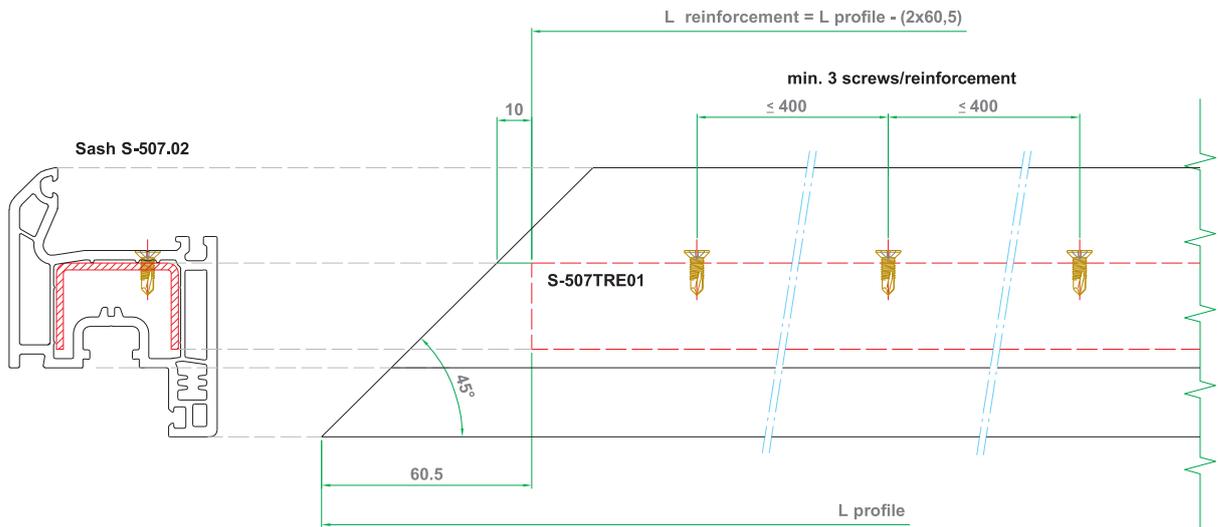


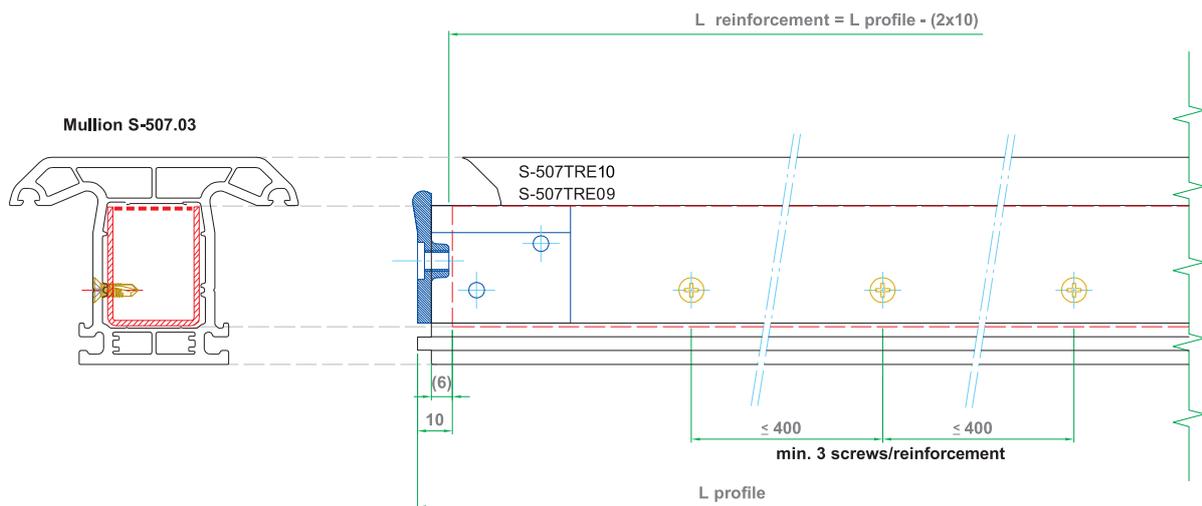
$$I_x = 0.16 \text{ [cm}^4\text{]}$$

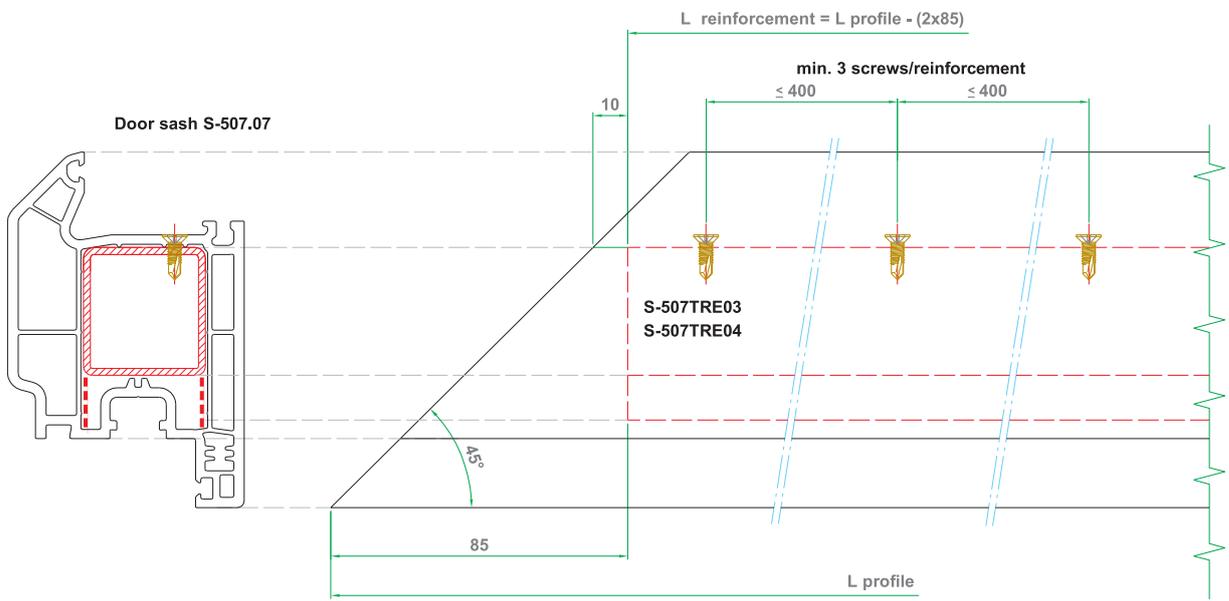
$$I_y = 0.08 \text{ [cm}^4\text{]}$$

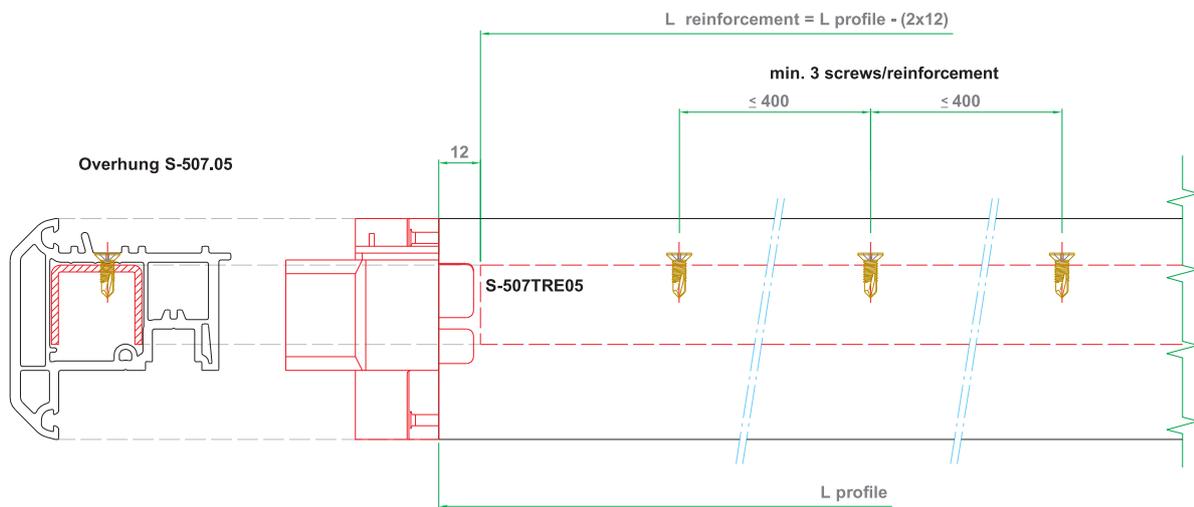


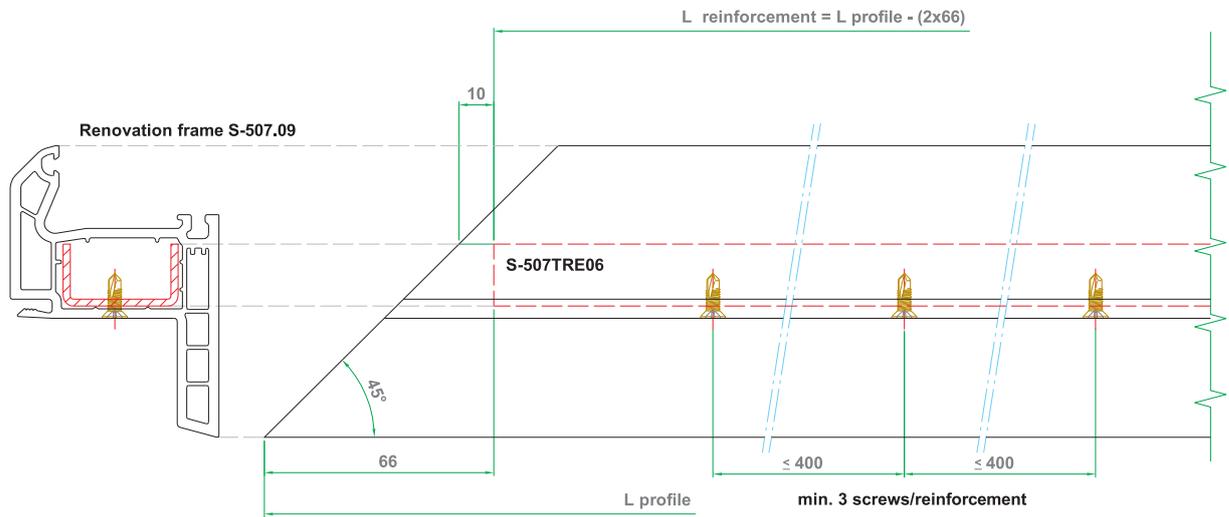


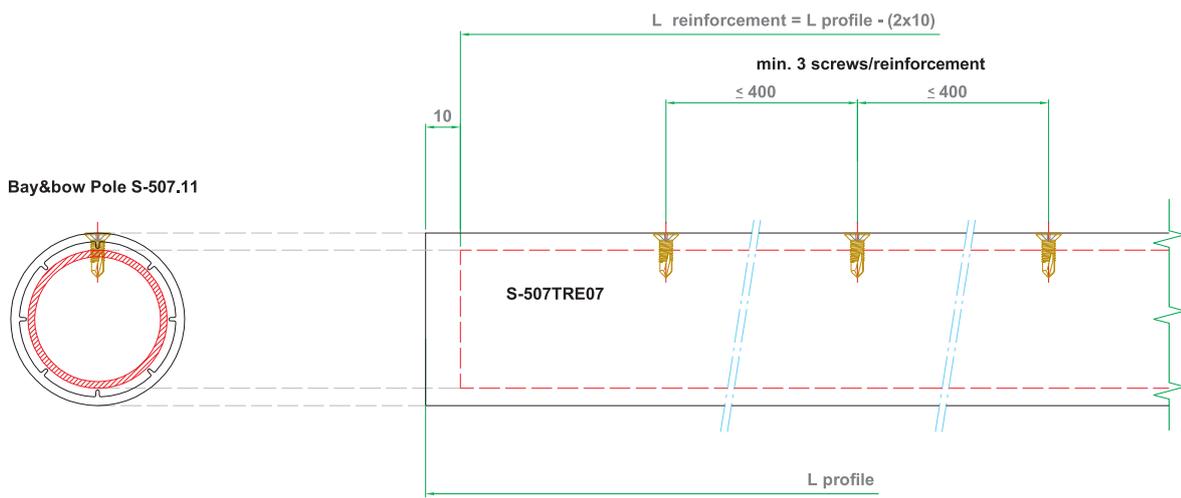


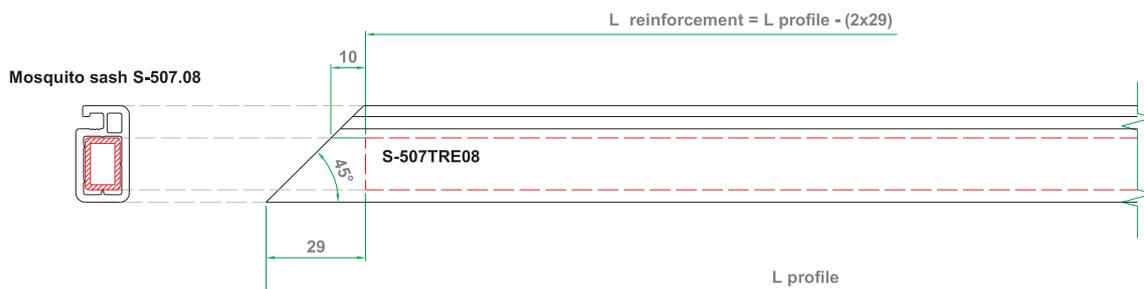












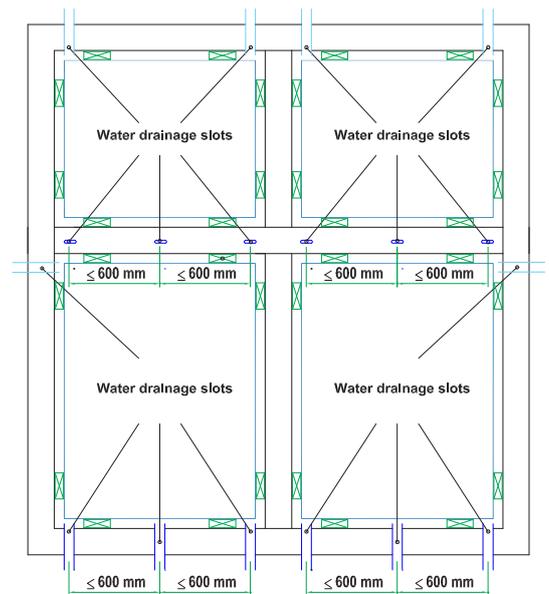
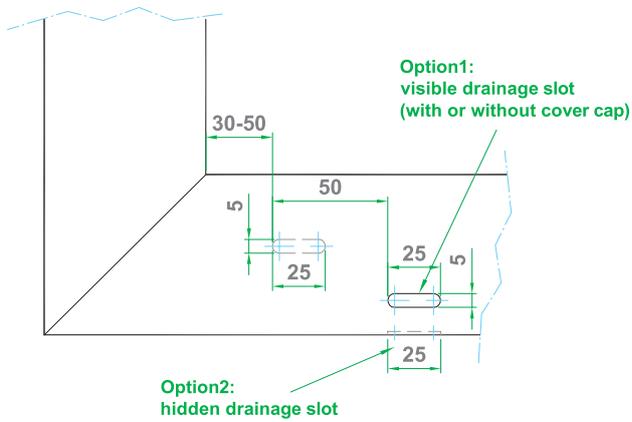
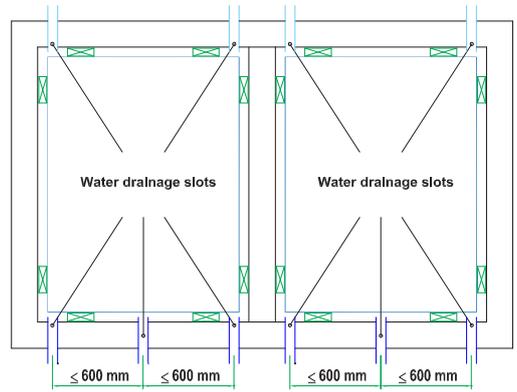
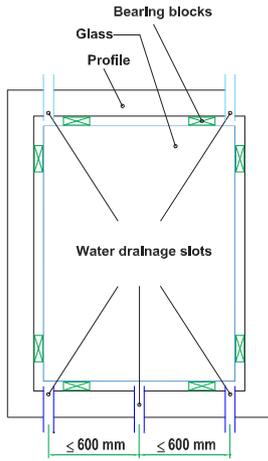
Drainage

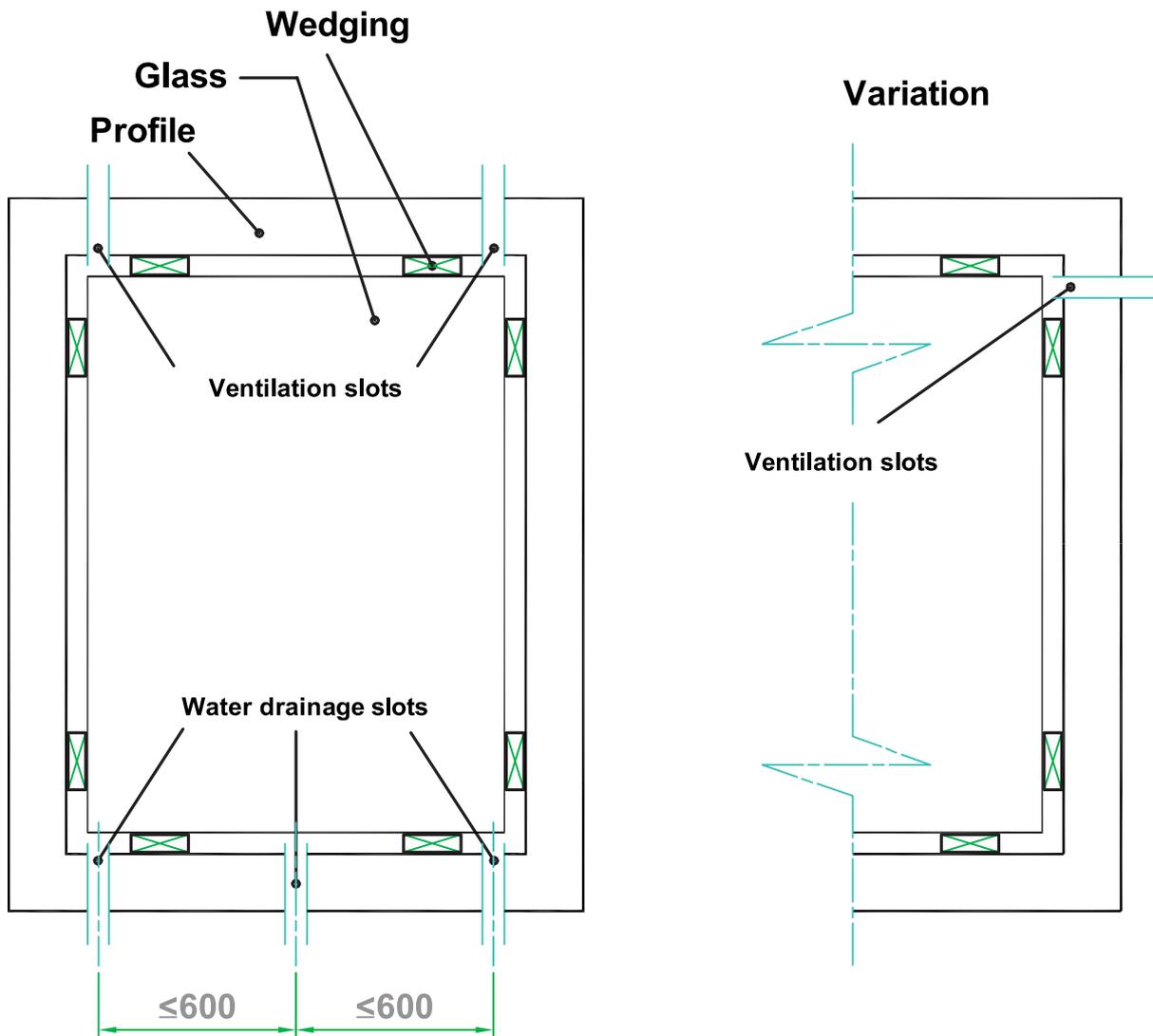
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Drainage





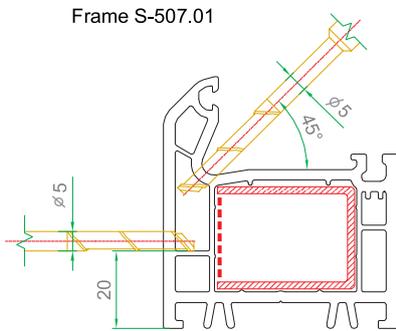
Minimum dimensions for water drainage slots/ventilation slots:
Slots: 5x25 mm or
Hole: $\varnothing 8$ mm ($\varnothing 5$ mm for ventilation slots)

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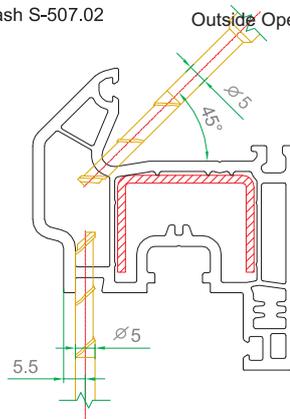
Best of the Best

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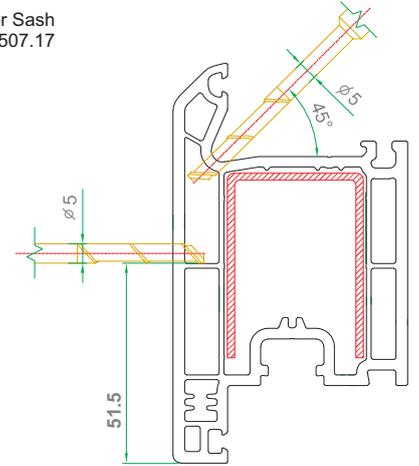
Frame S-507.01



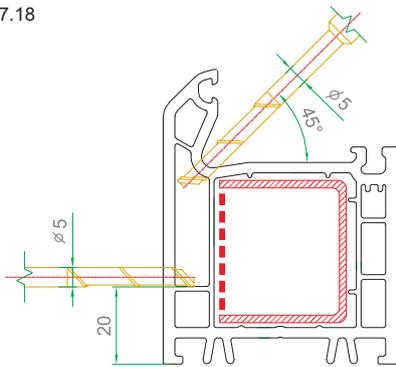
Sash S-507.02



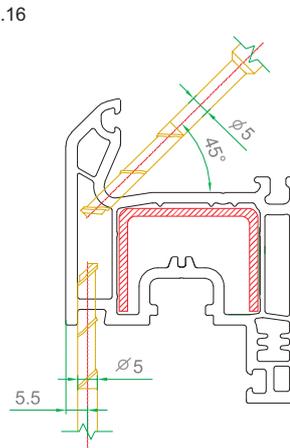
Outside Opening Door Sash S-507.17



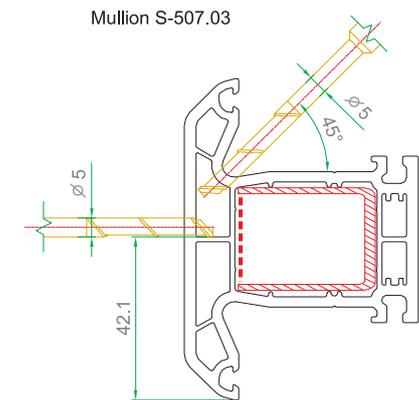
Frame S-507.18



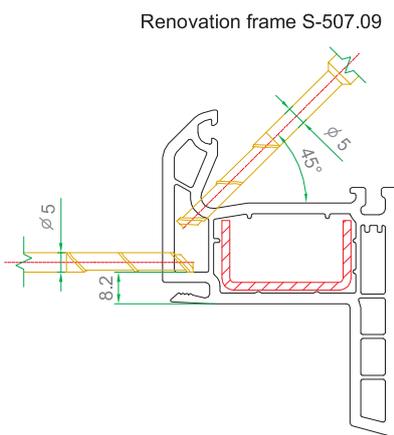
Sash S-507.16



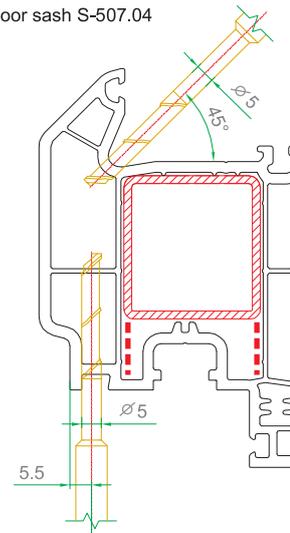
Mullion S-507.03



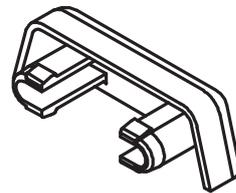
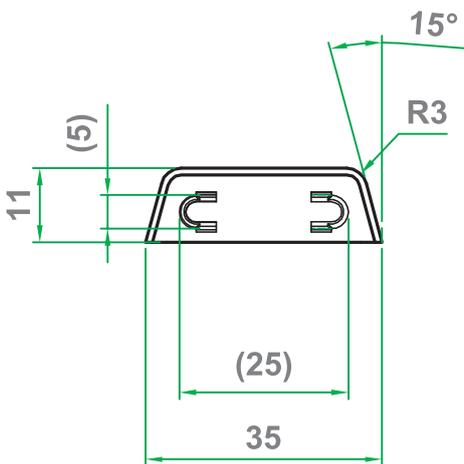
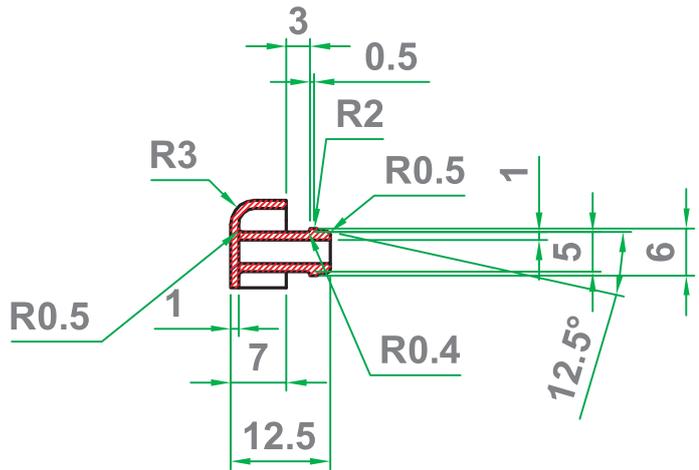
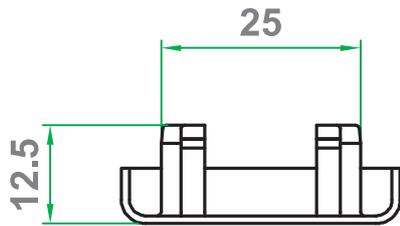
Renovation frame S-507.09



Door sash S-507.04



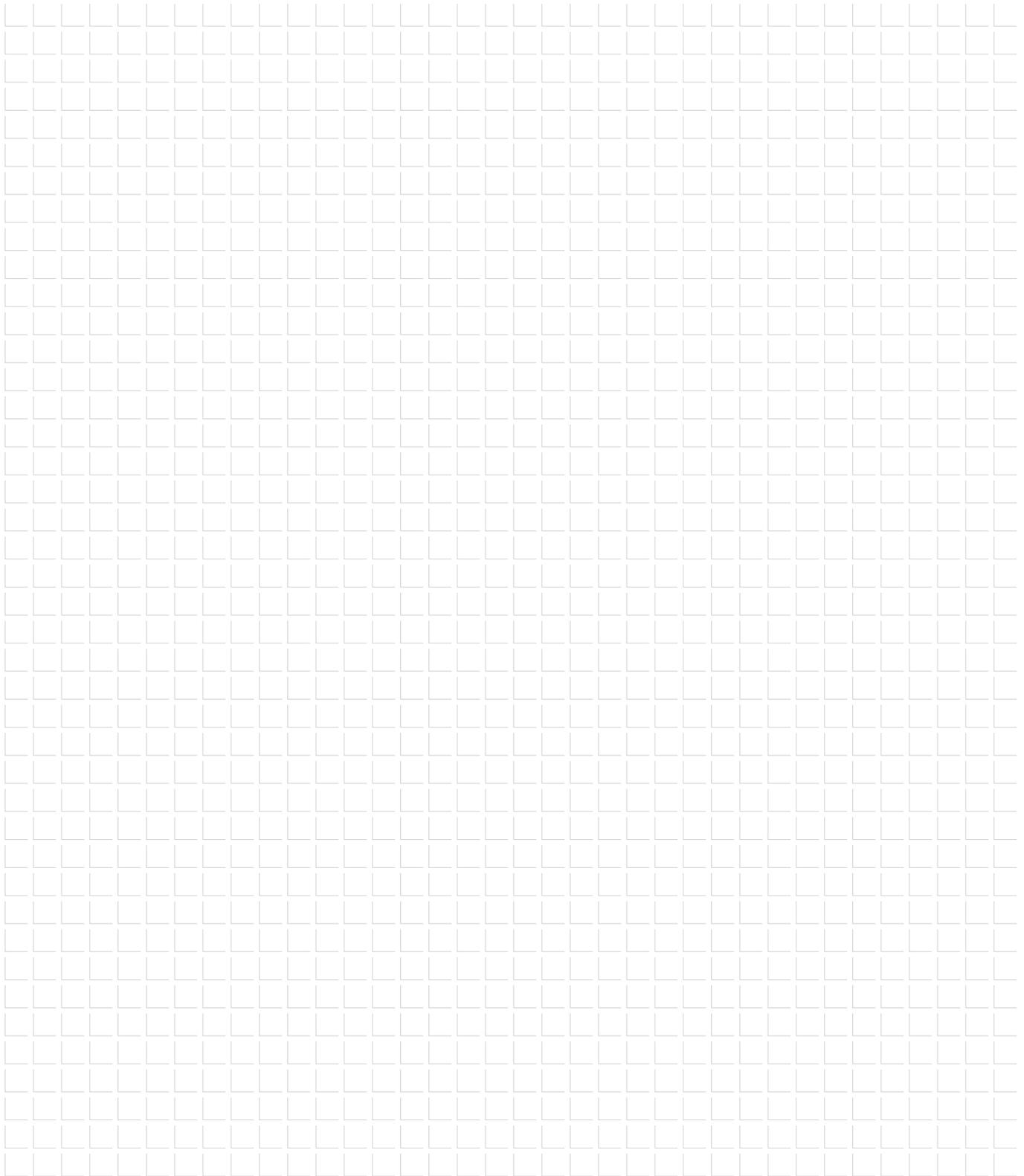
Drainage



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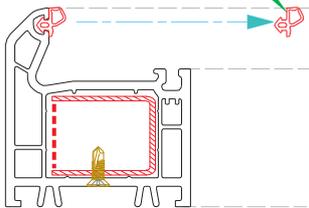
UPVC Profile Producer

glued butt joint on top

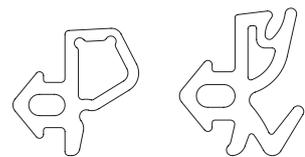


S-507DIZ02

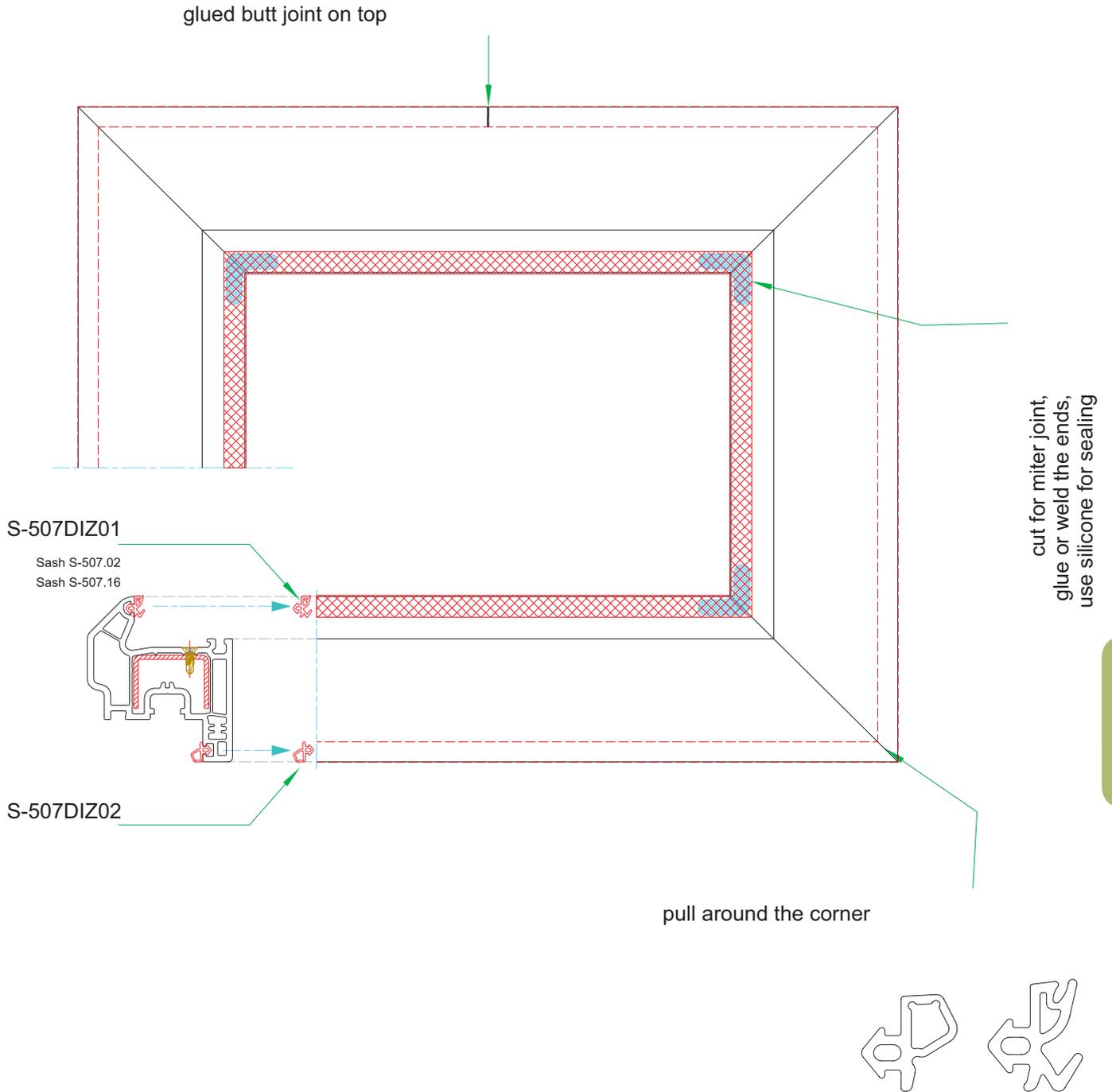
Frame S-507.01
Frame S-507.18



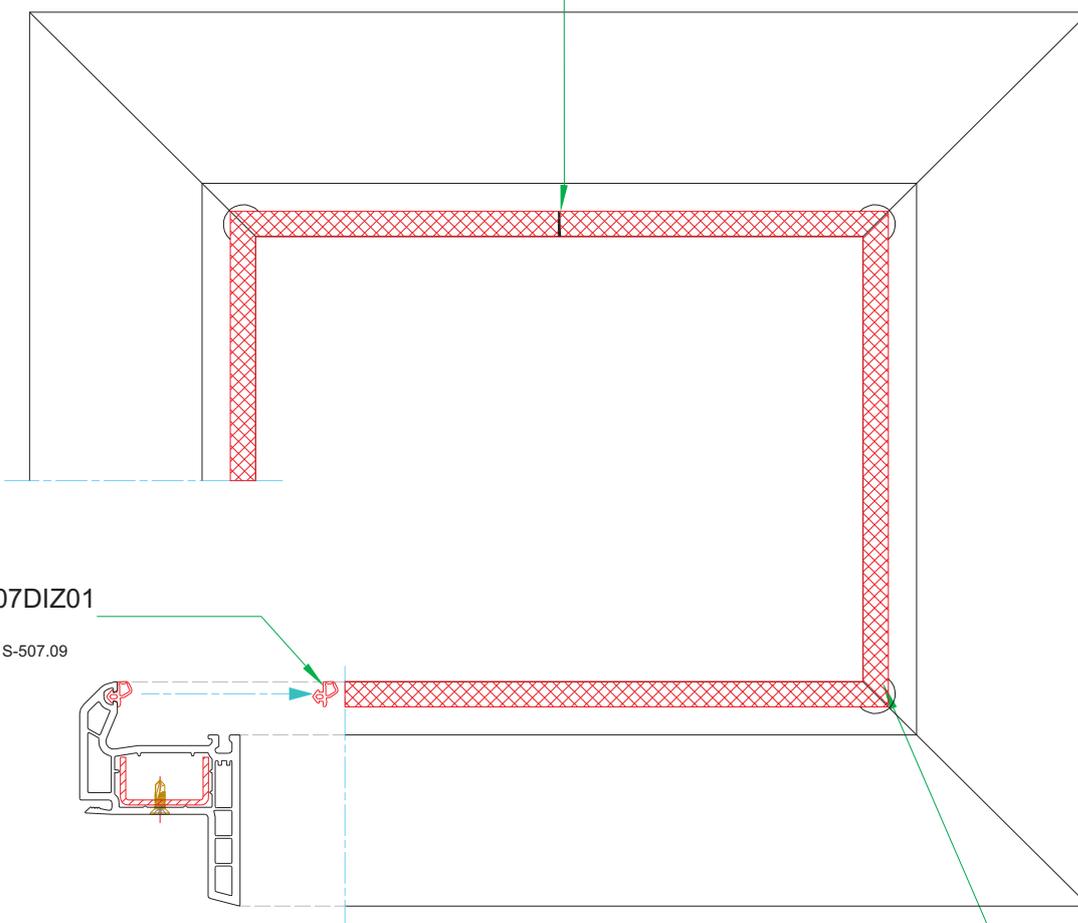
pull around the corner



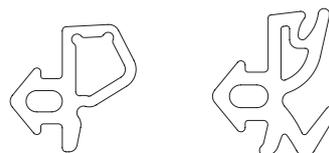
Sealing

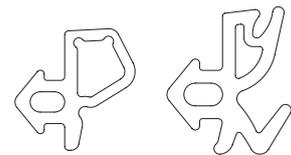
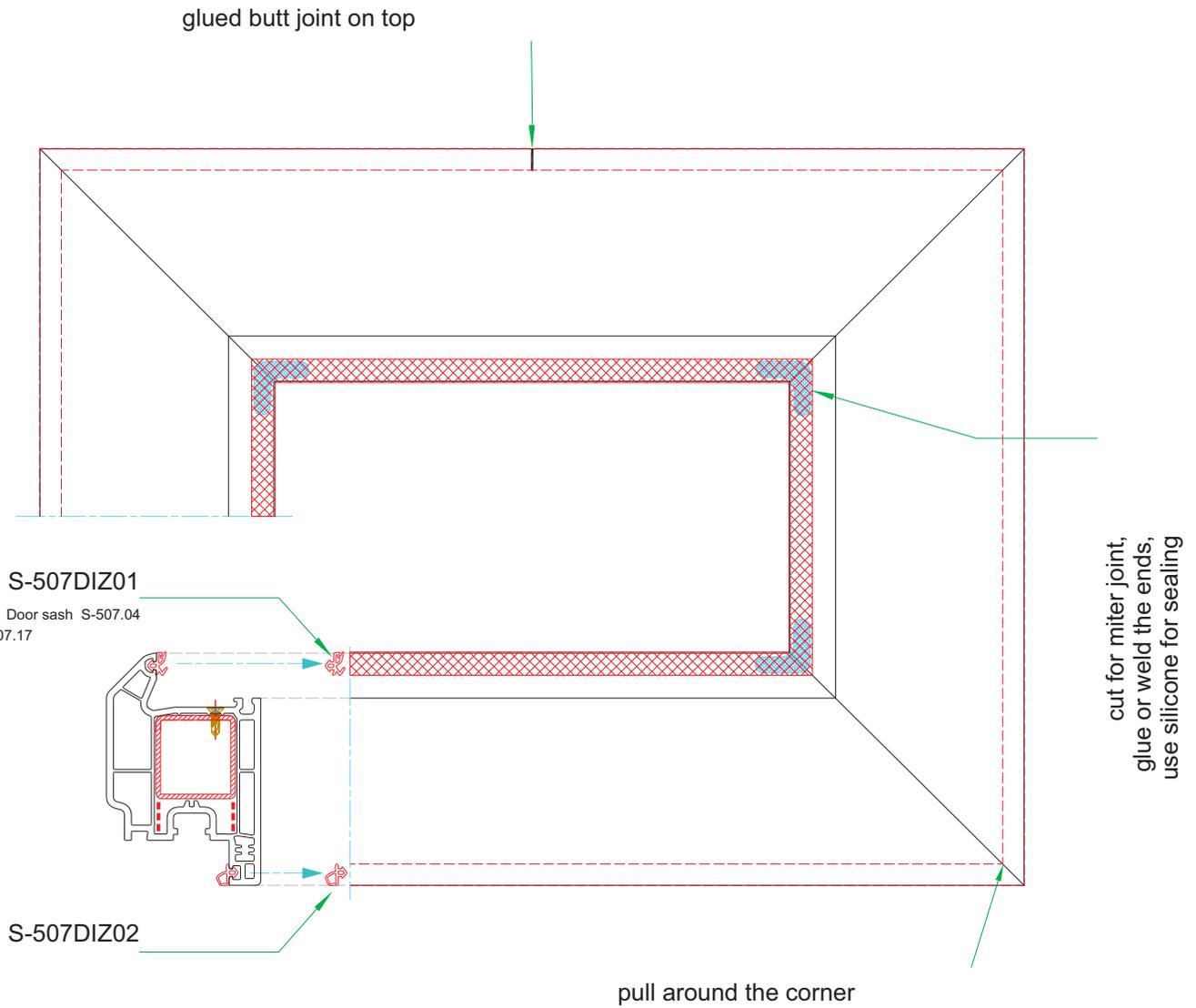


glued butt joint on top



pull around the corner

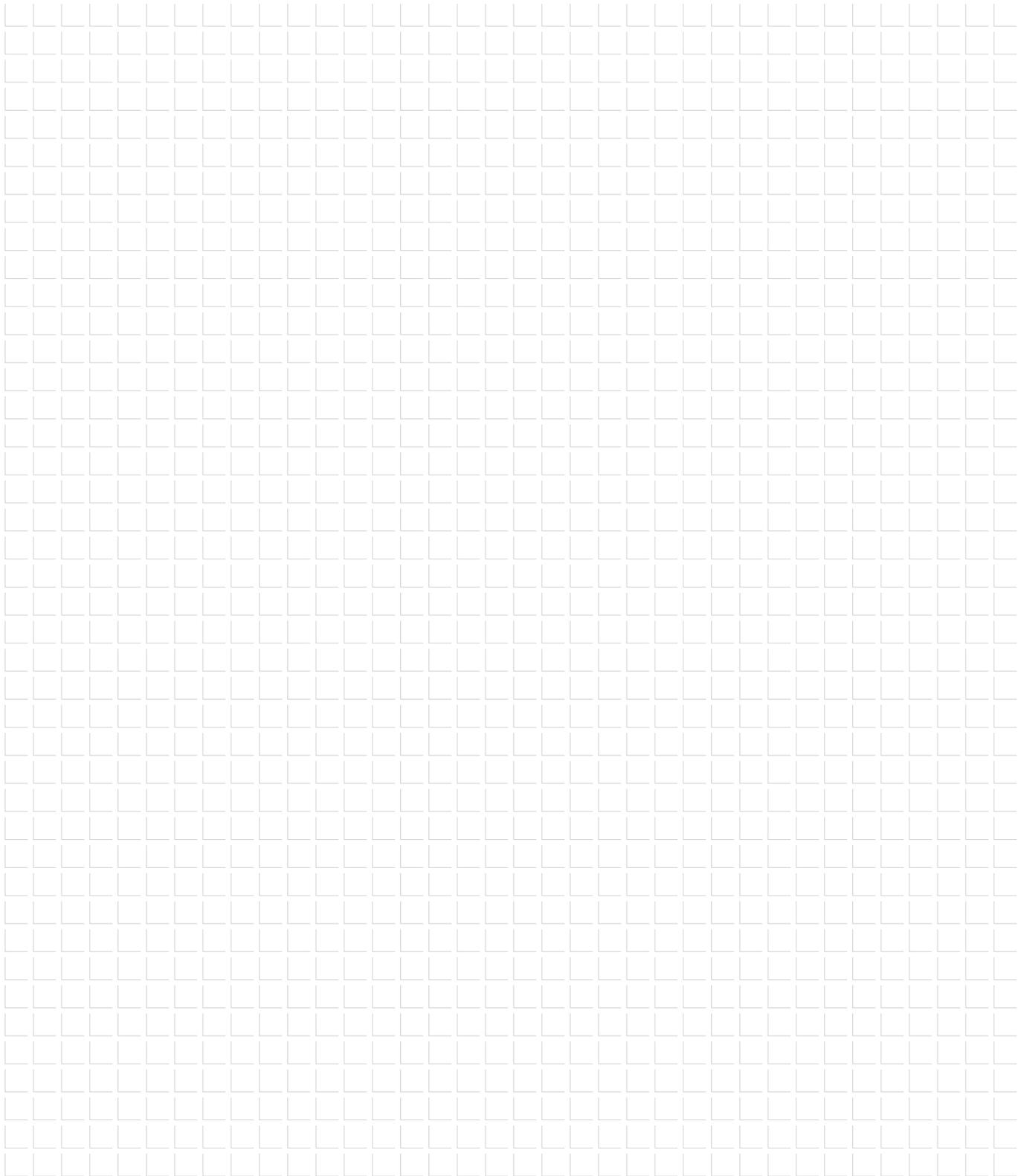




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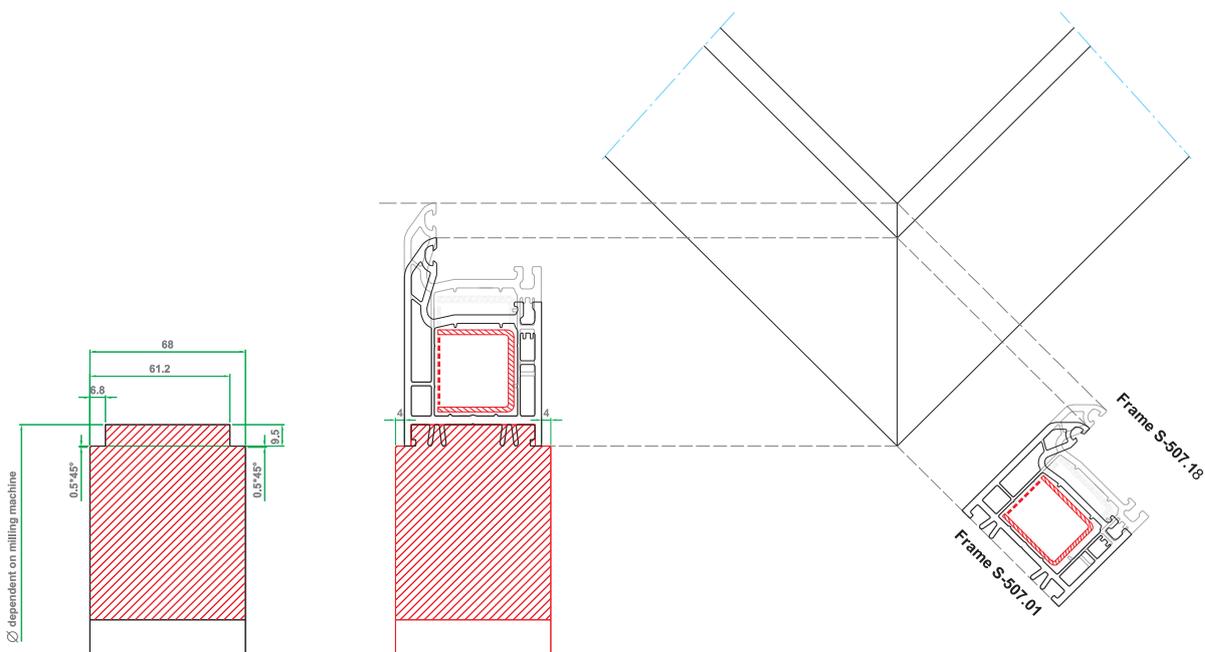


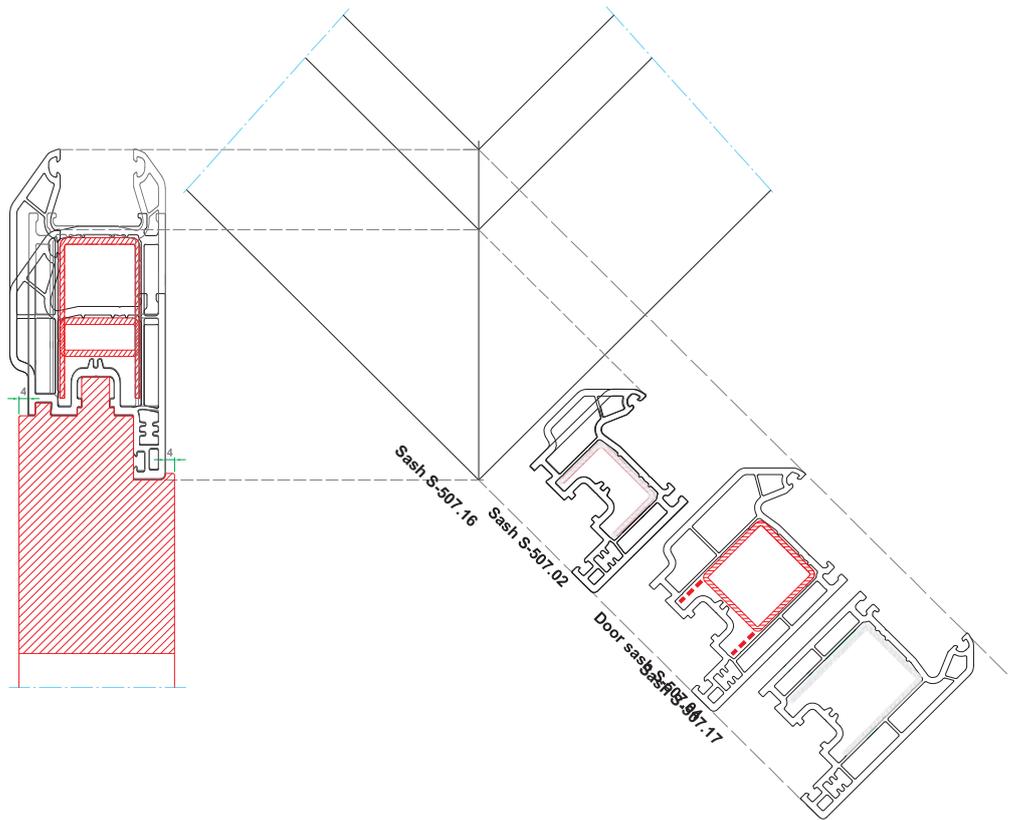
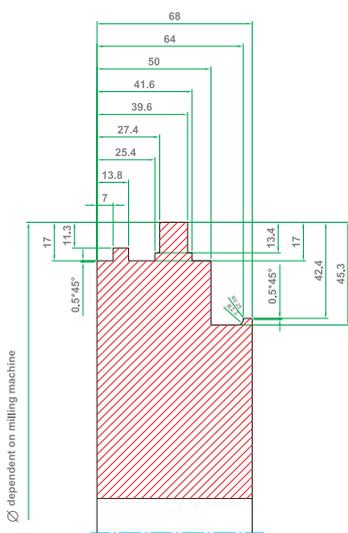
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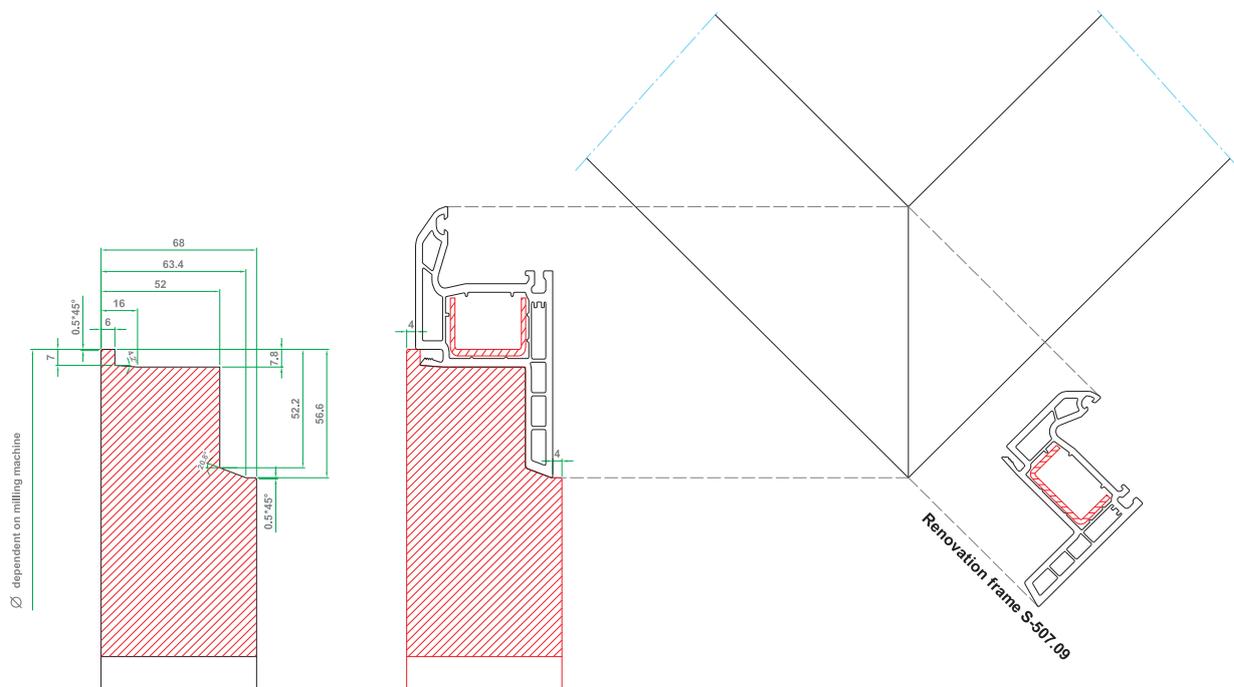
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UPVC Profile Producer

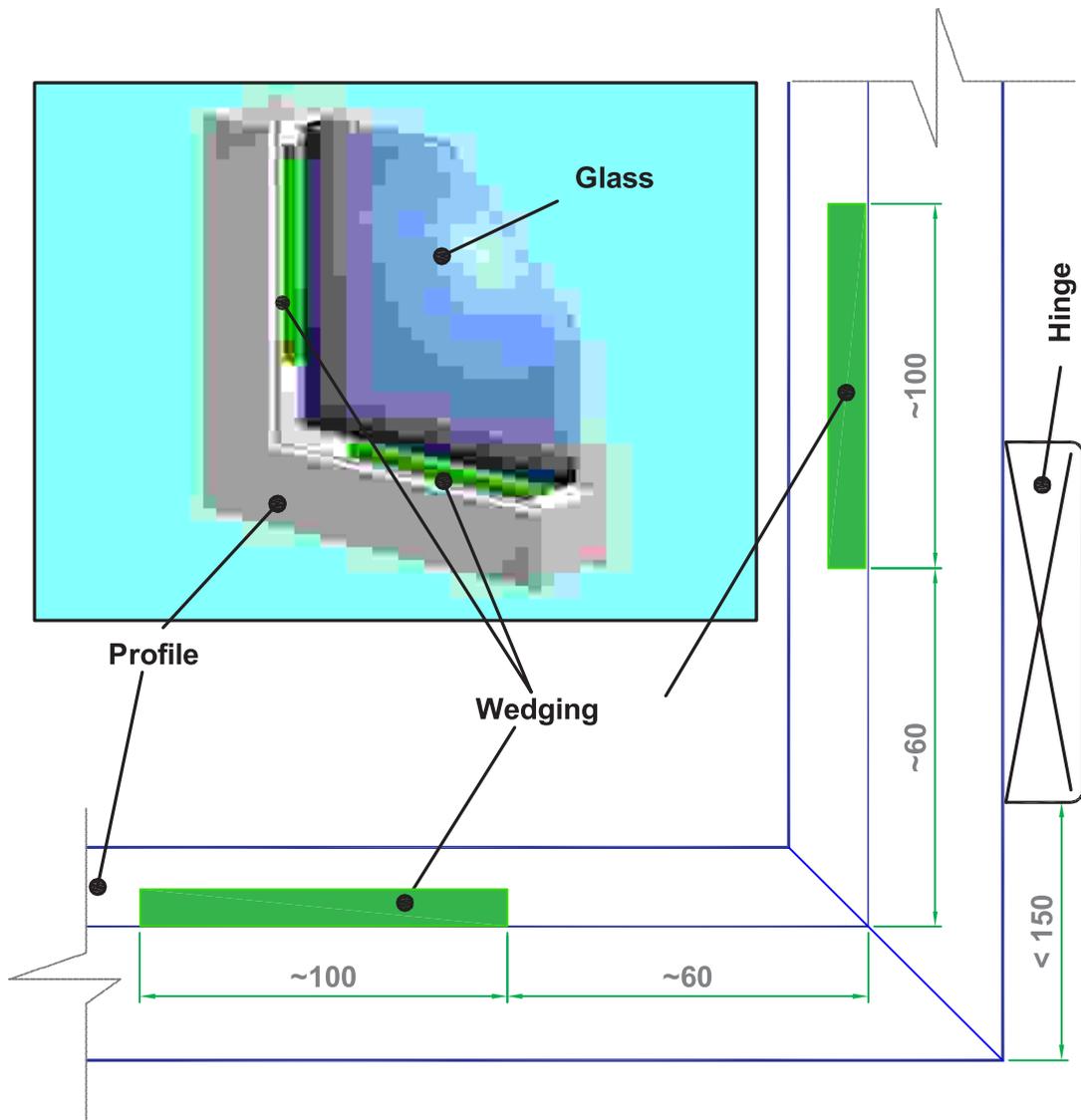
Profile Milling

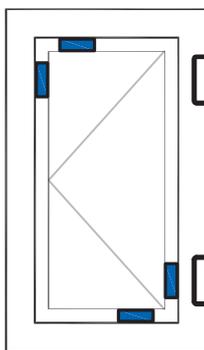




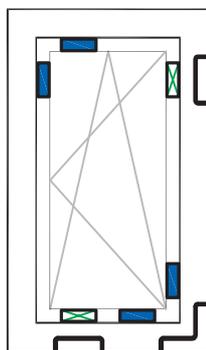


Glazing Guide Lines

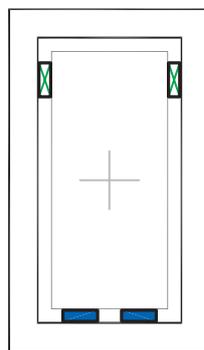




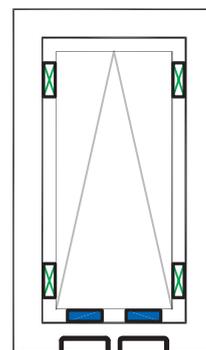
Side hung window



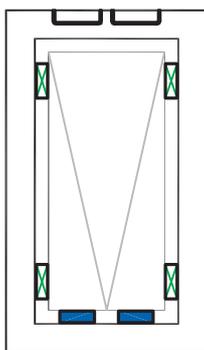
Tilt&turn window



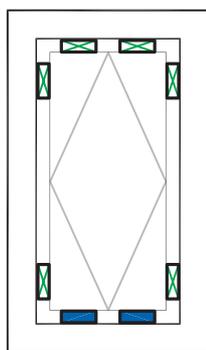
Picture window
(Fixed glazing)



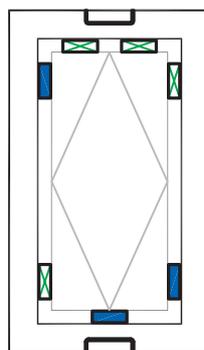
bottom hung window



Top hung window



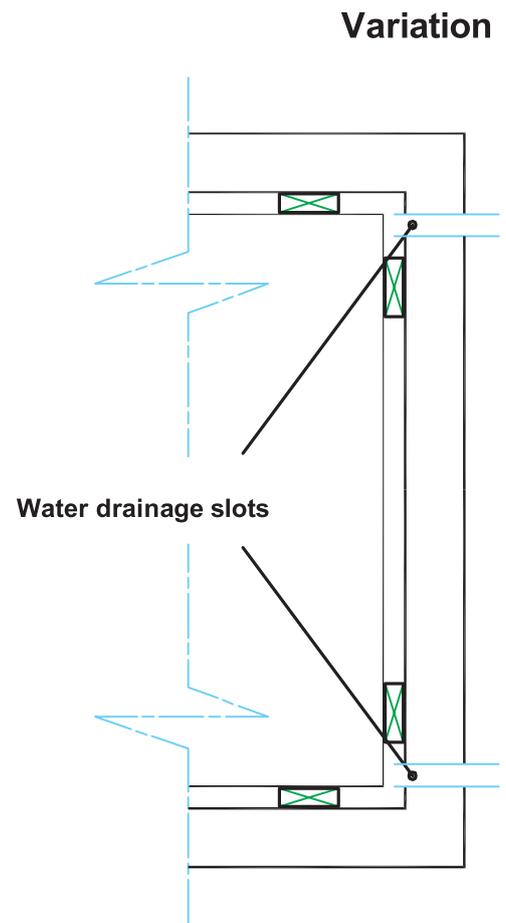
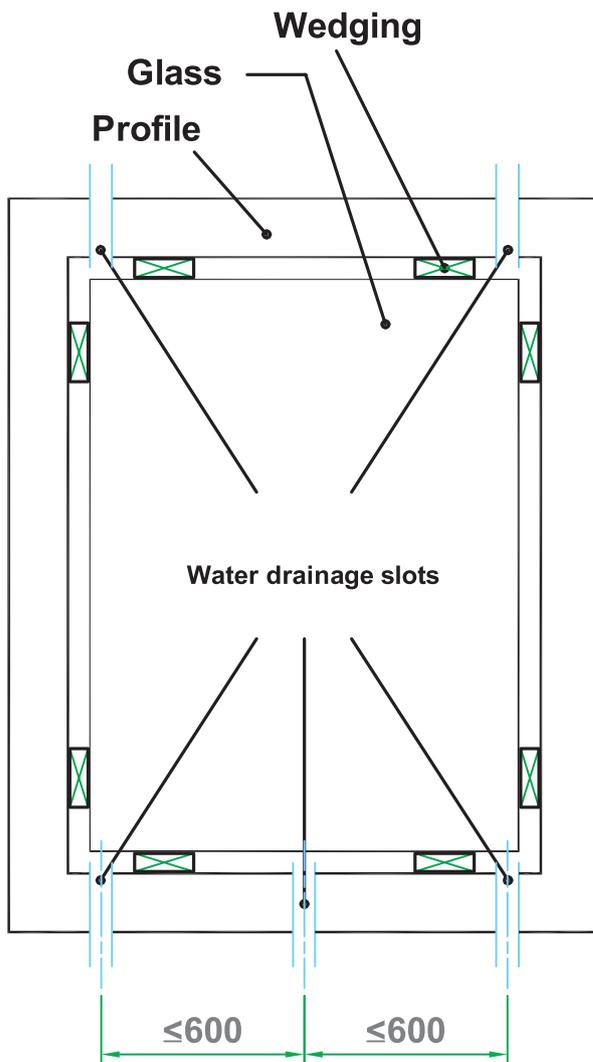
Pivot window



Pivot window centric

 = Distance block

 = Bearing block

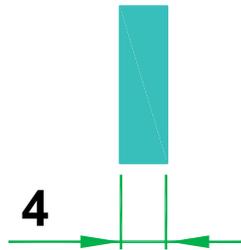


Minimum dimensions for water drainage slots/ventilation slots:
Slots: 5x25 mm or
Hole: \varnothing 8 mm

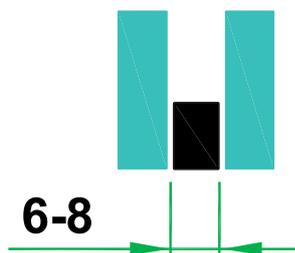
Heat transfer coefficient of various glazing units

$$U_g =$$

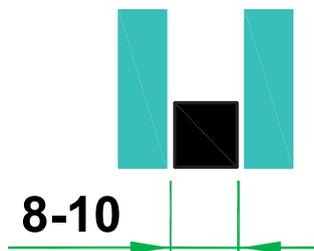
5,7 W/m² K



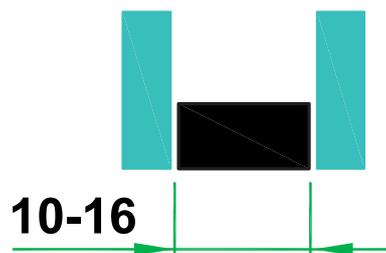
3,3 W/m² K



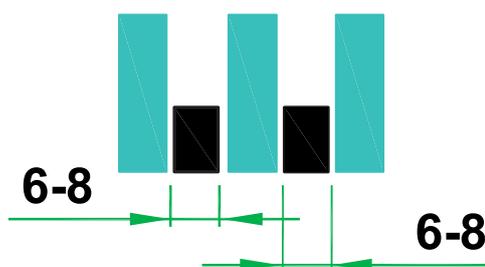
3,1 W/m² K



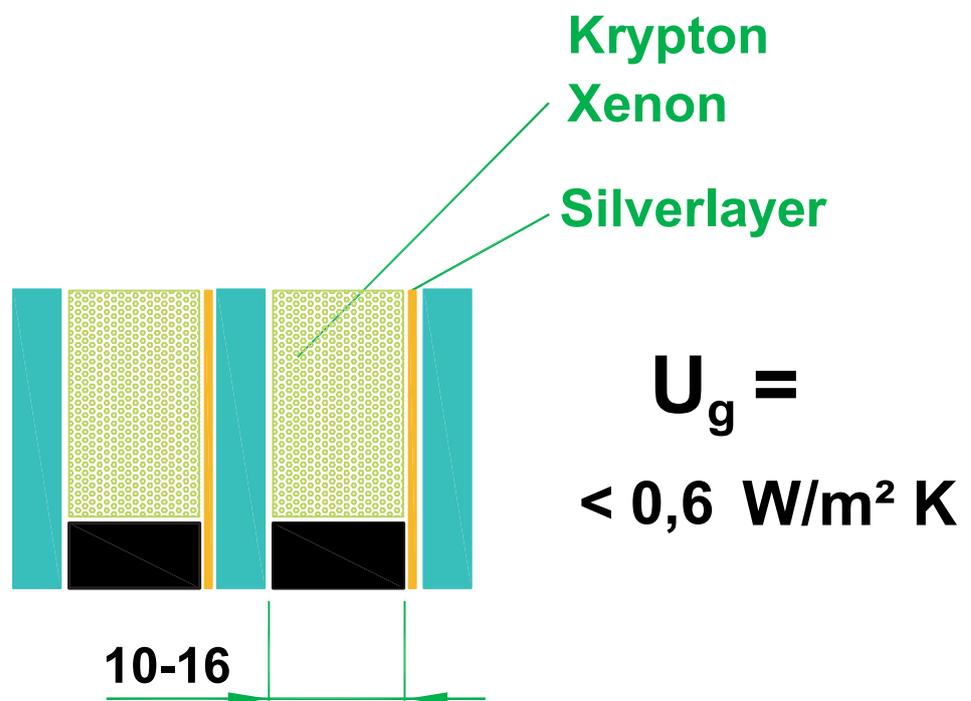
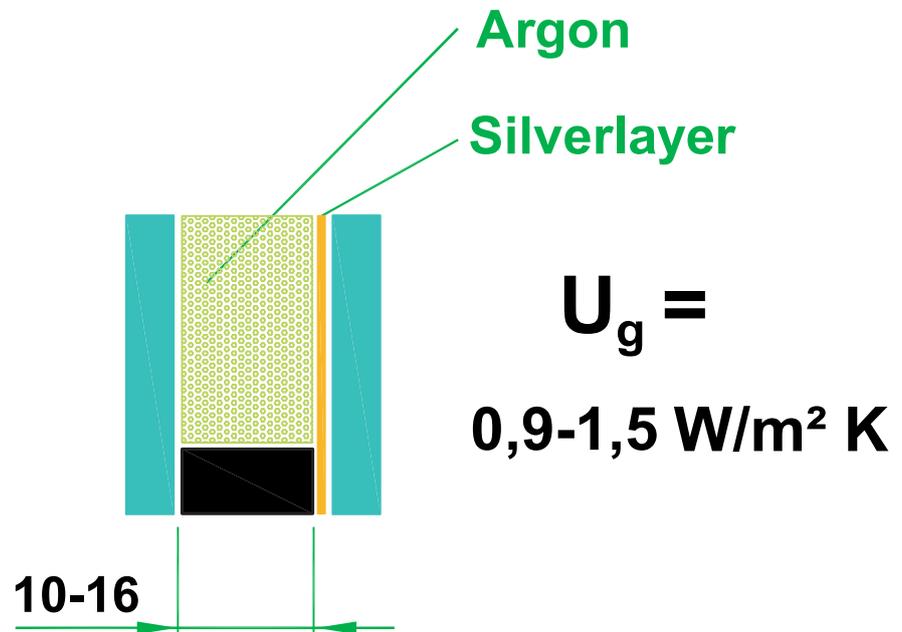
2,9 W/m² K



2,3 W/m² K

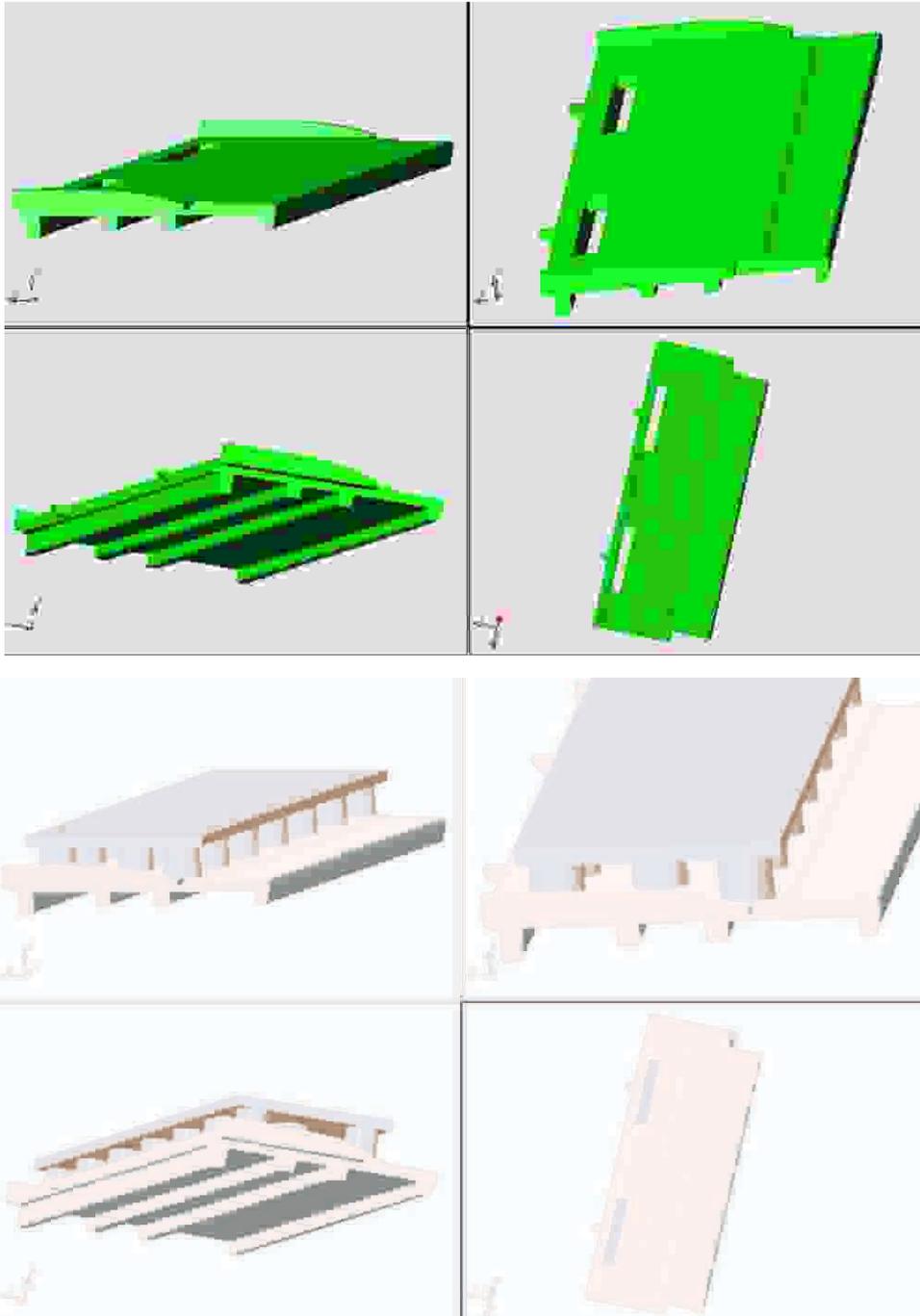


Heat transfer coefficient of various glazing units



ویستا بست (سهامی خاص)

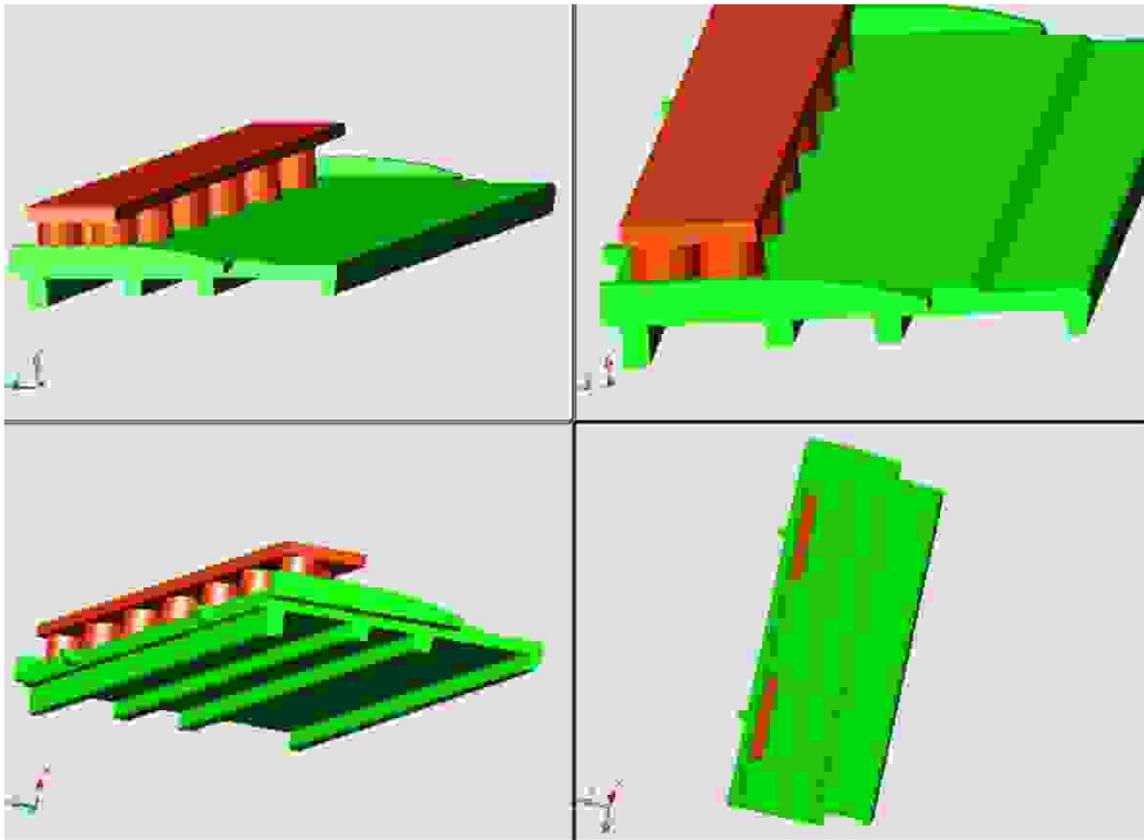
تولیدکننده پروفیل یو پی وی سی



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Sectional Drawings

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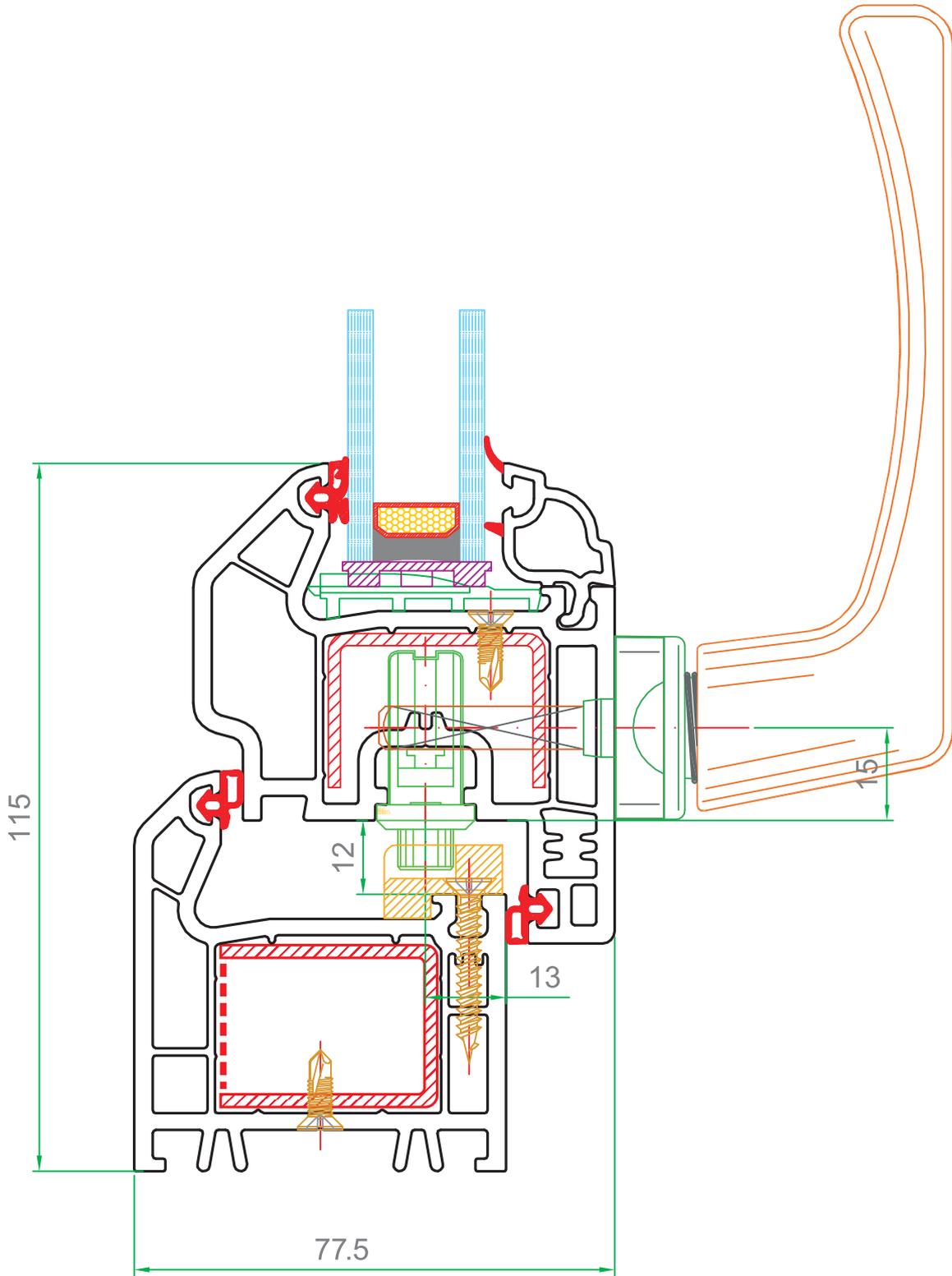
Best of the Best

UPVC Profile Producer

Profile S-507.01
1.24 kg/m

Flush S-507.02
1.43 kg/m

Sectional Drawing

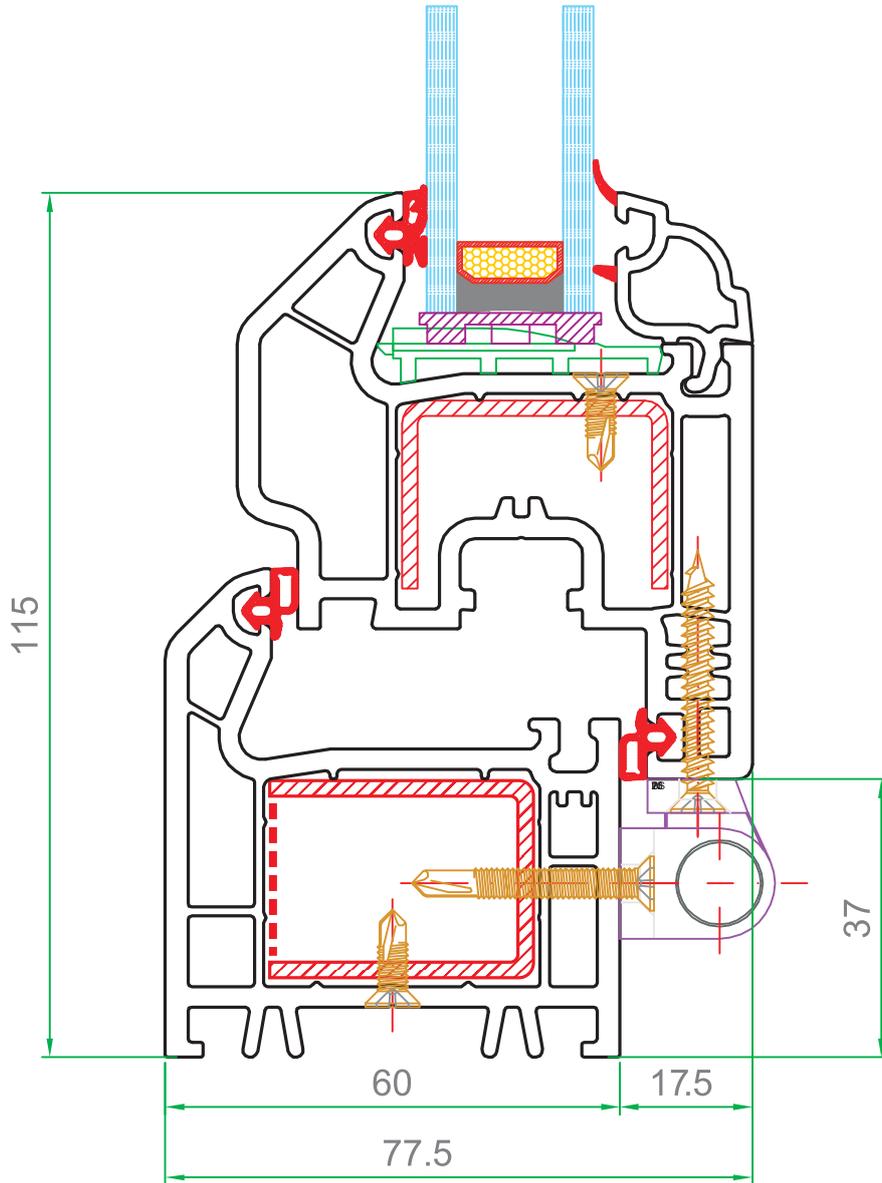


ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

نام S-507.01
1.24 kg/m

نوع S-507.02
1.43 kg/m



Sectional Drawing

VISTA BEST®

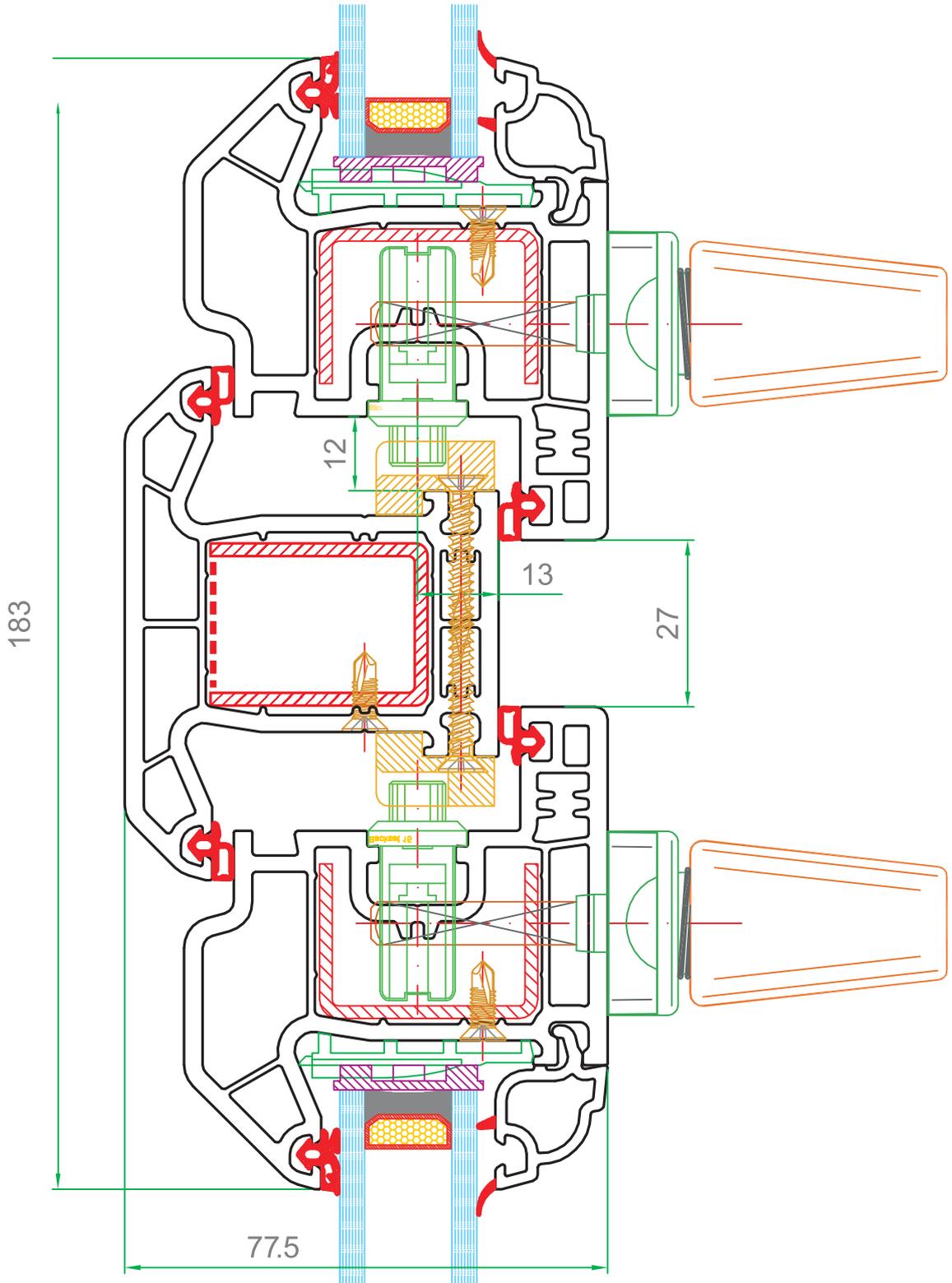
Best of the Best

UPVC Profile Producer

lition S-507.03
1.35 kg/m

ash S-507.02
1.43 kg/m

Sectional Drawing

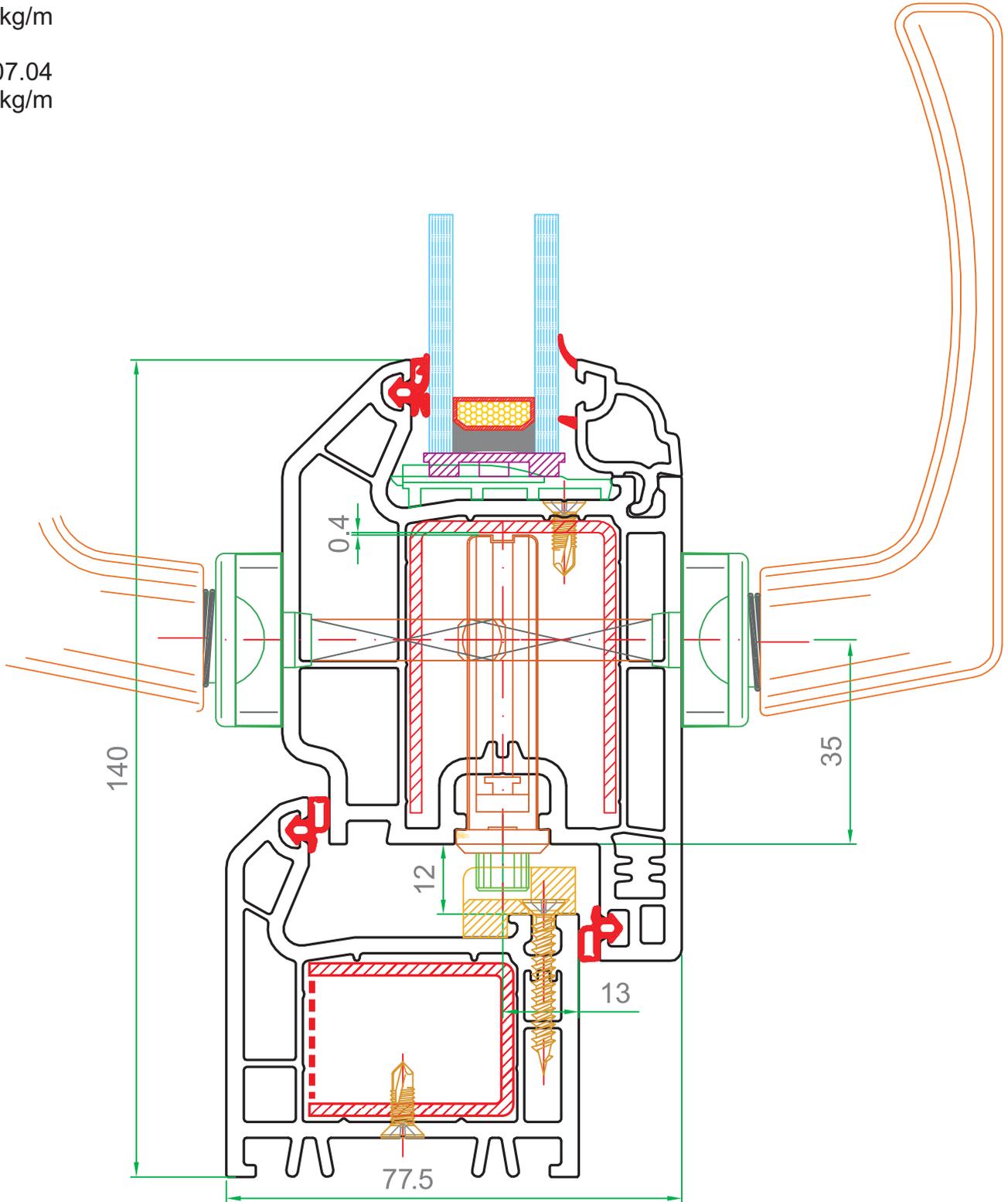


ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

نام S-507.01
1.24 kg/m

نوع S-507.04
1.77 kg/m



Sectional Drawing

VISTA BEST®

Best of the Best

UPVC Profile Producer

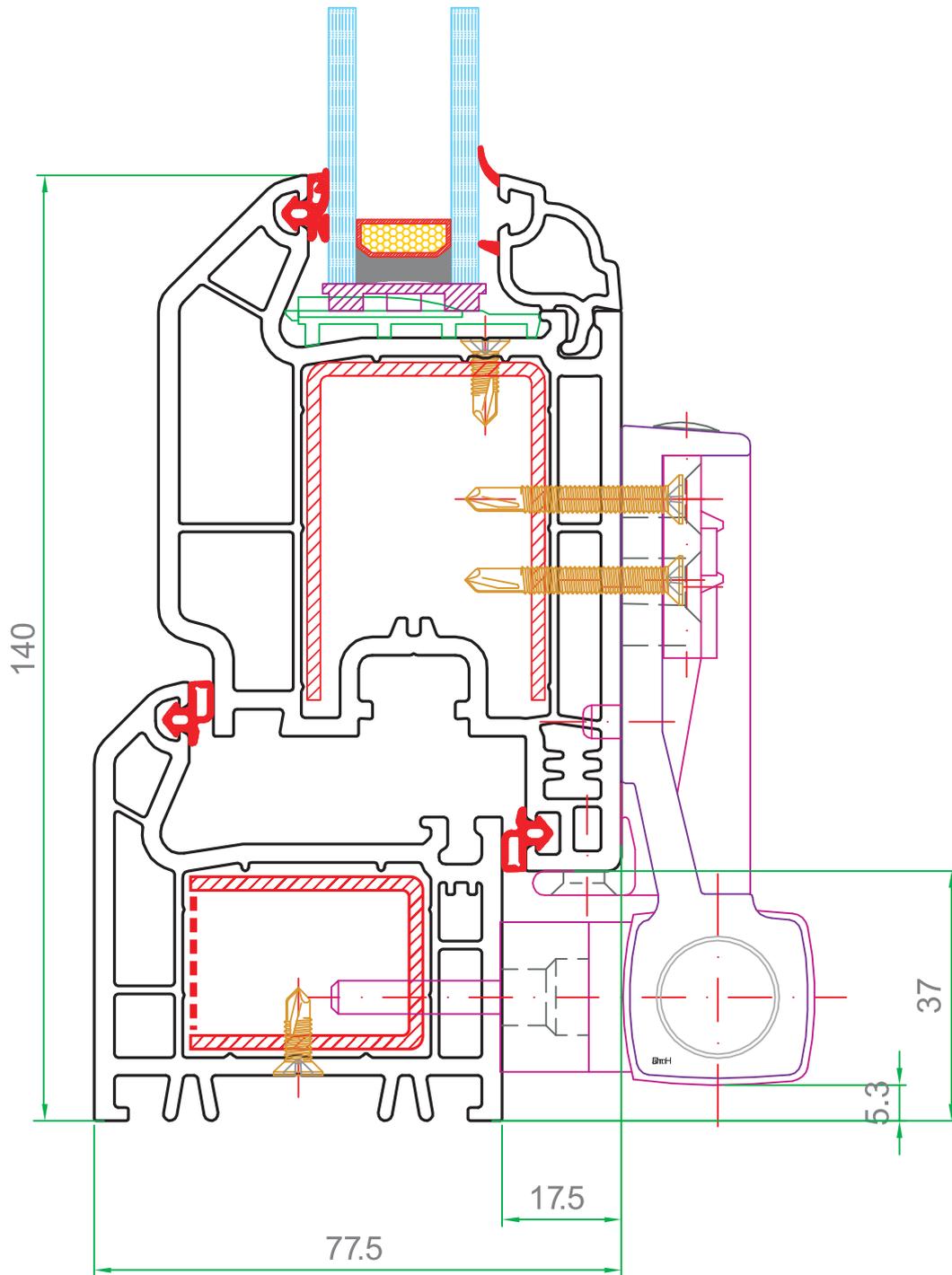
Frame S-507.01

1.24 kg/m

Glass S-507.04

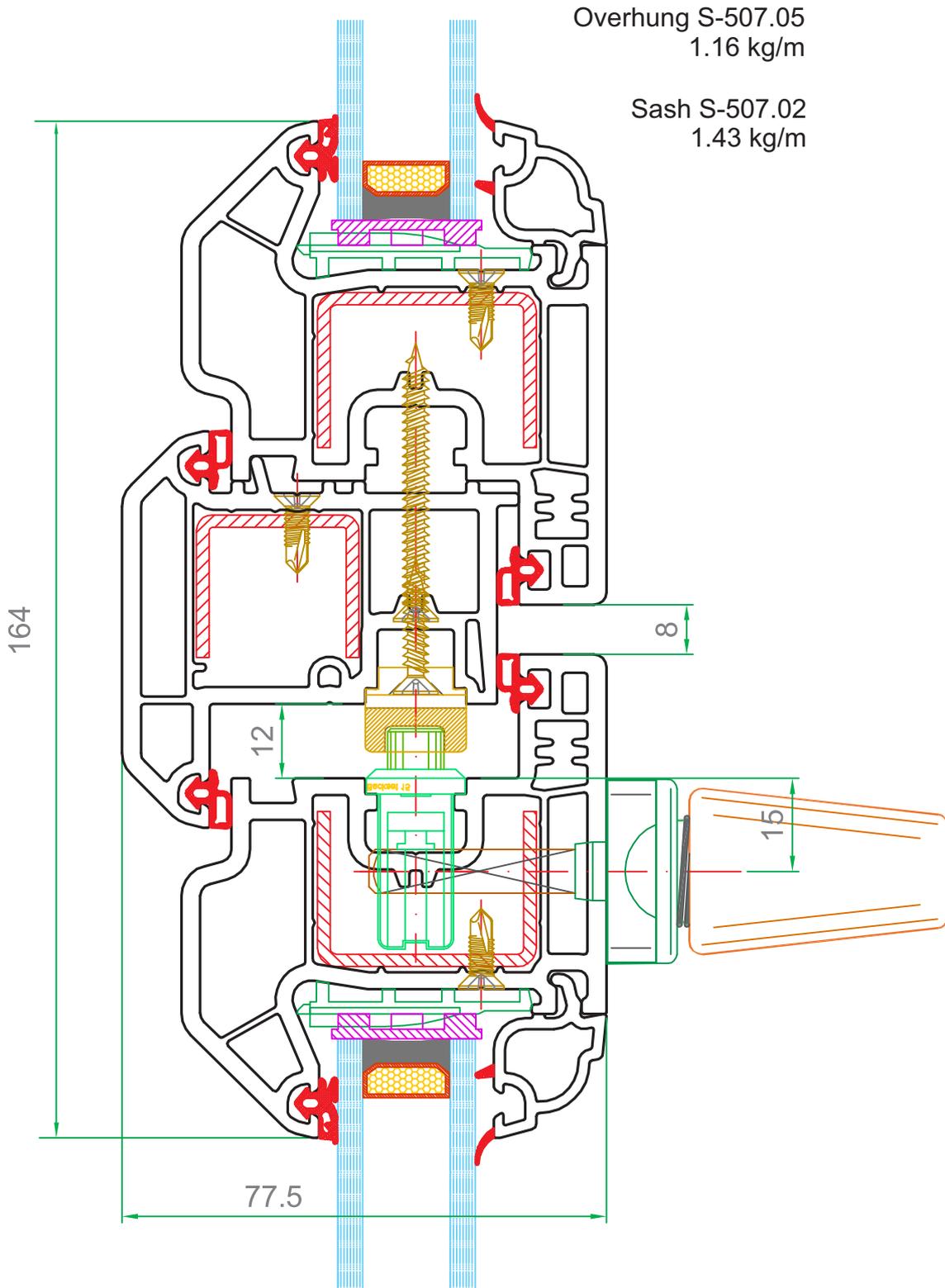
1.77 kg/m

Sectional Drawing



ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی



Sectional Drawing

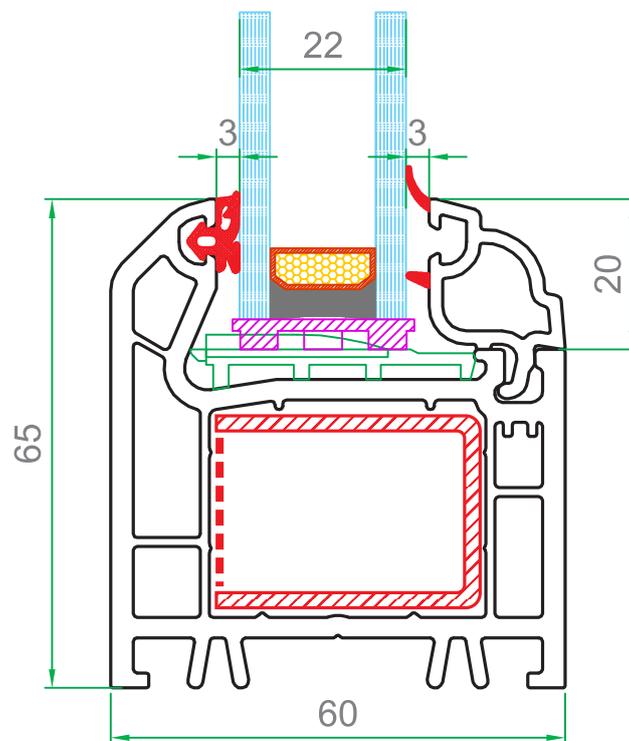
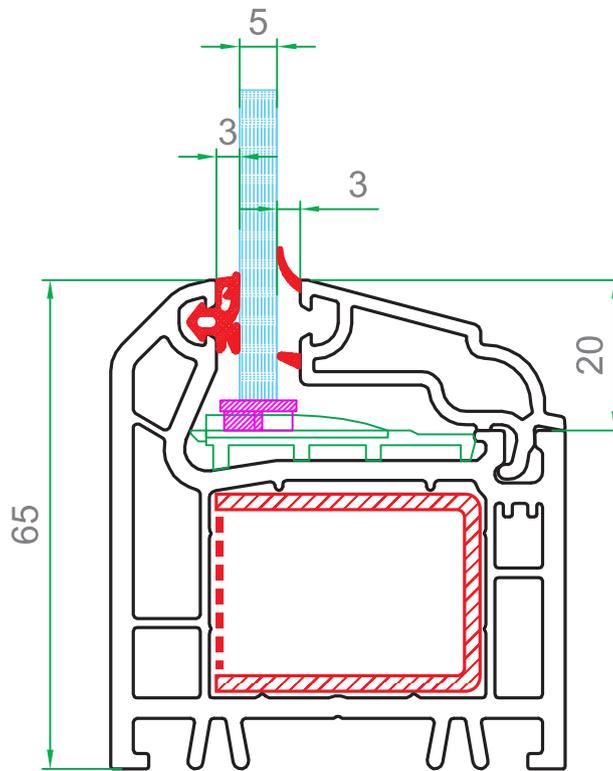
VISTA BEST®

Best of the Best

UPVC Profile Producer

65 mm S-507.07
PVC 12.8 g/m

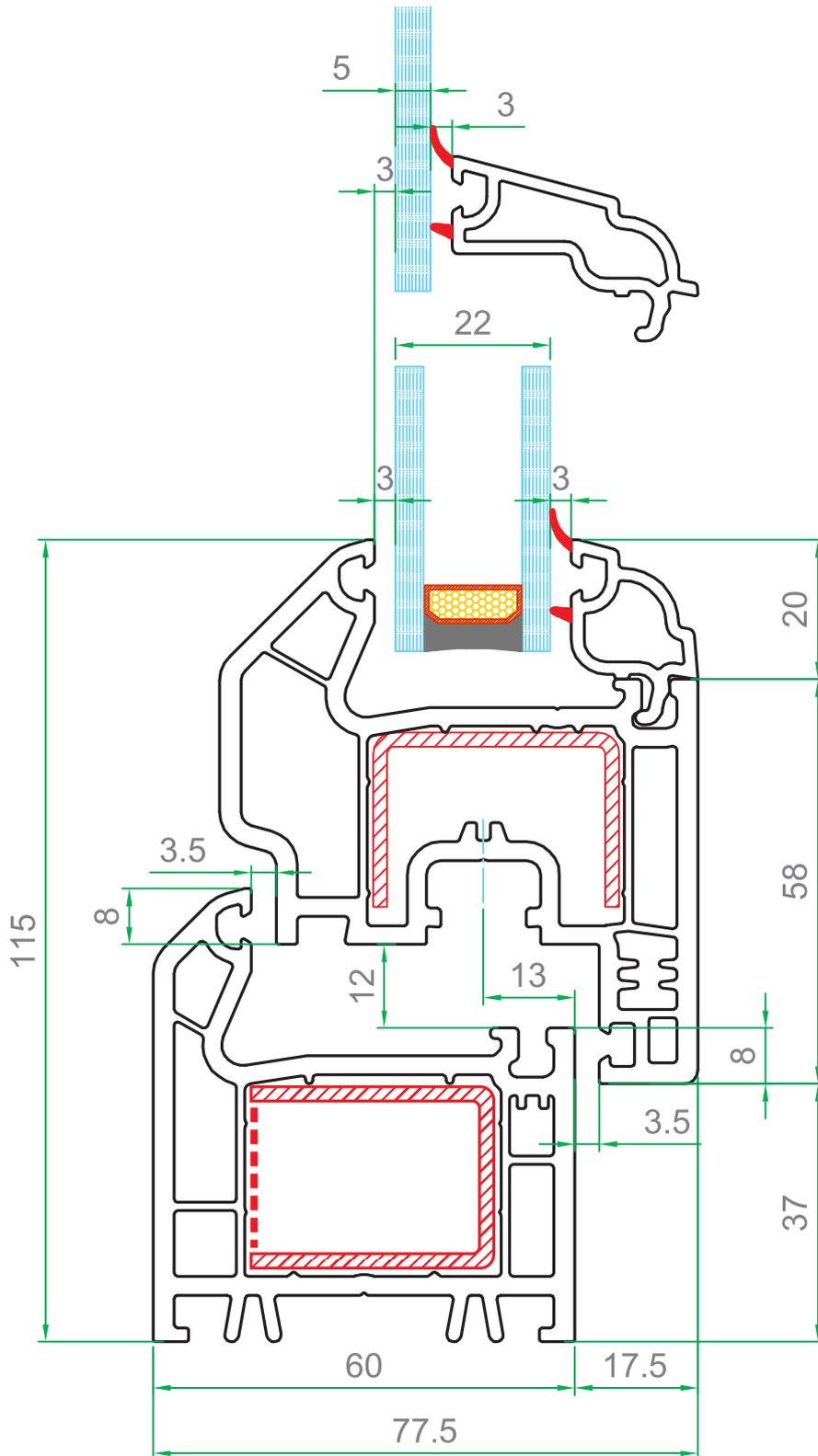
65 mm S-507.06
PVC 12.8 g/m



Sectional Drawing

mm S-507.07
PVC 12.8 g/m

mm S-507.06
PVC 12.8 g/m



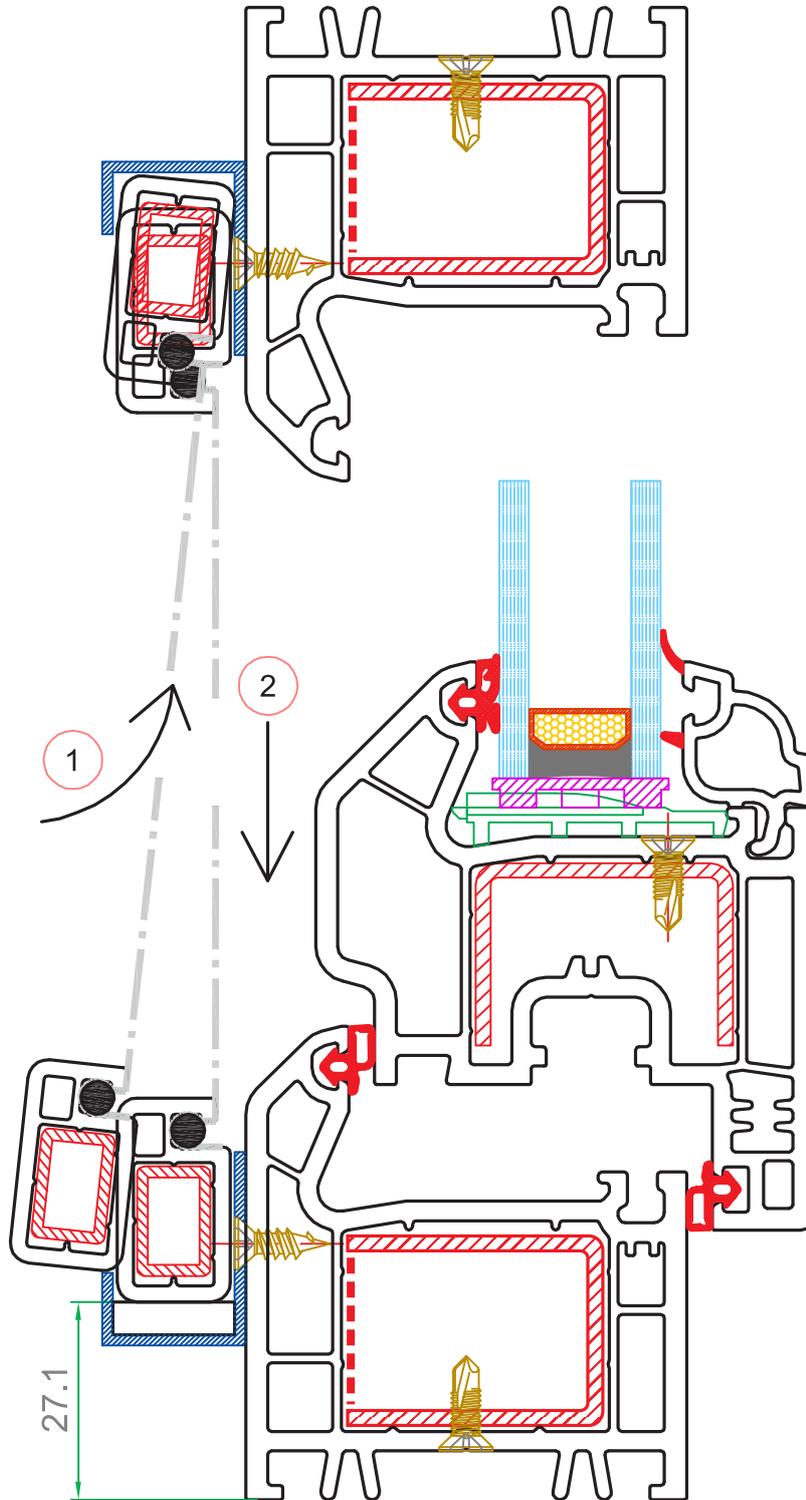
VISTA BEST®

Best of the Best

UPVC Profile Producer

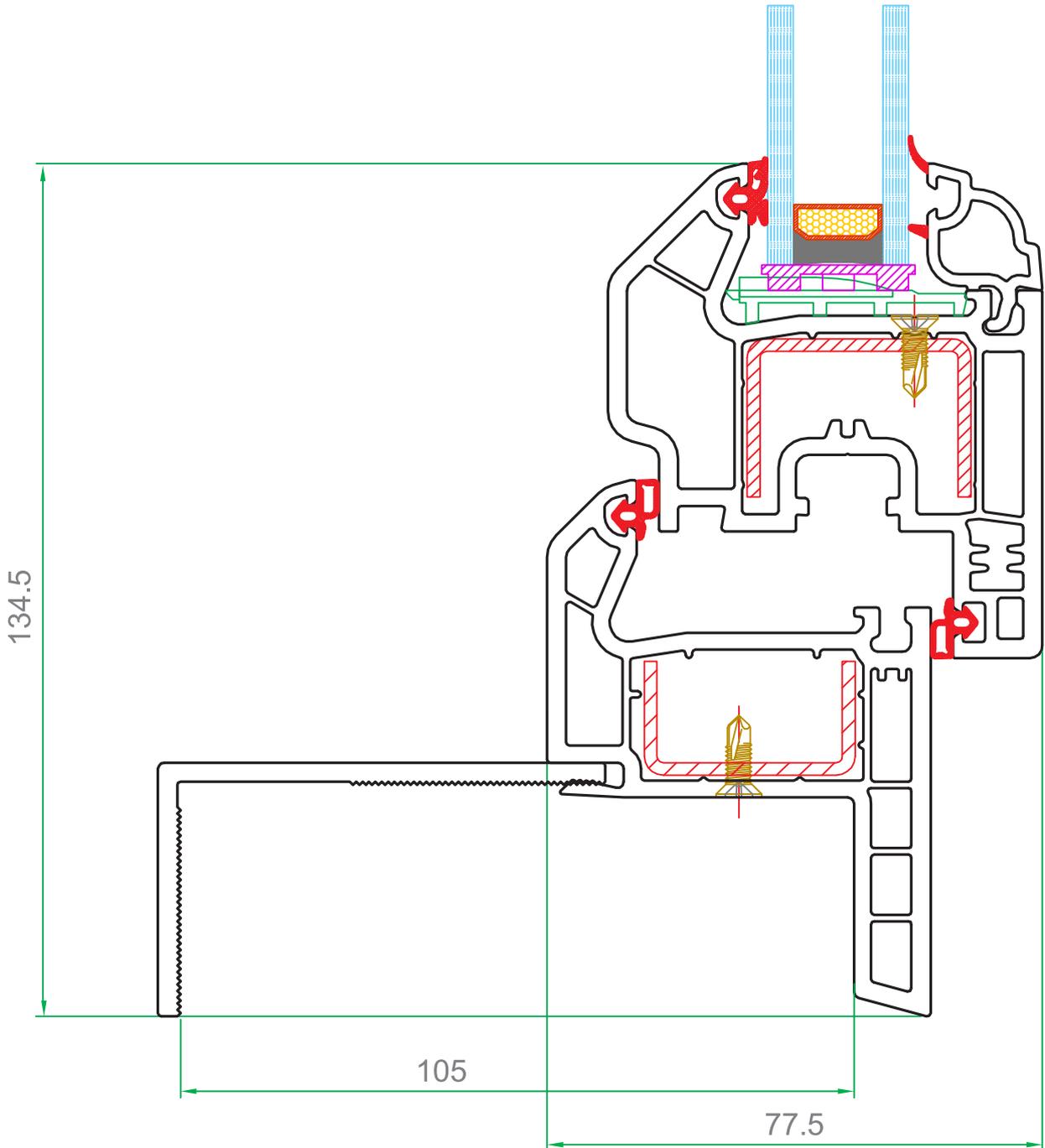
ash S-507.08
0.26 kg/m

Sectional Drawing



نام S-507.09
1.28 kg/m

زاویه S-507.12
0.49 kg/m



Sectional Drawing

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UPVC Profile Producer

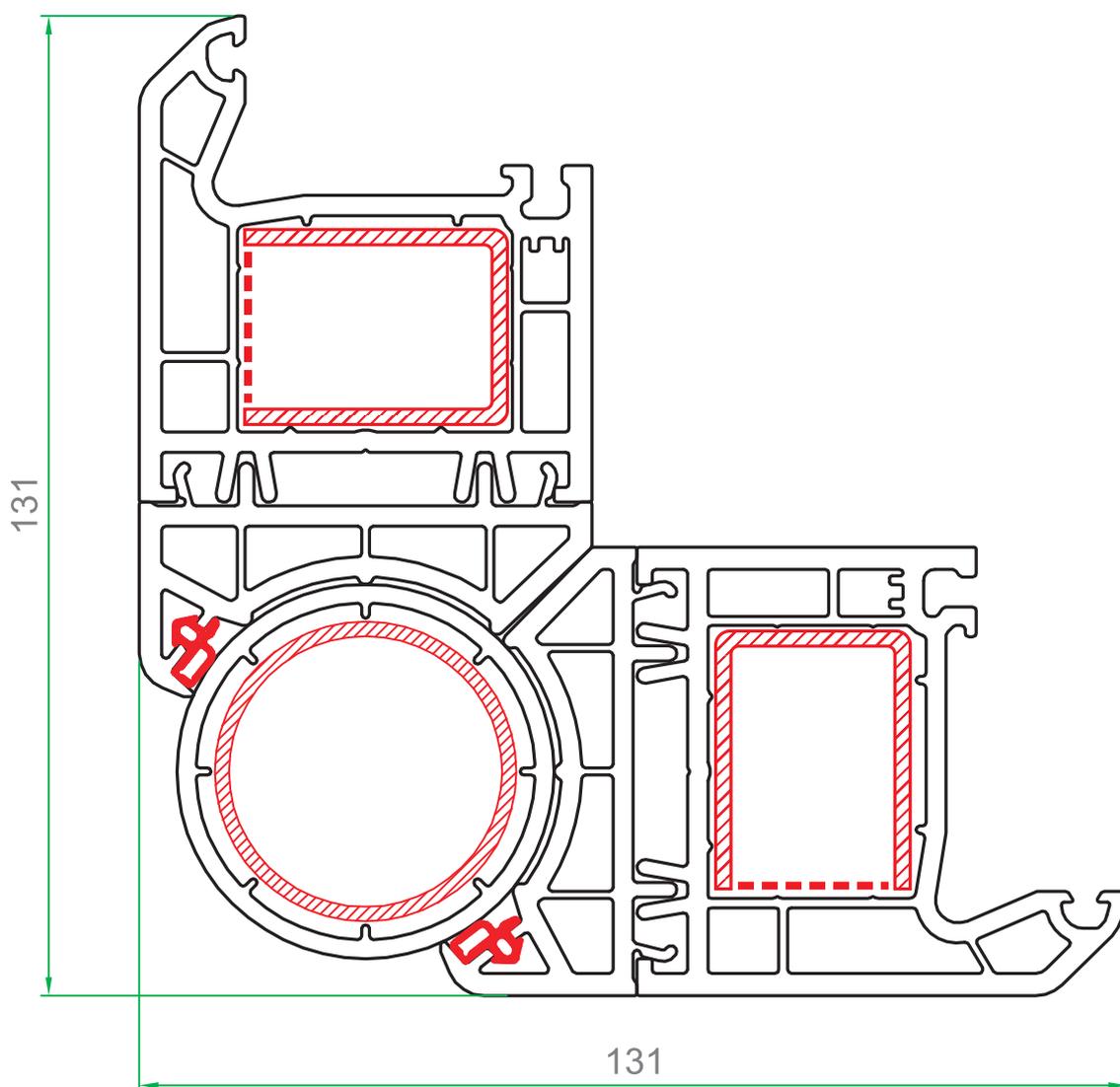
ptor S-507.10

0.71 kg/m

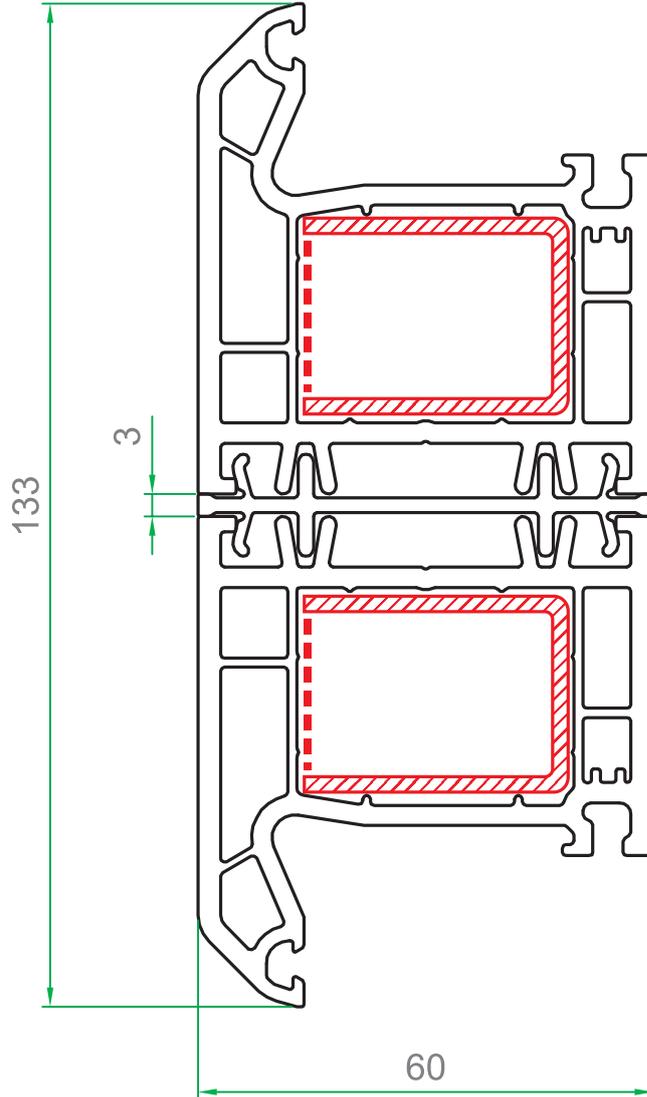
bole S-507.11

0.56 kg/m

Sectional Drawing



Profile S-507.13
0.29 kg/m



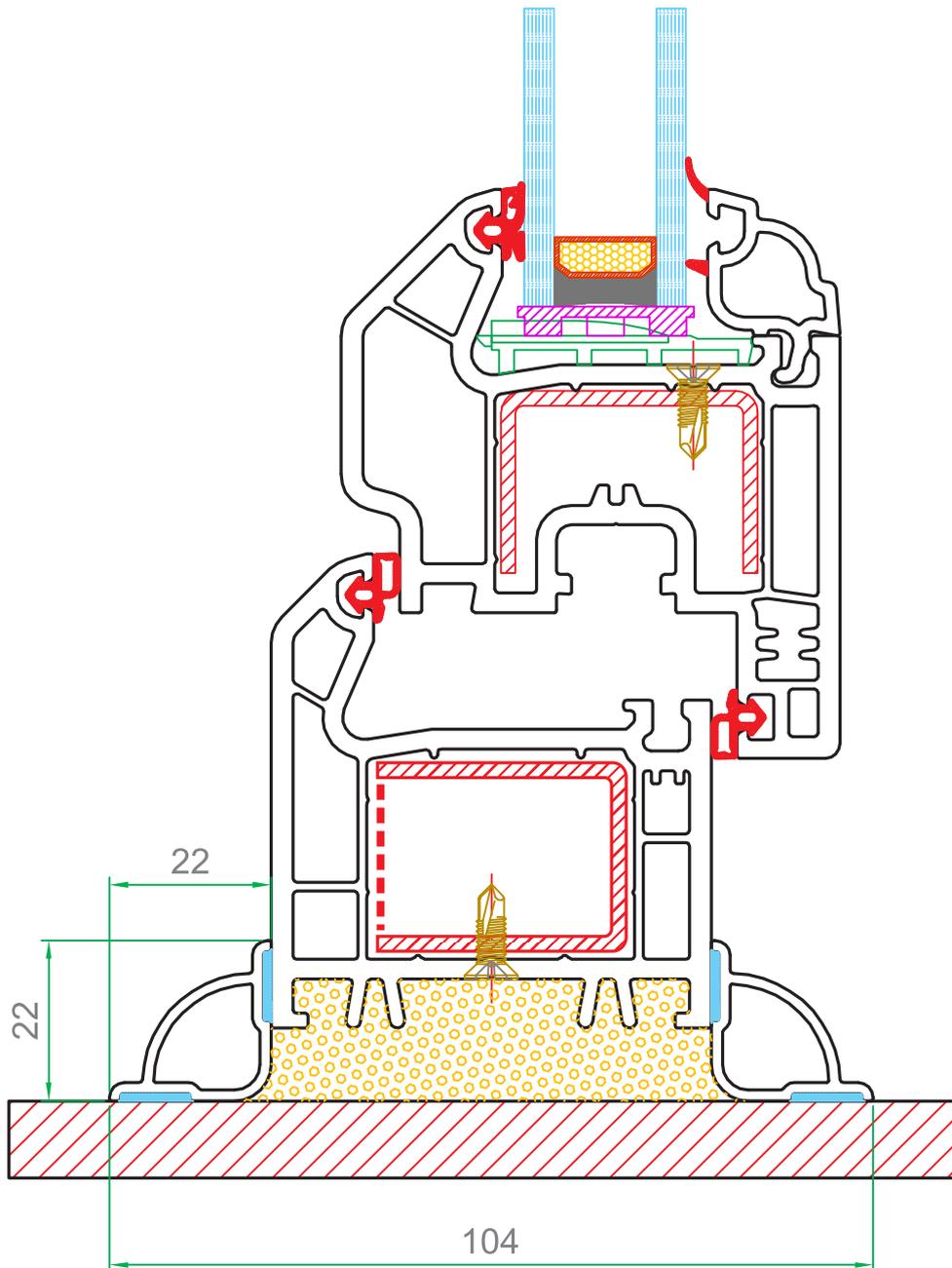
VISTA BEST®

Best of the Best

UPVC Profile Producer

over S-507.14
0.14 kg/m

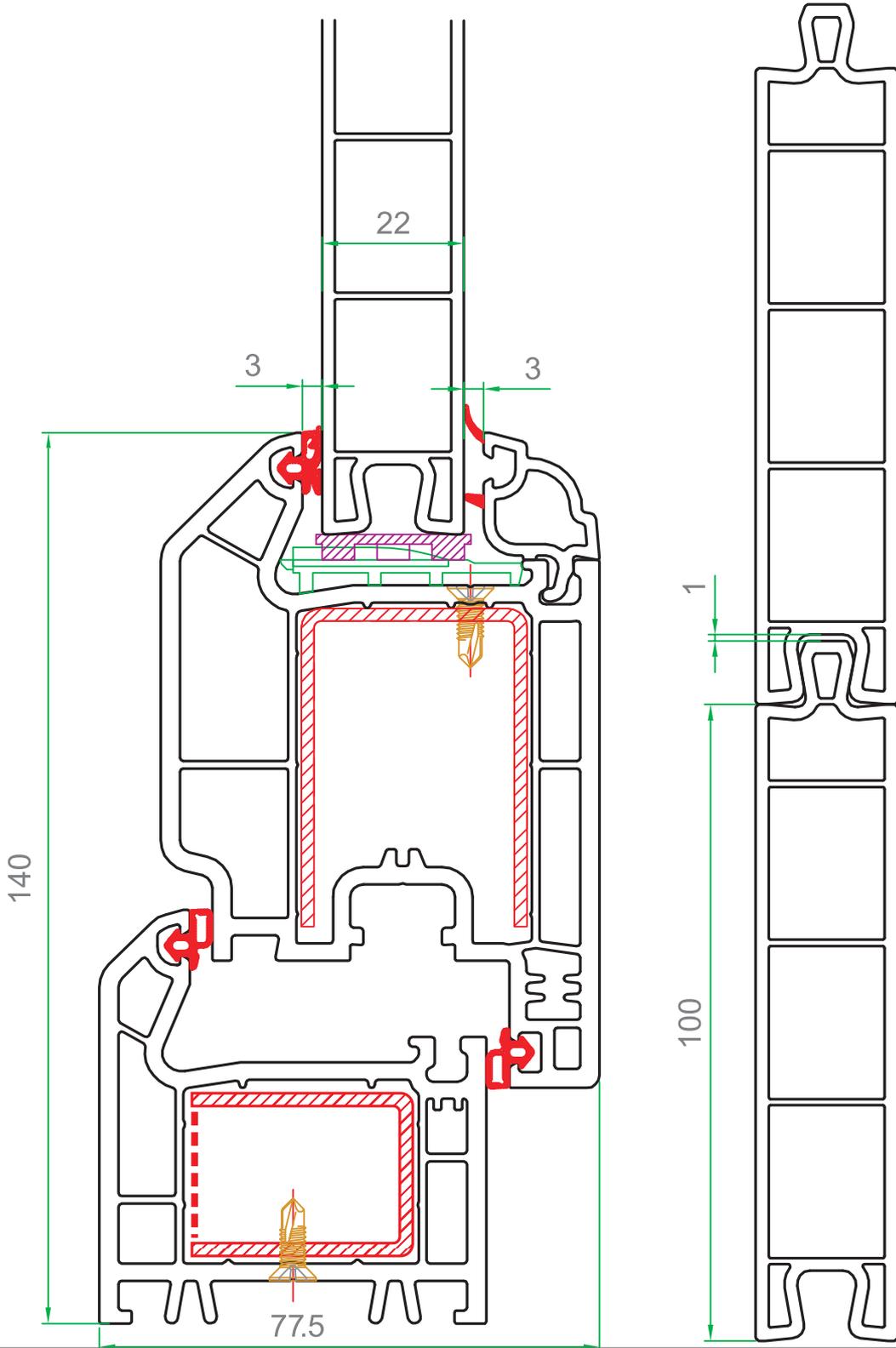
Sectional Drawing



ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

anel S-507.15
0.89 kg/m



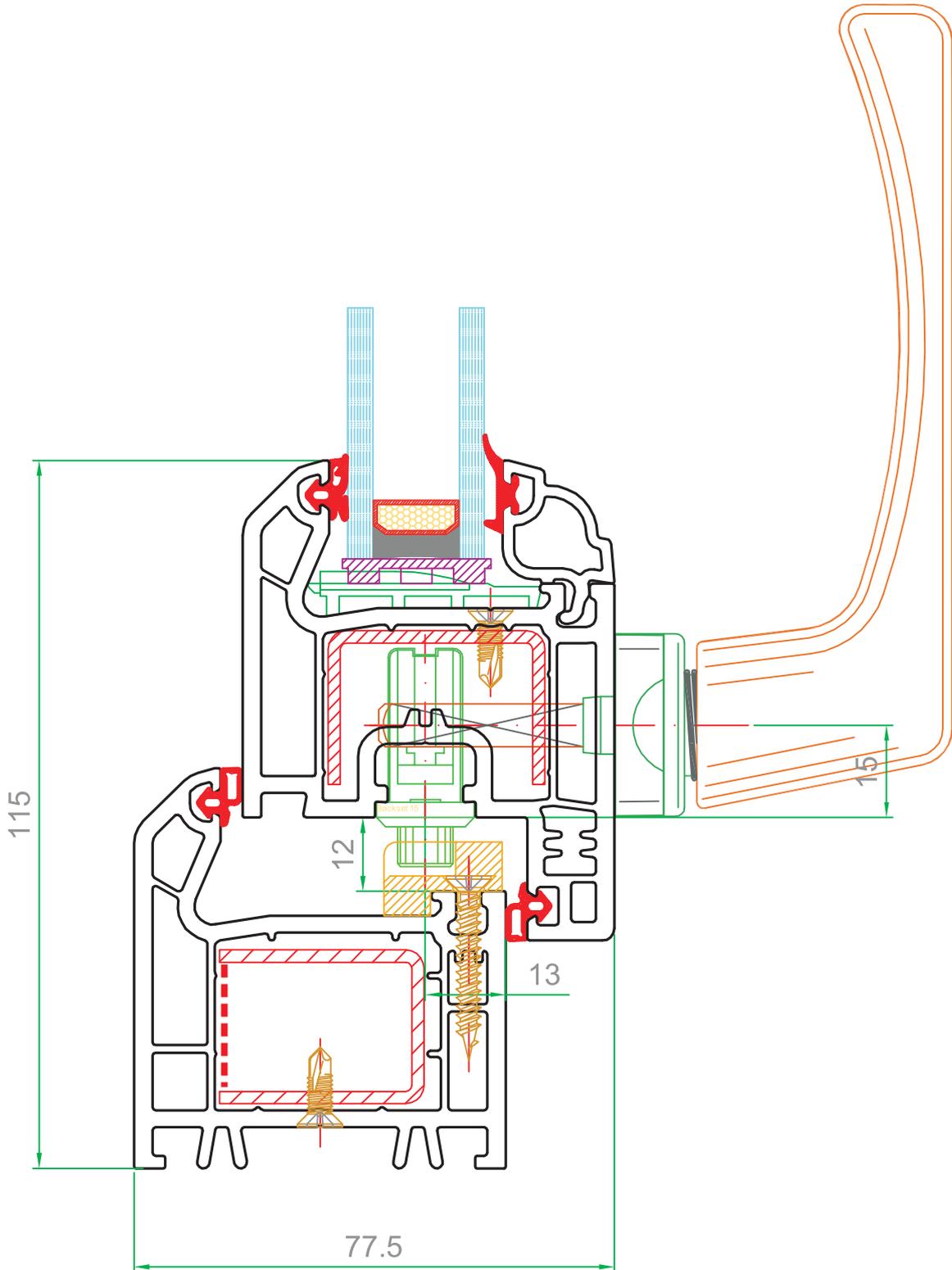
Sectional Drawing

ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

نام S-507.01
1.24 kg/m

نوع S-507.16
1.39 kg/m



Sectional Drawing

VISTA BEST®

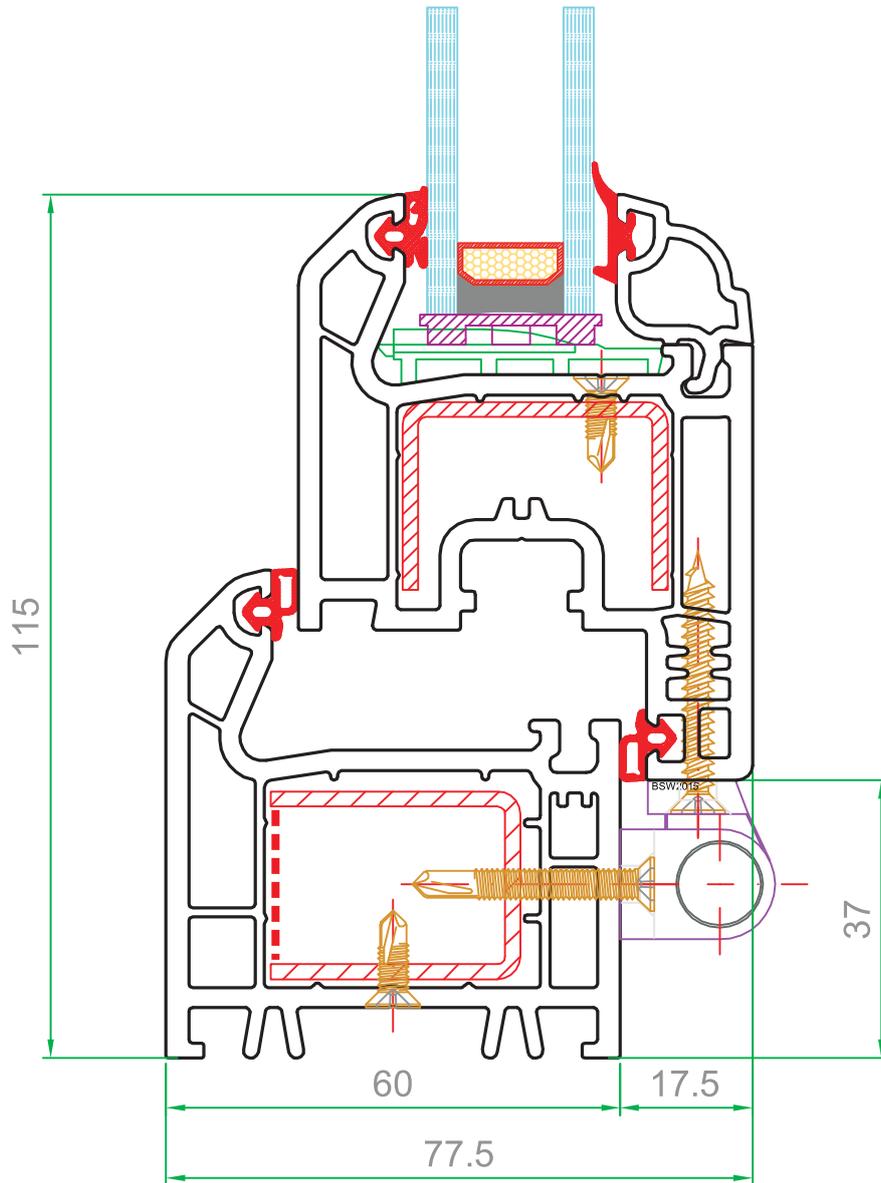
Best of the Best

UPVC Profile Producer

Frame S-507.01
1.24 kg/m

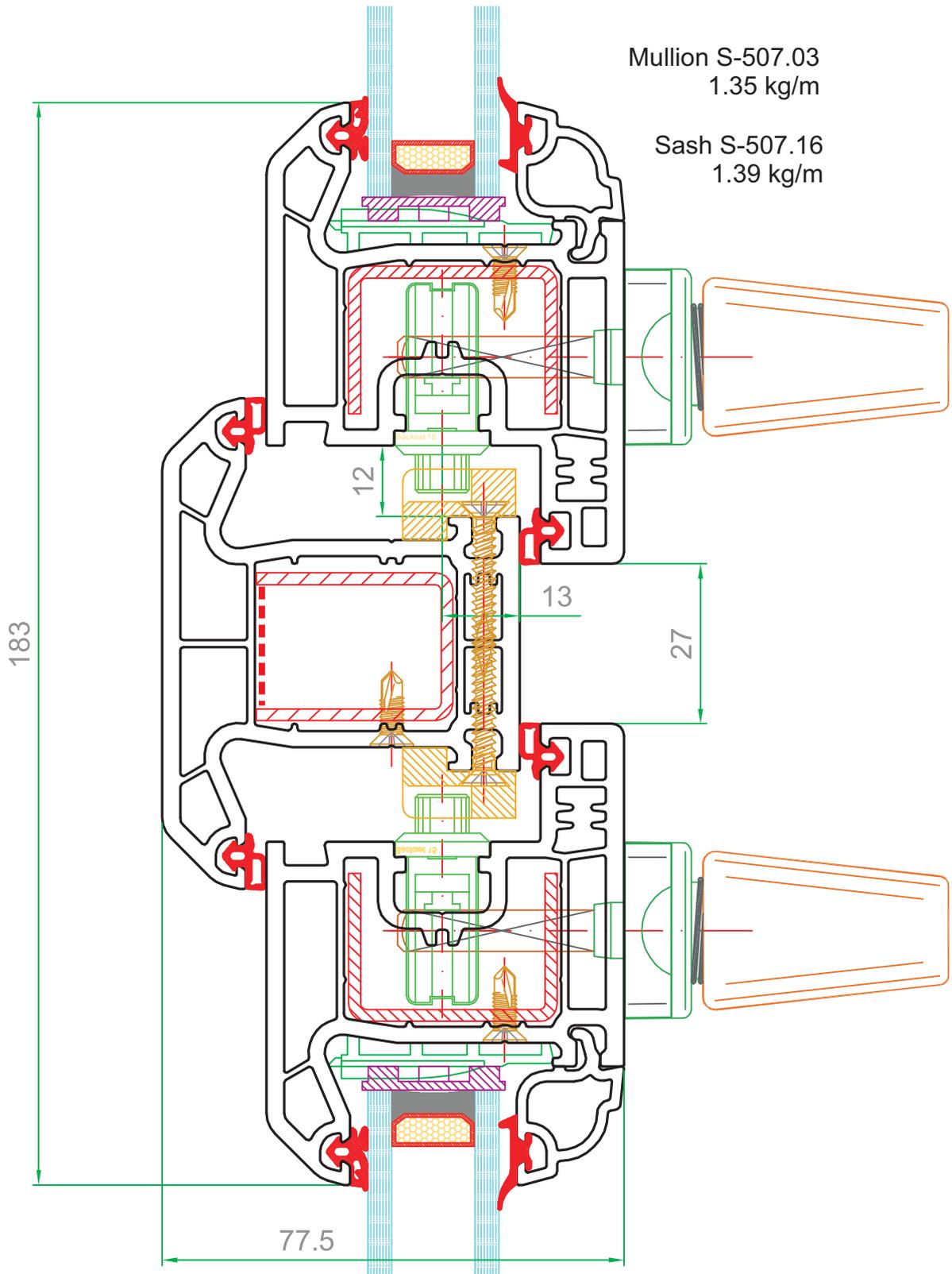
Glass S-507.16
1.39 kg/m

Sectional Drawing



ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

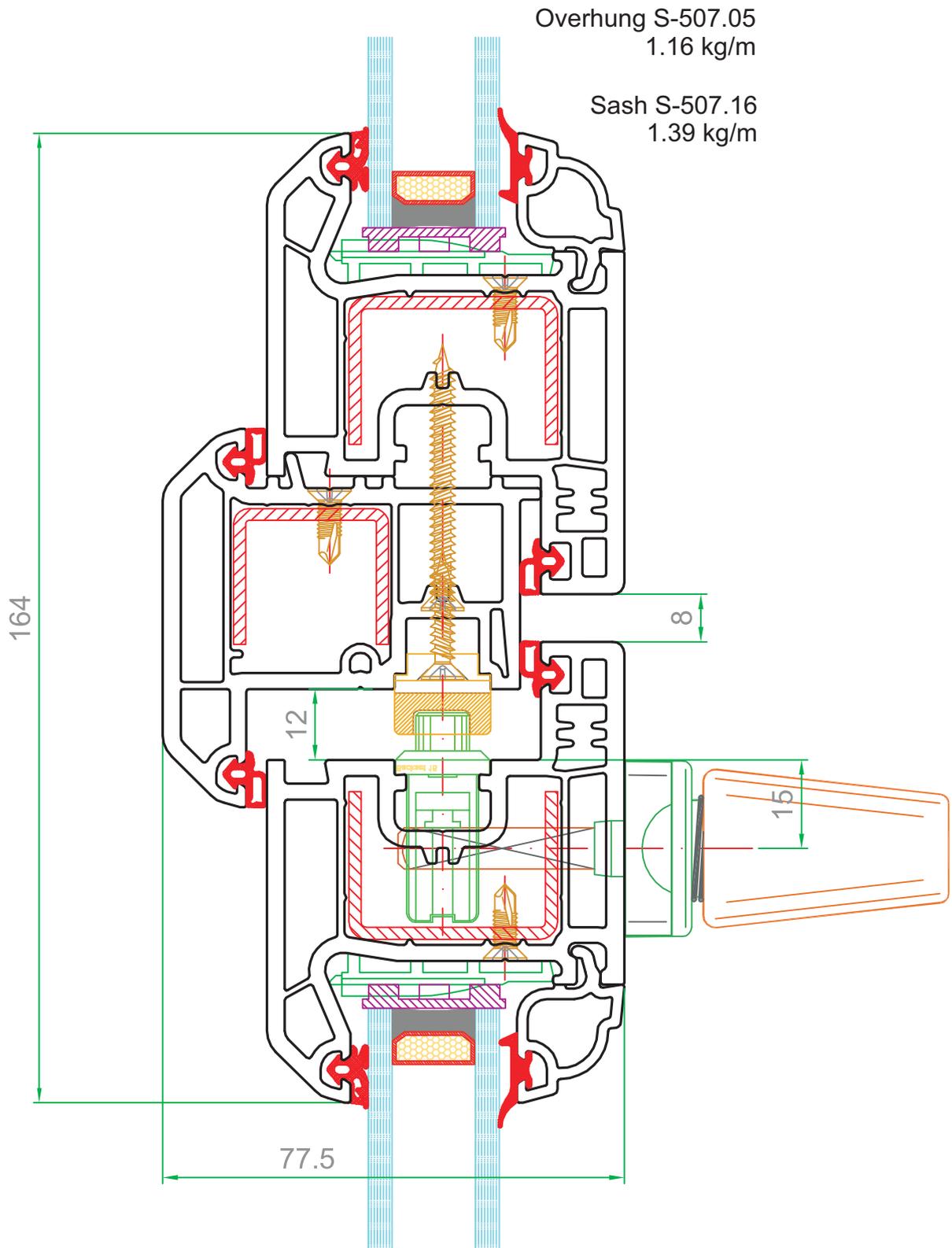


VISTA BEST®

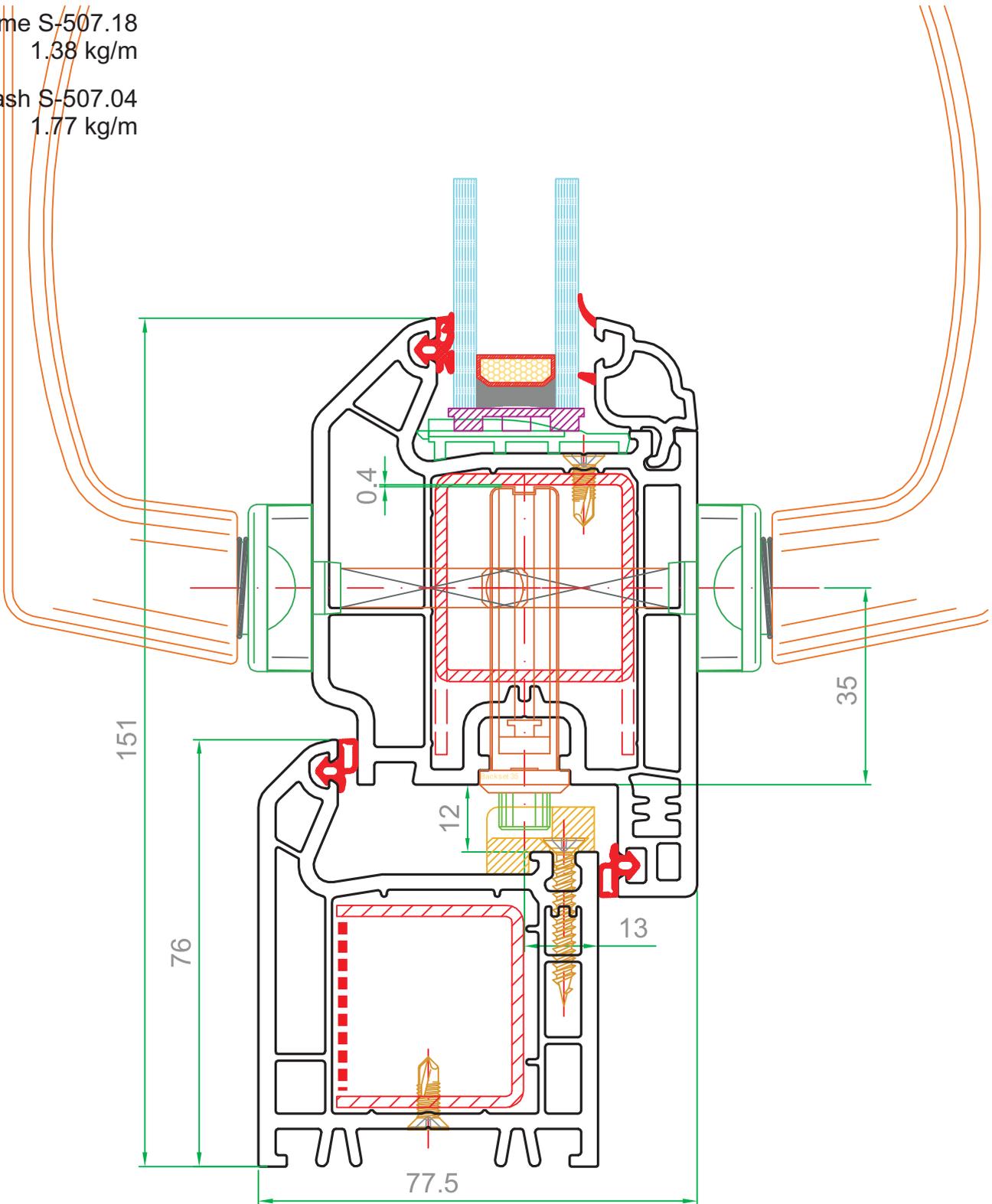
Best of the Best

UPVC Profile Producer

Sectional Drawing



Frame S-507.18
1.38 kg/m
Door sash S-507.04
1.77 kg/m



VISTA BEST®

Best of the Best

UPVC Profile Producer

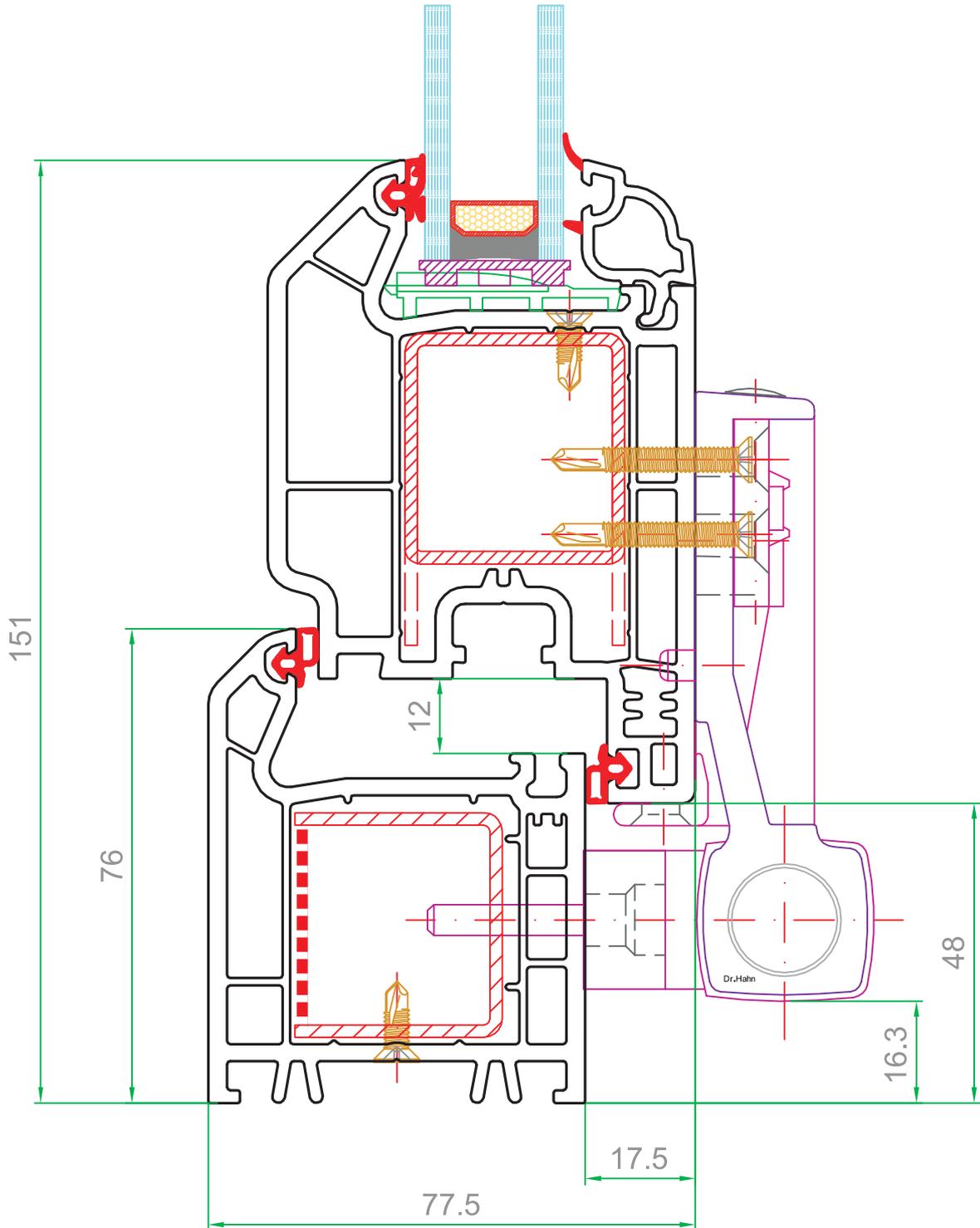
Frame S-507.18

1.38 kg/m

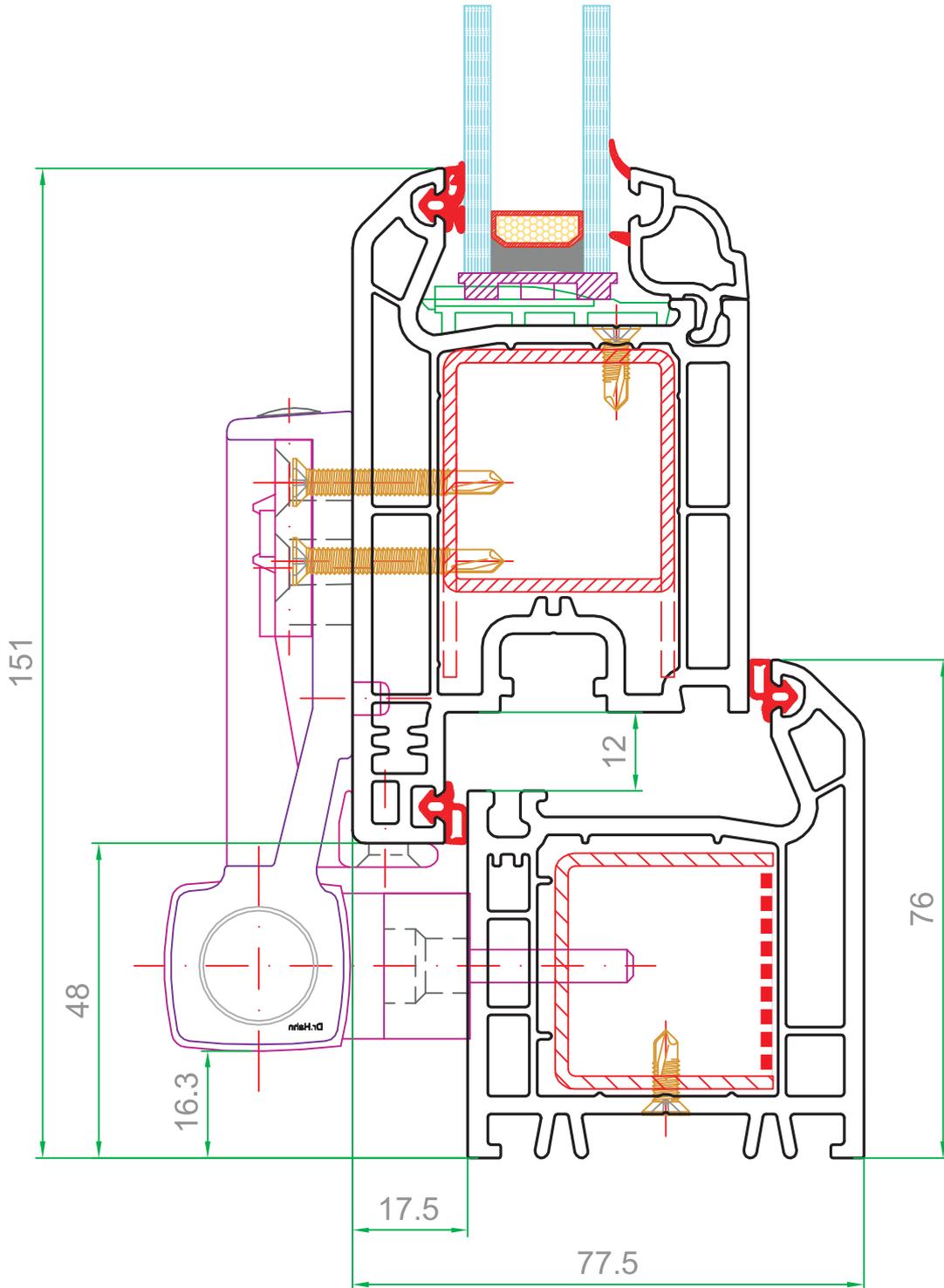
Glass S-507.04

1.77 kg/m

Sectional Drawing



نام S-507.18
1.38 kg/m
شماره S-507.17
1.72 kg/m

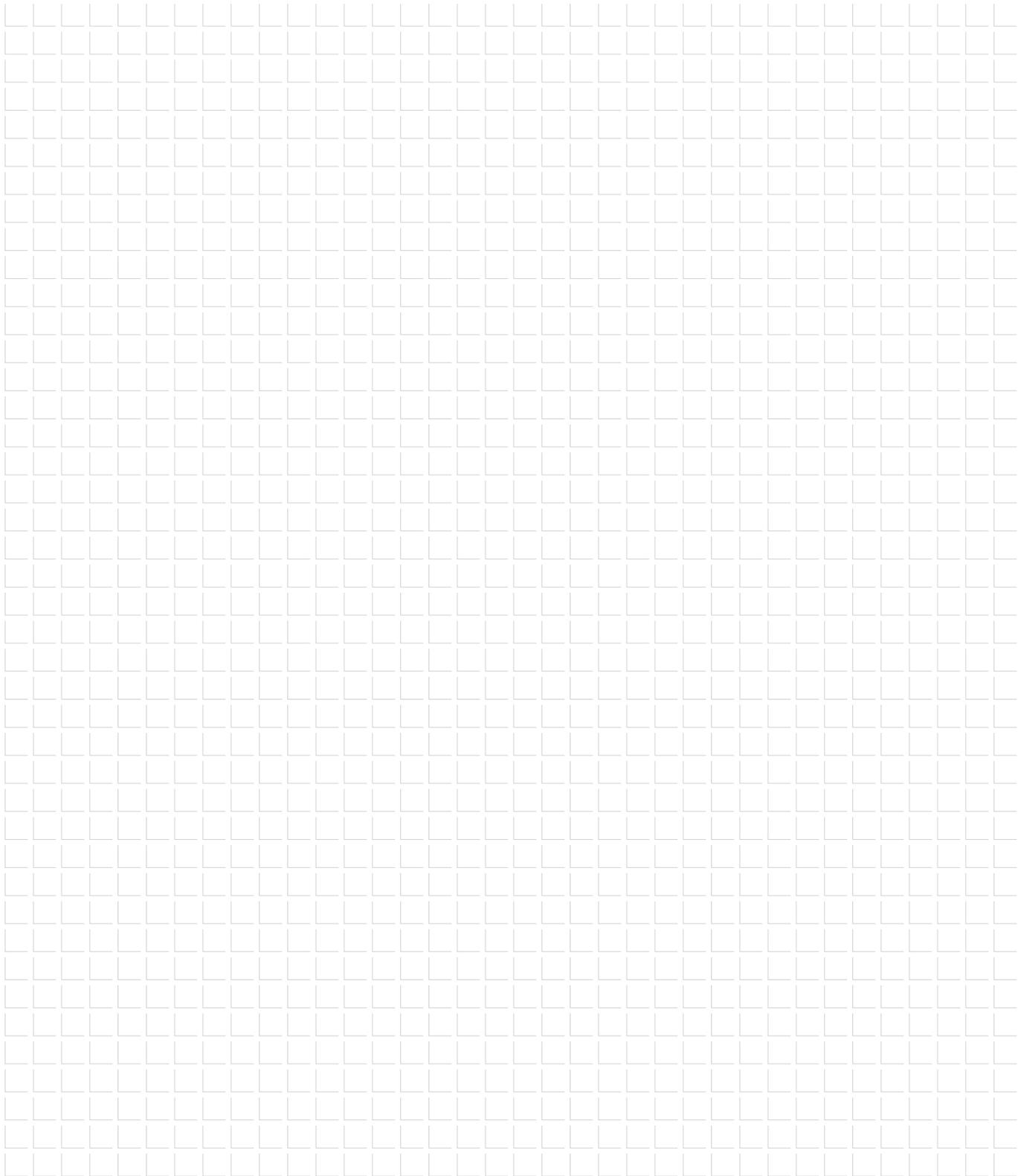


Sectional Drawing

VISTA BEST®

Best of the Best

UPVC Profile Producer



Dimension Limits

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

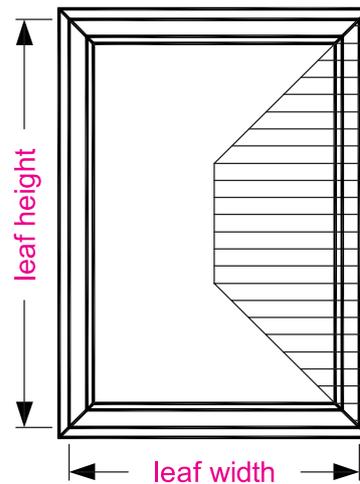
Profile label :

Sash S-507.02, Sash S-507.16

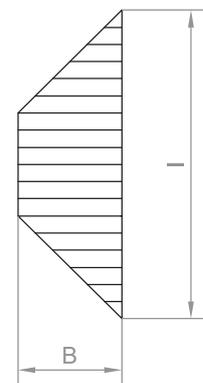
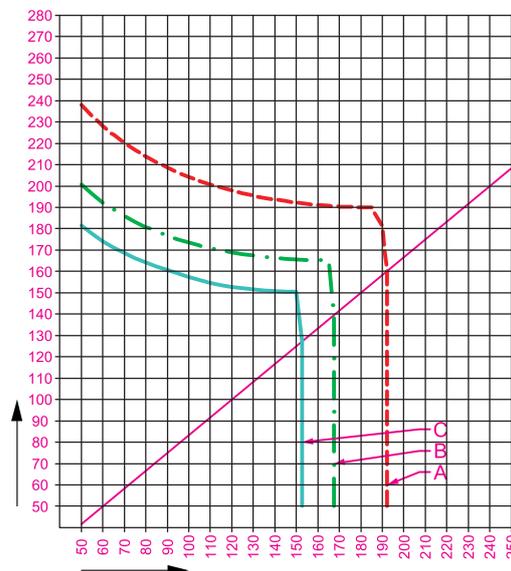
Manufacturing plant :

<p>A -----</p> <p>B -.-.-.-</p> <p>C _____</p>	<p>windload = 400 [Pa] (Wind speed = 91 km/h)</p> <p>windload = 800 [Pa] (Wind speed = 129 km/h)</p> <p>windload = 1200 [Pa] (Wind speed = 158 km/h)</p>
--	--

reinforce profile	S-507TRE01 - 1,5mm
moment of inertia Ix	0.78 [cm ⁴]
moment of inertia Iy	2.45 [cm ⁴]
thickness of reinforcement	1.5 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



height of window leaf in [cm]



B = load width
I = support width
(lookup in index)

width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

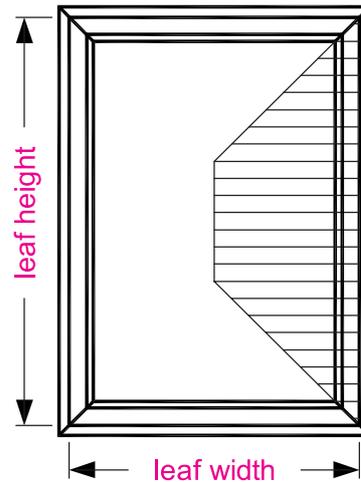
S-507 3-chamber T&T

Profile label :

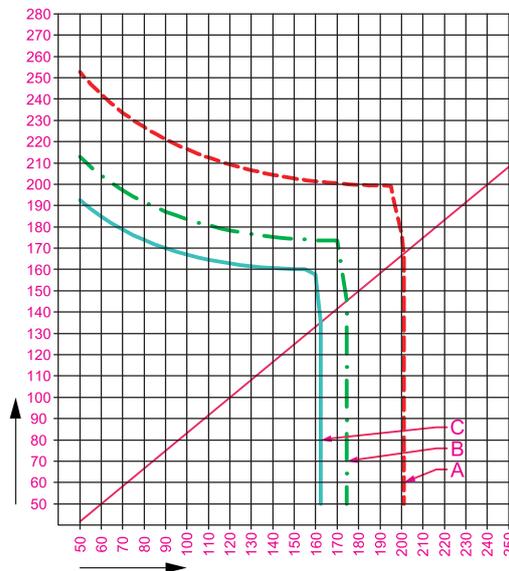
Sash S-507.02, Sash S-507.16

- A - - - - - windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - · - · - windload = 800 [Pa]
(Wind speed = 129 km/h)
- C — — — — — windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-507TRE01 - 2,0mm
 moment of inertia Ix 1.01 [cm⁴]
 moment of inertia Iy 3.12 [cm⁴]
 thickness of reinforcement 2.0 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]

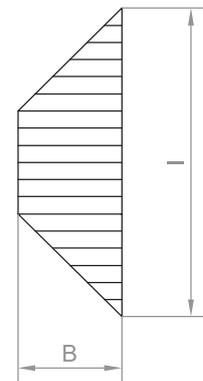


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
 I = supportwidth
 (lookup in index)

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

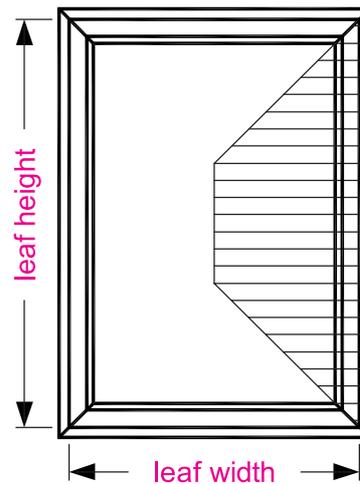
Profile label :

Sash S-507.02, Sash S-507.16

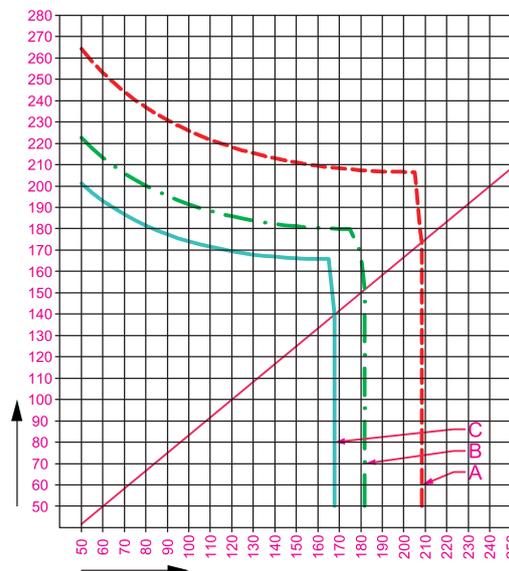
Manufacturing plant :

<p>A </p> <p>B </p> <p>C </p>	<p>windload = 400 [Pa] (Wind speed = 91 km/h)</p> <p>windload = 800 [Pa] (Wind speed = 129 km/h)</p> <p>windload = 1200 [Pa] (Wind speed = 158 km/h)</p>
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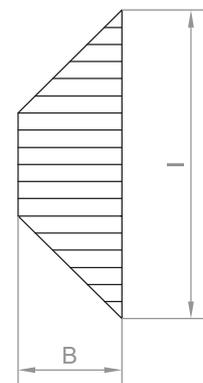
reinforce profile	S-507TRE01 - 2,5mm
moment of inertia Ix	1.22 [cm ⁴]
moment of inertia Iy	3.73 [cm ⁴]
thickness of reinforcement	2.5 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
I = supportwidth
(lookup in index)

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

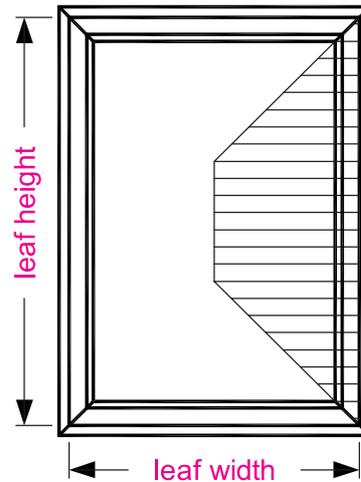
Profile label :

Sash S-507.02, Sash S-507.16

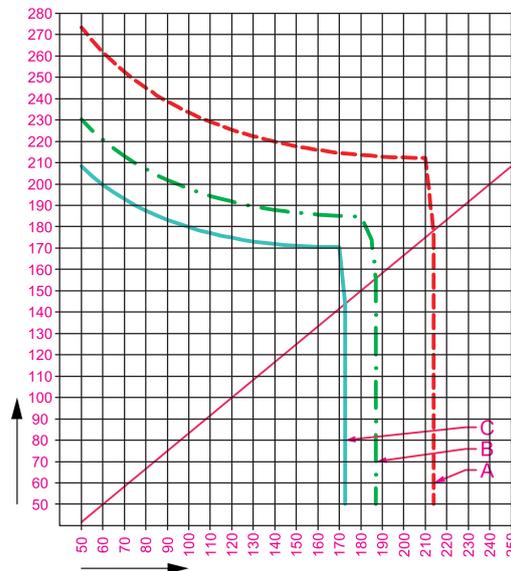
Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-507TRE01 - 3,0mm
moment of inertia Ix	1.41 [cm ⁴]
moment of inertia Iy	4.28 [cm ⁴]
thickness of reinforcement	3.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

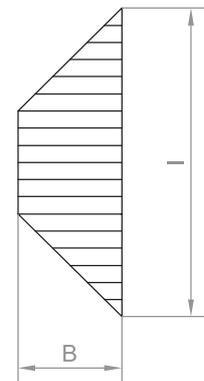


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
I = supportwidth
(lookup in index)

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

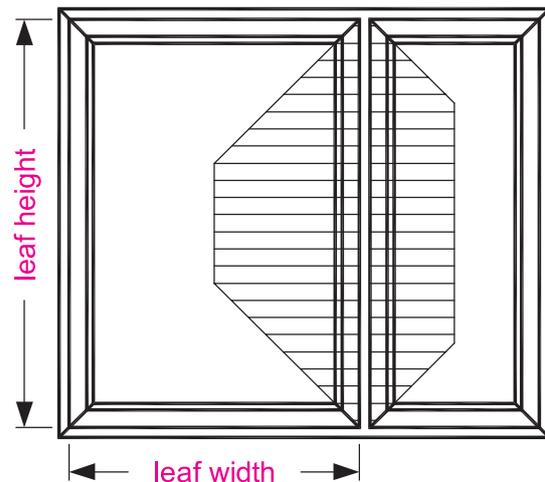
Profile label :

Mullion S-507.03

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B -.-.-.- windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ———— windload = 1200 [Pa]
(Wind speed = 158 km/h)

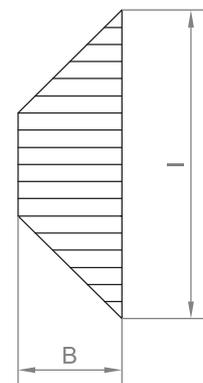
reinforce profile S-507TRE01 - 1,5mm
 moment of inertia Ix 0.78 [cm⁴]
 moment of inertia Iy 2.45 [cm⁴]
 thickness of reinforcement 1.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
 l = supportwidth
 (lookup in index)

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

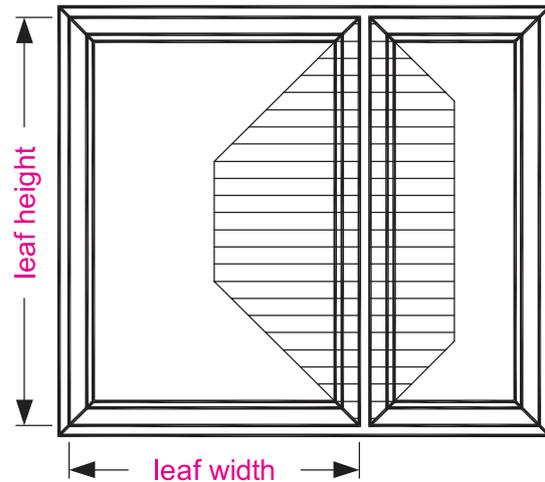
Profile label :

Mullion S-507.03

Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-507TRE01 - 2,0mm
moment of inertia Ix	1.01 [cm ⁴]
moment of inertia Iy	3.12 [cm ⁴]
thickness of reinforcement	2.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

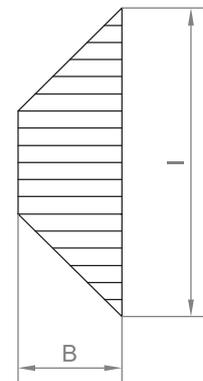


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
l = supportwidth
(lookup in index)

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

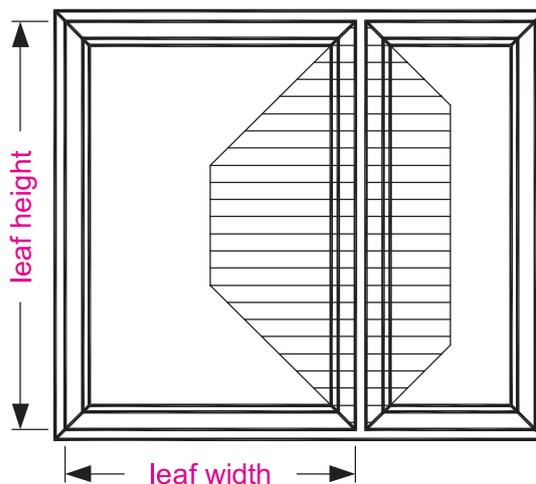
Profile label :

Mullion S-507.03

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - · - · - · - windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

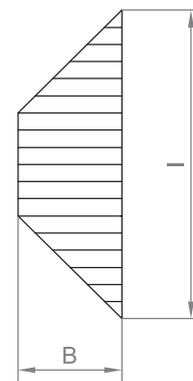
reinforce profile S-507TRE01 - 2,5mm
 moment of inertia Ix 1.22 [cm⁴]
 moment of inertia Iy 3.73 [cm⁴]
 thickness of reinforcement 2.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
 l = supportwidth
 (lookup in index)

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

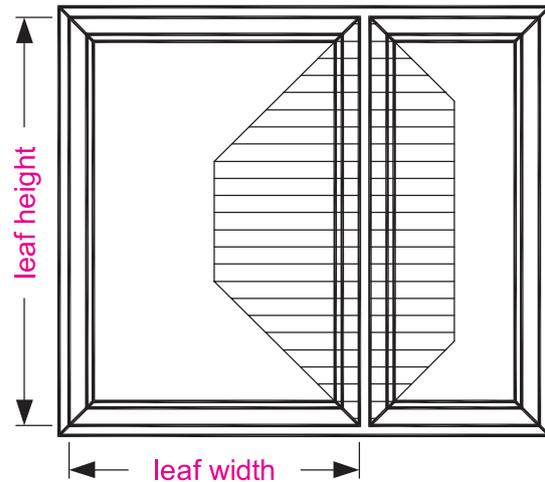
Profile label :

Mullion S-507.03

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B -.-.-.- windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ———— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-507TRE01 - 3,0mm
 moment of inertia Ix 1.41 [cm⁴]
 moment of inertia Iy 4.28 [cm⁴]
 thickness of reinforcement 3.0 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]

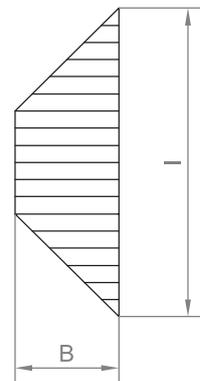


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
 l = supportwidth
 (lookup in index)

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

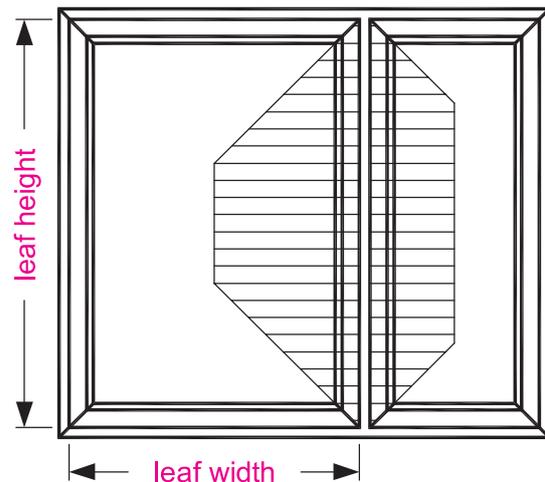
Profile label :

Mullion S-507.03

Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

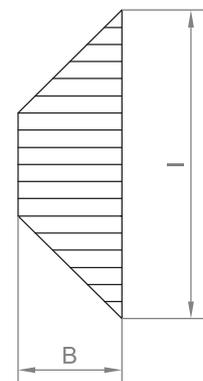
reinforce profile	S-507TRE10 - 1,5mm
moment of inertia Ix	1.65 [cm ⁴]
moment of inertia Iy	2.79 [cm ⁴]
thickness of reinforcement	1.5 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
l = supportwidth
(lookup in index)

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

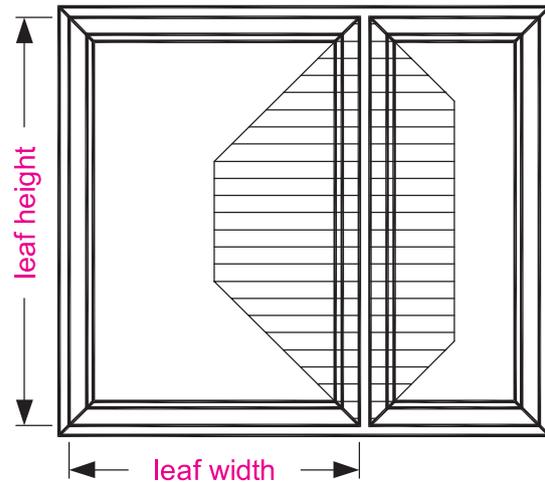
Profile label :

Mullion S-507.03

Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-507TRE10 - 2,0mm
moment of inertia Ix	2.07 [cm ⁴]
moment of inertia Iy	3.52 [cm ⁴]
thickness of reinforcement	2.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

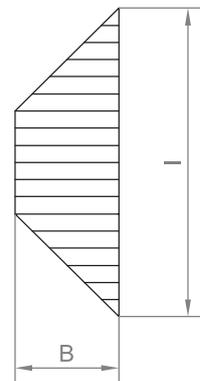


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
l = supportwidth
(lookup in index)

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

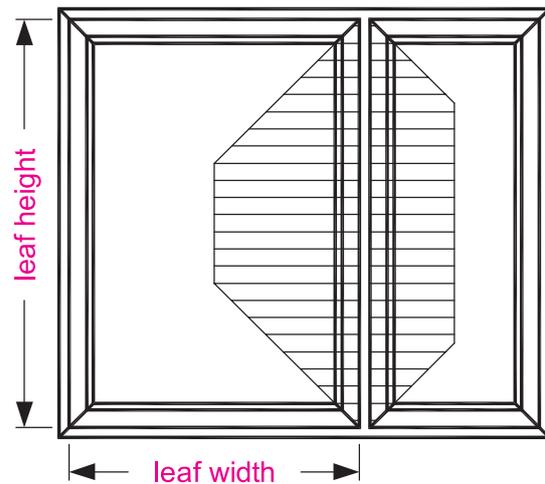
Profile label :

Mullion S-507.03

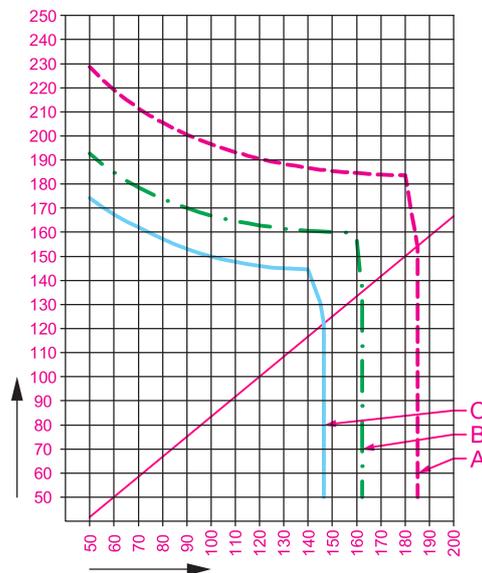
Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B -.-.-.- windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ———— windload = 1200 [Pa]
(Wind speed = 158 km/h)

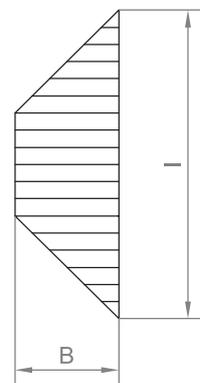
reinforce profile S-507TRE10 - 2,5mm
 moment of inertia Ix 2.42 [cm⁴]
 moment of inertia Iy 4.16 [cm⁴]
 thickness of reinforcement 2.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
 l = supportwidth
 (lookup in index)

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

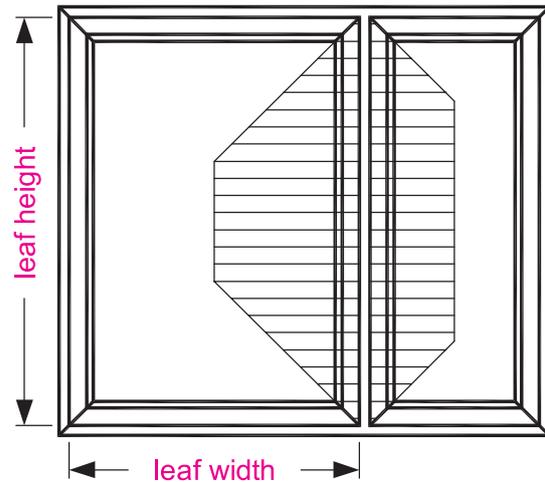
Profile label :

Mullion S-507.03

Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-507TRE10 - 3,0mm
moment of inertia Ix	2.72 [cm4]
moment of inertia Iy	4.71 [cm4]
thickness of reinforcement	3.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

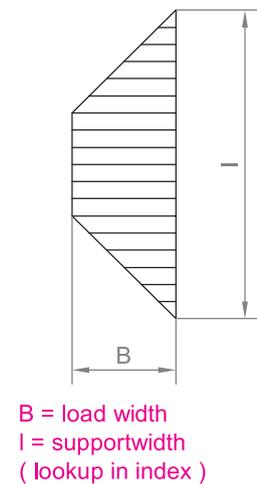


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

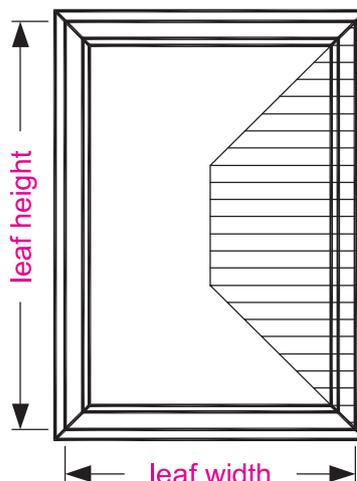
Profile label :

Door sash S-507.04, Door sash S-507.17

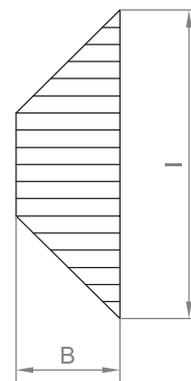
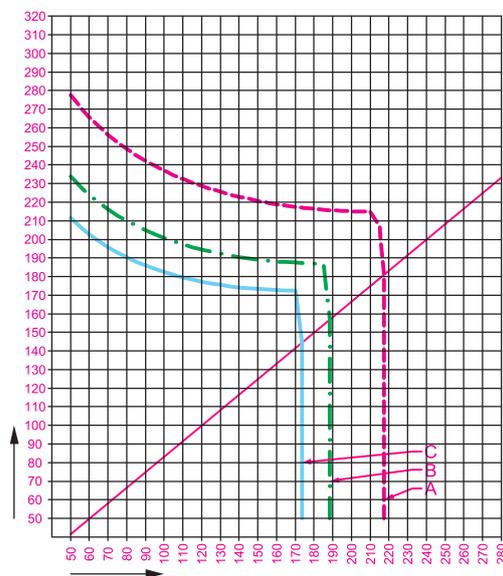
Manufacturing plant :

<p>A </p> <p>B </p> <p>C </p>	<p>windload = 400 [Pa] (Wind speed = 91 km/h)</p> <p>windload = 800 [Pa] (Wind speed = 129 km/h)</p> <p>windload = 1200 [Pa] (Wind speed = 158 km/h)</p>
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reinforce profile	S-507TRE04 - 1,5mm
moment of inertia Ix	5.18 [cm ⁴]
moment of inertia Iy	4.55 [cm ⁴]
thickness of reinforcement	1.5 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



height of window leaf in [cm]



B = load width
l = supportwidth
(lookup in index)

width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

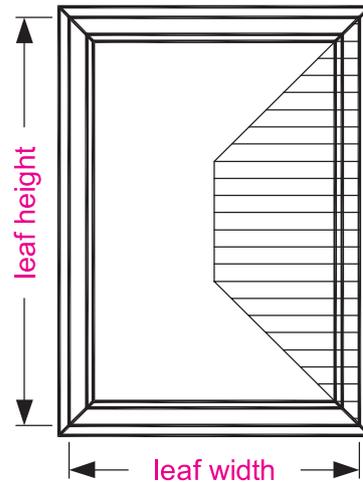
Profile label :

Door sash S-507.04, Door sash S-507.17

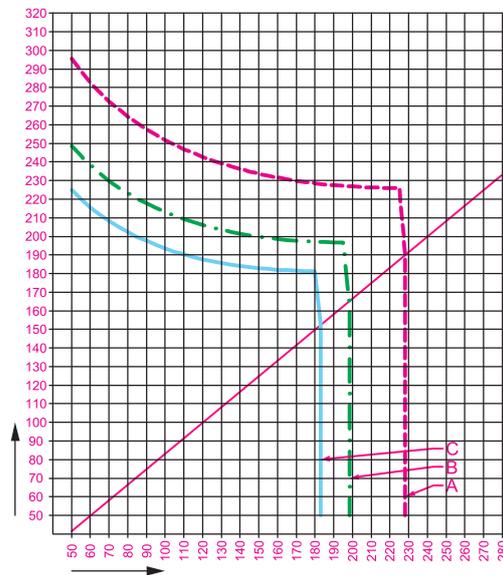
Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-507TRE04 - 2,0mm
moment of inertia Ix	6.77 [cm ⁴]
moment of inertia Iy	5.85 [cm ⁴]
thickness of reinforcement	2.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

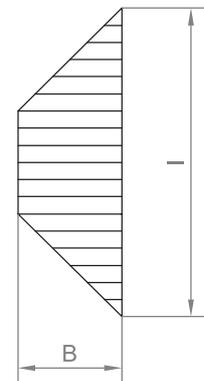


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
l = supportwidth
(lookup in index)

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

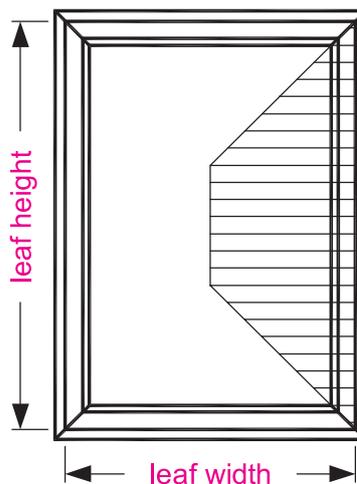
Profile label :

Door sash S-507.04, Door sash S-507.17

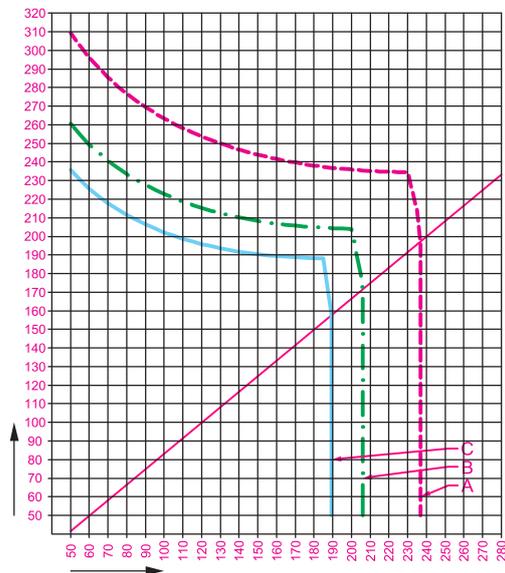
Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

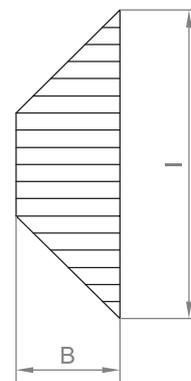
reinforce profile	S-507TRE04 - 2,5mm
moment of inertia Ix	8.29 [cm ⁴]
moment of inertia Iy	7.04 [cm ⁴]
thickness of reinforcement	2.5 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
l = supportwidth
(lookup in index)

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-507 3-chamber T&T

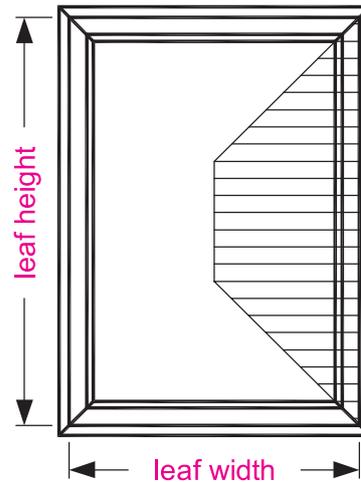
Profile label :

Door sash S-507.04, Door sash S-507.17

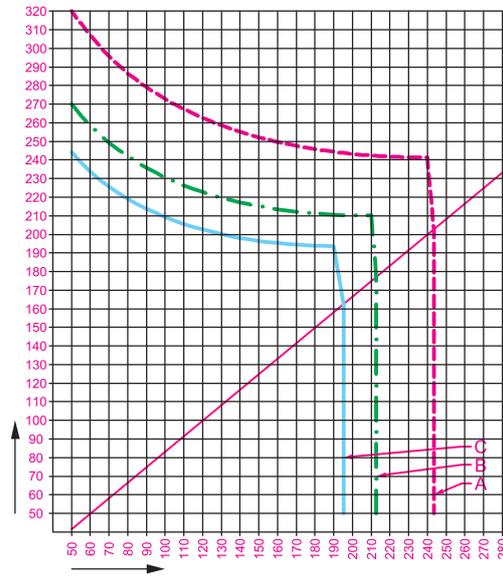
Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-507TRE04 - 3,0mm
moment of inertia Ix	9.75 [cm ⁴]
moment of inertia Iy	8.13 [cm ⁴]
thickness of reinforcement	3.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

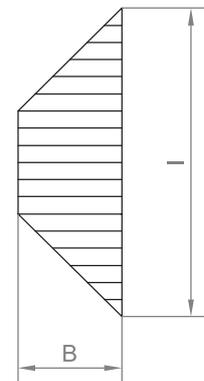


height of window leaf in [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
l = supportwidth
(lookup in index)

CLASSIFICATION OF WIND LOAD (DIN EN 12210) :

Class	P1 [Pa]	P2 [Pa] ^{a)} = 0,5xP1	P3 [Pa] = 1,5xP1
0	NOT TESTED		
1	400	200	600
2	800	400	1200
3	1200	600	1800
4	1600	800	2400
5	2000	1000	3000
E xxx ^{b)}	xxx		

This pressure having been repeated 50 times

Specimen tested with wind loading above class 5, classified Exxx - where xxx is the actual test pressure P1 (e.g. 2350 etc.)

(Table 1)

Classification shall be according to the results of wind resistance tests to positive and negative test pressures.

This classification can be used with other relevant standards or codes of practice and can thus be used to provide correlation with actual exposure requirements.

CLASSIFICATION OF RELATIVE FRONTAL DEFLECTION (DIN EN 12210):

Class	Relative frontal deflection
A	< 1/150
B	< 1/200
C	< 1/300

(Table 2)

The relative frontal deflection of the most deforming framing member of the specimen measured at test pressure P1 shall be classified as in table 2.

CLASSIFICATION FOR RESISTANCE TO WIND LOAD (DIN EN 12210):

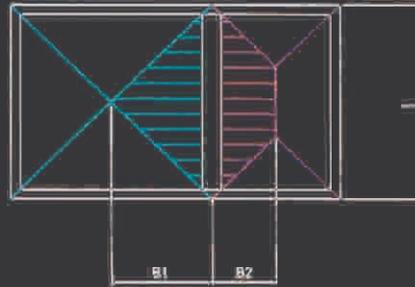
Wind loads and relative frontal deflection shall be combined into one overall classification as indicated in table 3.

Wind load class	Relative frontal deflection		
	A	B	C
1	A1	B1	C1
2	A2	B2	C2
3	A3	B3	C3
4	A4	B4	C4
5	A5	B5	C5
E xxx	AE xxx	BE xxx	CE xxx

NOTE: In the resistance to wind load classification the number refers to the wind load class, see table 1 and the letter to the relative frontal deflection, see table 2.

(Table 3)

WIND LOAD FORMULA



Calculation of the essential moment of inertia I_{eff} :

To calculate the load width B of the triangle- or trapezium load, the shorter side of the element field has to be halved.

In case of mullions and element connections you have to see to it that each of them get a load share of both of the adjoining element fields.

$$I_{eff} = \frac{W I^4 B}{1920 E f} \left[25 - 40 \left(\frac{B}{I} \right)^2 + 16 \left(\frac{B}{I} \right)^4 \right] \text{ cm}^4$$

- W = Wind load
- I = Support width (Profile length)
- B = Load width
- E = elastic modulus (for steel = 210.000 N/mm²)
- f = max. deflection
 $f = l/200$; max. 8 mm, double glazing
 $f = l/175$; single glazing
 dependent at glass producer / single- or double glass

E-Modules of elasticity:

Material	Elastic module [N/mm ²]
PVC-U	ca. 2.700
Timber	ca. 10.000
Aluminium	ca. 70.000
Steel	ca. 210.000

WIND SPEED

The pressure exerted by the wind on a wall component is assumed to be uniformly distributed across the surface of the product.

Its magnitude is dependent on such factors as the geographical location, shape and surrounding of the building as well as the height of the product above grade and its location within the wall.

The jurisdiction where the windows or doors will be installed should be contacted to determine the wind load requirements that have been adopted and are enforced.

W = Wind load

L = Linear force at long pane edge

f_{max} = safe deflection $f_{max} = \frac{L}{175}$ or $\frac{L}{200}$

dependent at glass producer / single- or double glass

p = density of air (1,25 kg/m³)

v = wind speed

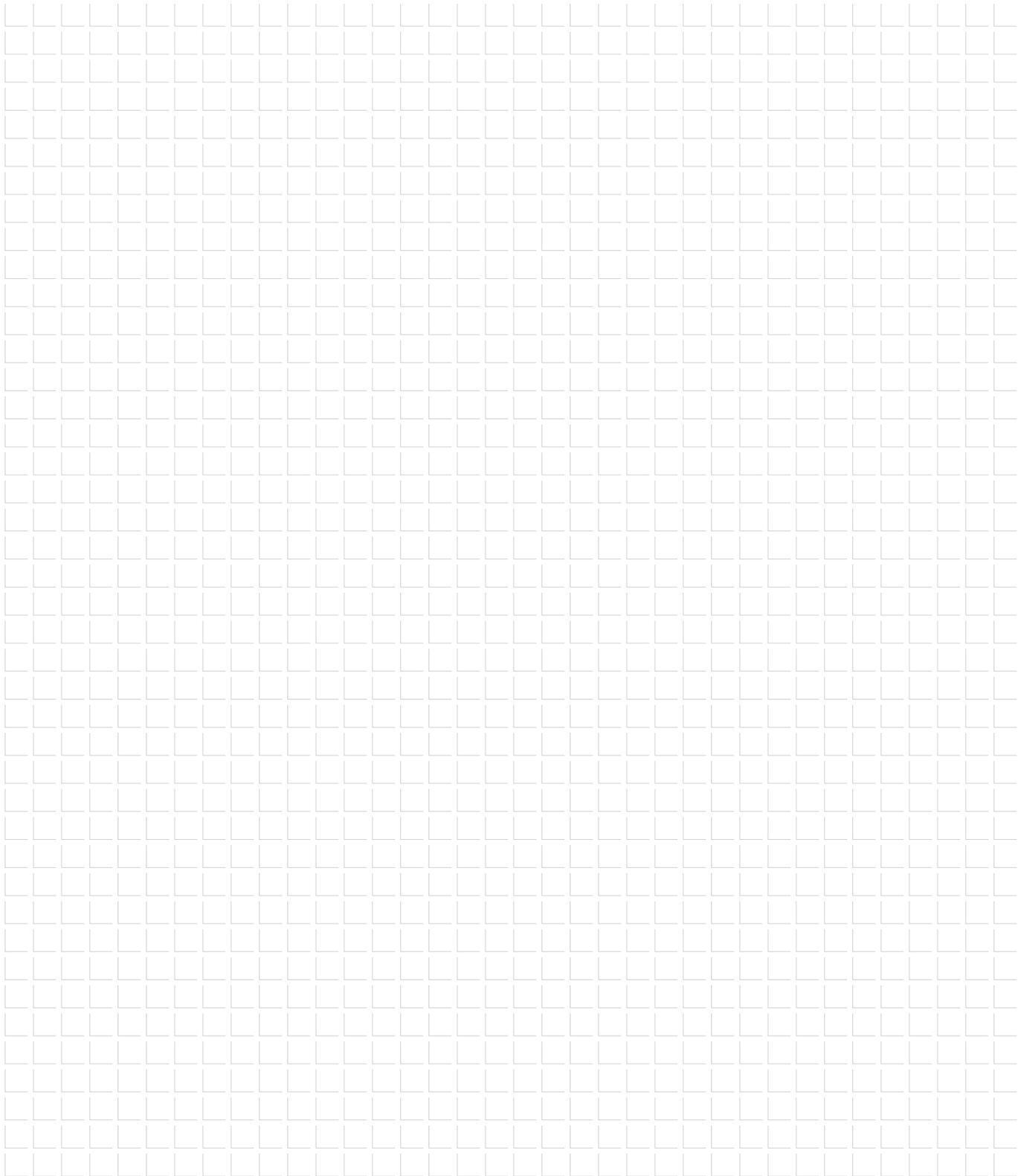
$$v = \sqrt{\frac{2 \times W}{p}} = \text{m / sec} \cong (\times 3,6) \approx \text{km / h}$$

Wind load W [Pa]	wind speed [m/s]	wind speed [km/h]
400	25,3	91
550	29,7	107
600	31	112
750	34,6	125
800	35,8	129
1000	40	144
1200	43,8	158
1500	49	176
1600	50,6	182
1800	53,6	193
2000	56,6	203
2400	62	223
2500	63,2	228
3000	69,3	249
3500	74,8	269

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Chemical & Mechanical

Mechanical Properties

Property	Test method	Unit	PVC-U
Elastic modulus E	DIN 53 457	N/mm ² (kg/cm ²)	2 500 (25 000)
Notched impact test ak at 23°C at 0°C	DIN 53 453	KJ/m ² (kpcm/cm ²)	35 8
Impact strength an at 23°C at 0°C at -20°C at -40°C	DIN 53 453	KJ/m ² (kpcm/cm ²)	without breakage without breakage without breakage without breakage
Ball indentation hardness H 358/30	DIN 53 456	N/mm ² (kp/cm ²)	74 (740)
Tensile strength ss (yield stress**)	DIN 53 455	N/mm ² (kp/cm ²)	44 (440)
Tensile impact strength azn at 23°C at 0°C	DIN 53 488	KJ/m ² (kpcm/cm ²)	700 400
Flexural strength sbB (8 mm deflection)	DIN 53 452 Standard test piece	N/mm ² (kp/cm ²)	70 700
Heat resistance according Vicat VST/B50 according ISO 75 FISO/A	DIN 53 460 DIN 53 461	°C °C	82 72
Coefficient of linear expansion a (-30°C, +30°C)	IN 53 752	1/k (1/grad)	7,0 · 10 ⁻⁵
Thermal conductivity l	DIN 52 612 Sheet 1	W/(m · k) [kcal/(m · h · grad)]	0,20 (0,17)
Density r	DIN 53 479	g/cm ³	1,44
Water absorption WA	DIN 53 495	%	0,04

* The properties were determined at press plates according DIN 77 48 part 2 (June 1979)

** In case of U-PVC tensile force and yield stress are identical

Chemical Properties

Substance	Concentration %	Temperature °C	Resistance of PVC-U
Formic acid	100	20	+
Ammonia, liquid	100	20	0
Ammonia, gaseous	100	60	+
Aniline, pure	100	20	-
Exhaust gas			
carbon monoxide containing	any	60	+
carbon dioxide containing	any	60	+
hydrochloric acid containing	any	60	+
sulphur trioxide containing	any	20	0
Aluminum salt, aqueous	any	60	+
Benzine (aliphatic Carbon hydride)	100	60	+
Benzene	100	20	-
Beer	any	60	+
Butanol (Butyl alcohol)	100	40	+
Benzine-Benzene-mixture	80/20	20	-
Brandy	any	20	+
1,3-Butadiene, gaseous	100	60	+
Barium salt, aqueous	any	60	+
Chromic acid (Chromium-(V)-oxide), aqueous	50	20	+
Cyclohexane	100	20	+
Chlorobenzene	100	60	-
Chromic acid /Water/ Sulphuric acid (Chromic-sulphuric acid)	50/35/15	40	+
Hydrogen chloride	any	20	+
Chromium alum Chromium(III)-potassium sulfat	any	60	+
Dekalin	100	60	+
Manuring salts, aqueous	10	60	+
Diesel fuel	-	20	+
Acetic acid	95	20	+
Fatty acid soap (from C ₄)	100	60	+
Fruit juice	ready-to-use	60	+
Glycol, aqueous	ready-to-use	60	+
Haptane	100	60	+
Hexane	100	60	+
Isooctane	100	60	+

Chemical Properties

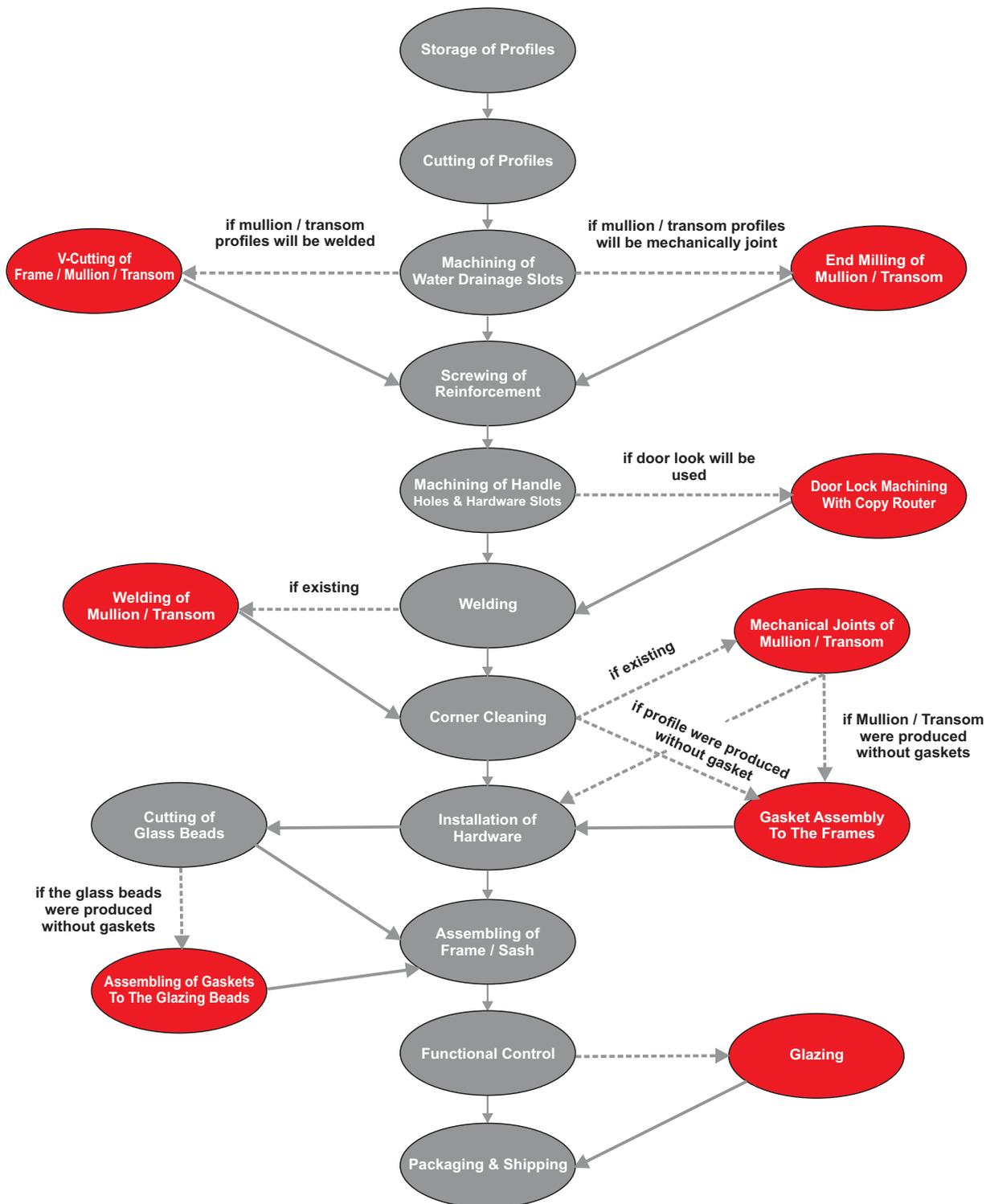
Substance	Concentration %	Temperature °C	Resistance of PVC-U
Nitrohydrochloric acid (HCL/HNO ₃)	75/25	20	o
Caustic potash solution	60	60	+
Potassium permanganate	6	60	+
Potassium peroxodisulfide	aqueous	40	+
Common salt	saturated	60	+
Carbon monoxide, gaseous	100	60	+
Linseed oil	100	40	+
Liqueur	ready-to-use	20	+
Mineral oils, free from aromatics	-	60	+
Methanol	100	40	+
Caustic soda solution, aqueous	60	60	+
Nitroglycerine	diluted	20	o
Sodium chlorate	10	60	+
Oils and greases animal and vegetable	-	60	+
Oxalic acid, aqueous	saturated	60	+
Phosphoric acid, aqueous	85	60	+
Hydrochloric acid	up to 37	60	+
Sulphuric acid	80	60	+
Seawater	-	40	+
Toluene	100	20	-
Trilone	commercial	60	o
Hydrogen	100	60	+
Wine	-	60	+
Xylene	100	20	-
Citric acid	10	40	+

Legend:

- + resistant
- limited resistant
- o not resistant

Installation

PRODUCTION SCHEME



STEP BY STEP WINDOW MANUFACTURING

Storage of profiles

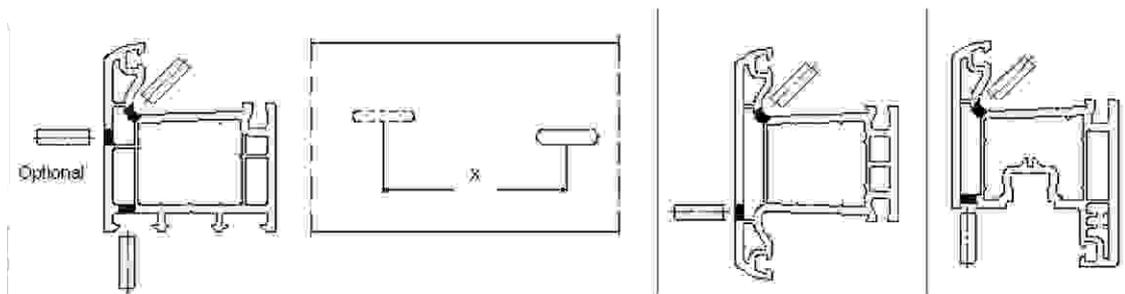
This must be located in an enlightened part of the workshop, readily accessible, and maintained at the same temperature (>15°C) as the work stations. Lower temperatures may cause some problems in welding.

Cutting of profiles

This is a high-precision operation; the quality of the welding, consequently the end product, largely depends on the accuracy of the cutting. Cutting precision and optimization can be controlled by computer.

Machining of water drainage slots

Water drainage slots are machined to the horizontal profiles located at the bottom side of the window partitions. Preset milling machines are used for this purpose. Pictures below show the placement of slots for different profiles.

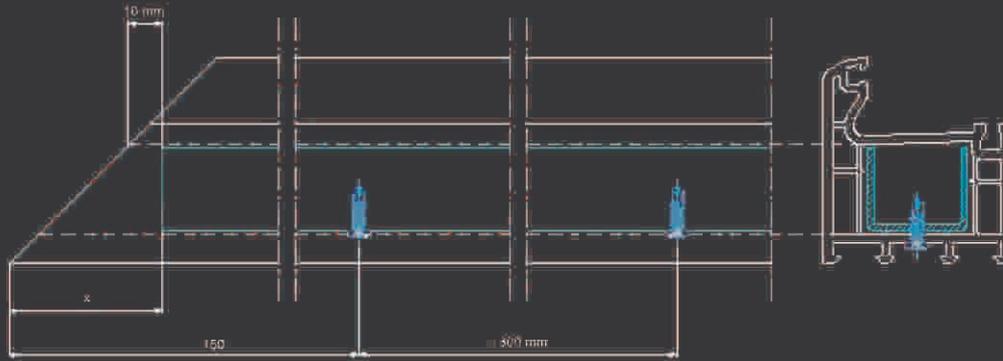


As can be seen from the pictures, there must be a certain distance (x) between the slots opened on the front side and the inner side. This distance should not be less than 50 mm.

Drainage slots for the door profile are machined like the sash profile. There shouldn't be any drainage slots in case of outward opening door sash.

Drainage from bottom is optional for the frame profiles. Widely used slot thickness is 5mm and slot length 20-25 mm.

Screwing on reinforcement profiles



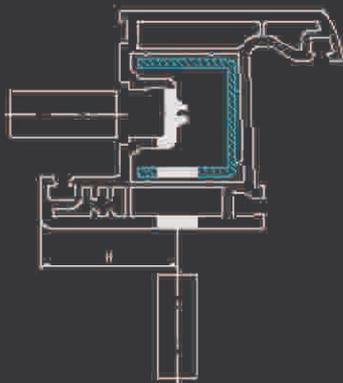
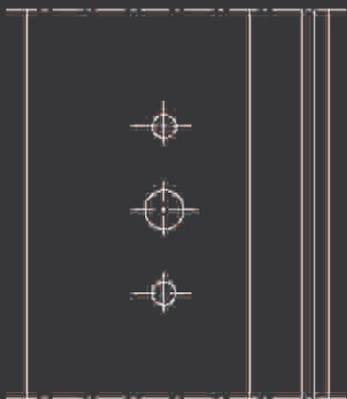
Reinforcement profiles are screwed on to the PVC profiles by self-tapping screws. Reinforcement profile cutting dimension is equal to (profile length - 2x). Determining the "x" dimension is quite important. After 45 ° cutting of the profile, a safety distance of 10mm can be measured from the wall which will be welded in the closest position to the reinforcement profile. The distance of this point to the profile edge will be the "x". This dimension should be determined for all the profiles, by this way, which will be welded while having reinforcement inside.

The distance of the first screw from the profile edge may be 150mm. The distance for the following screws should not be more than 300mm. For very short profile lengths, at least 3 screws should be used.

Machining of the hardware slots and handle holes

These two operations are held at the same machine. For the widely used hardware and handles, the placement of the slot and holes on the sash profile are shown on the following picture

The same process is valid also for the door profiles. In case of usage of locked espagnolettes or door locks, machining for the barrel is made by a copy router. Copy routers can also be used for all types of non-standard machining work on the profiles.

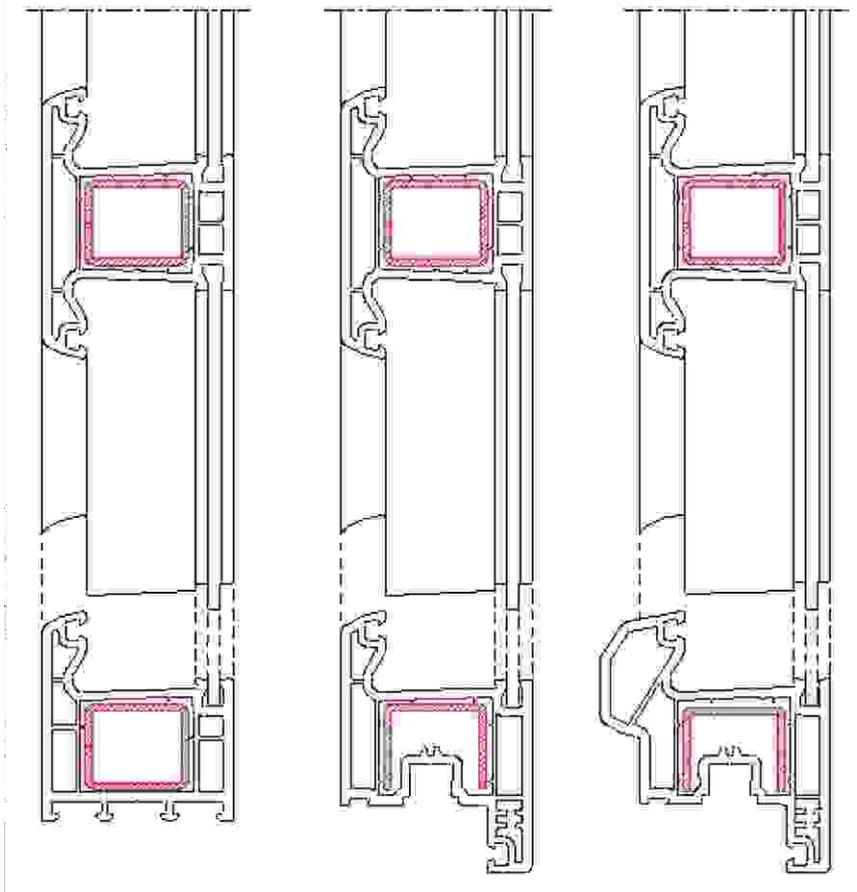


For the standard handles, the axis distance between the handle holes is 43 mm. The handle axis distance (a) and euro-groove machining width (b) depend on the hardware producer. After determination of the hardware, all these dimensions should be provided by the manufacturer.

Preparation of the mullion / transoms

Mullions and transoms are connected to the window frames by means of mechanical (mostly with metal or plastic injected parts) or welded joints. The widely used application is mechanical joint.

The mechanical connection calls for the mullion / transom profile to be end-milled. A special machine with specially designed rotating blades, according to the connection contour, is used for this purpose (see the following picture).

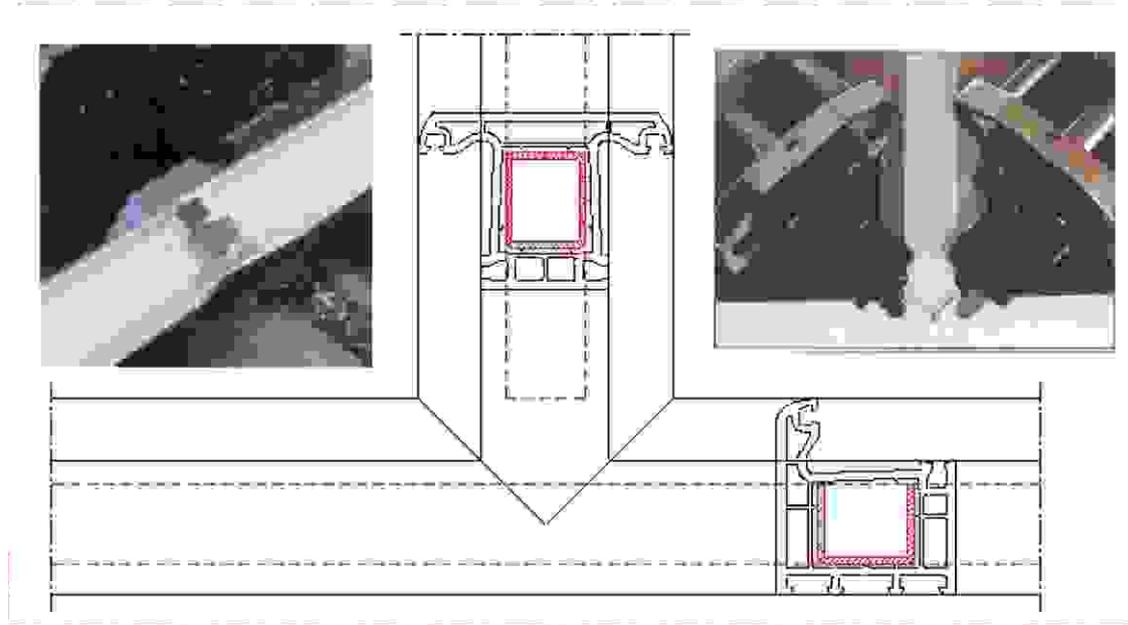


The end-machined profile mullion is assembled to the frame by means of injection parts which are mostly screwed to the reinforcement profile in the frame.

Regardless of the type of the frame (frame, sash, mullion, door etc.) which mullion / transom will be assembled, it would be very practical to have only one type of machining. In order to achieve this, the profile designer should check the connection of the mullion profile with the other profiles during the design stage (especially with the step sash and step door sash profiles).

Another concern is the screwing detail of the connection parts. To be able to screw the injection parts to the metal, the usage of the box reinforcement profile is important in the frame. The system should allow this application as can be seen on the picture above.

The welded connection of mullion / transom (T- and X-connections) necessitates 45° V-cuts in the mullion profile and 45° V-notched cuts on the framing profile. For these purposes, a special cutting machine is fitted with two blades working alternately. The accuracy of this V-cut is critical to the quality of the end product.



Welding of the profiles

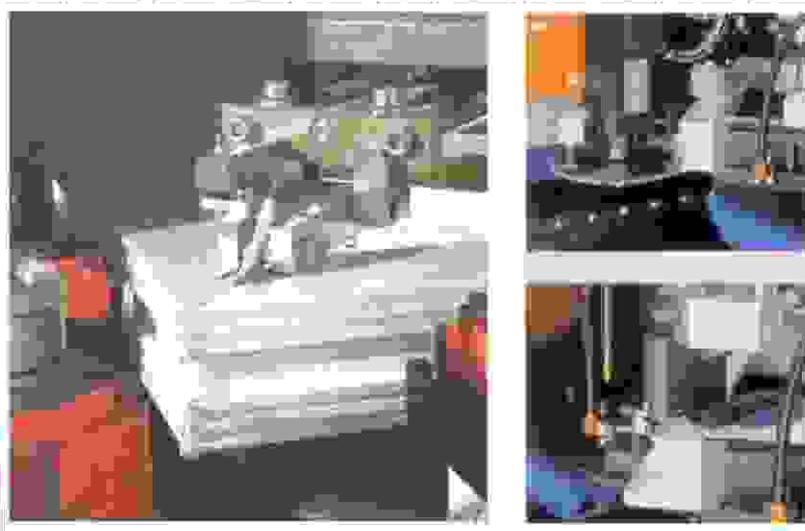
This is a very important operation in PVC window construction, which makes it completely watertight.



There is a wide range of welding machines, varying from the single-head welder to the multi-head welders which simultaneously weld the mullions / transoms, crosses, corner butt welds, and angles.

Corner cleaning

After the welding operation, weld sprue is formed on the welded corners. These sprues can be cleaned with several hand tools, corner cleaning machines or fully-automatic corner cleaning units as well.



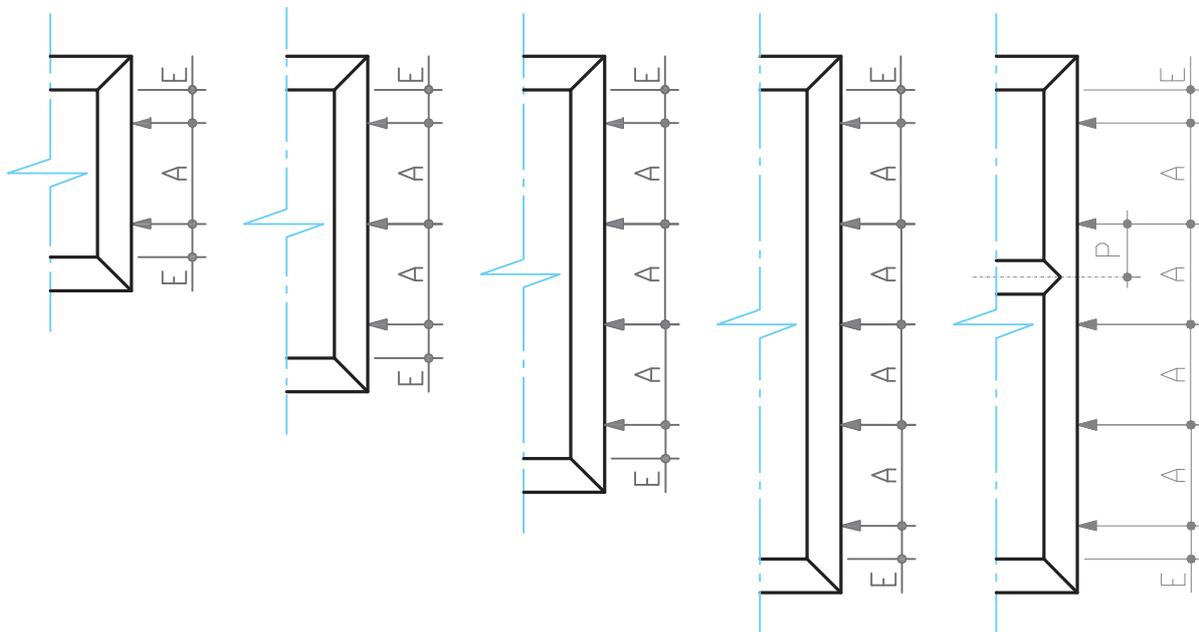
Hardware assembly

In window and door systems, all the accessories used for opening, closing and locking of the window sashes (espagnolettes, locks, locking bolts, hinges etc.) are called hardware.



Especially in the assembly of the tilt and turn opening systems, special jigs are used, mostly provided by the hardware manufacturer. Necessary holes on the frame and sash are opened by means of these jigs before the assembly of hardware.

Structural installation

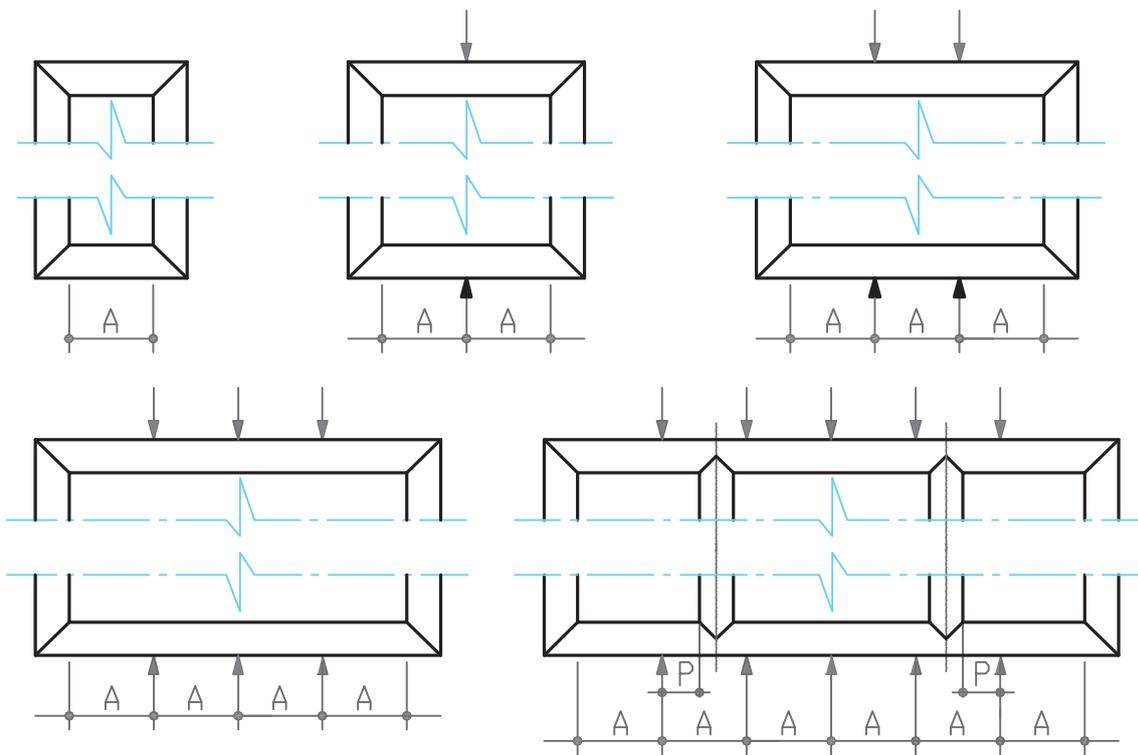


Anchorage distance of the vertical parts of the frame:

A = distance betw. fixing points
E = distance to corner
P = distance to mullion

	for white profiles	for coloured profiles
	max. 700 mm	max. 700 mm
	ca. 150 mm	ca. 250 mm
	ca. 150 mm	ca. 250 mm

Structural installation

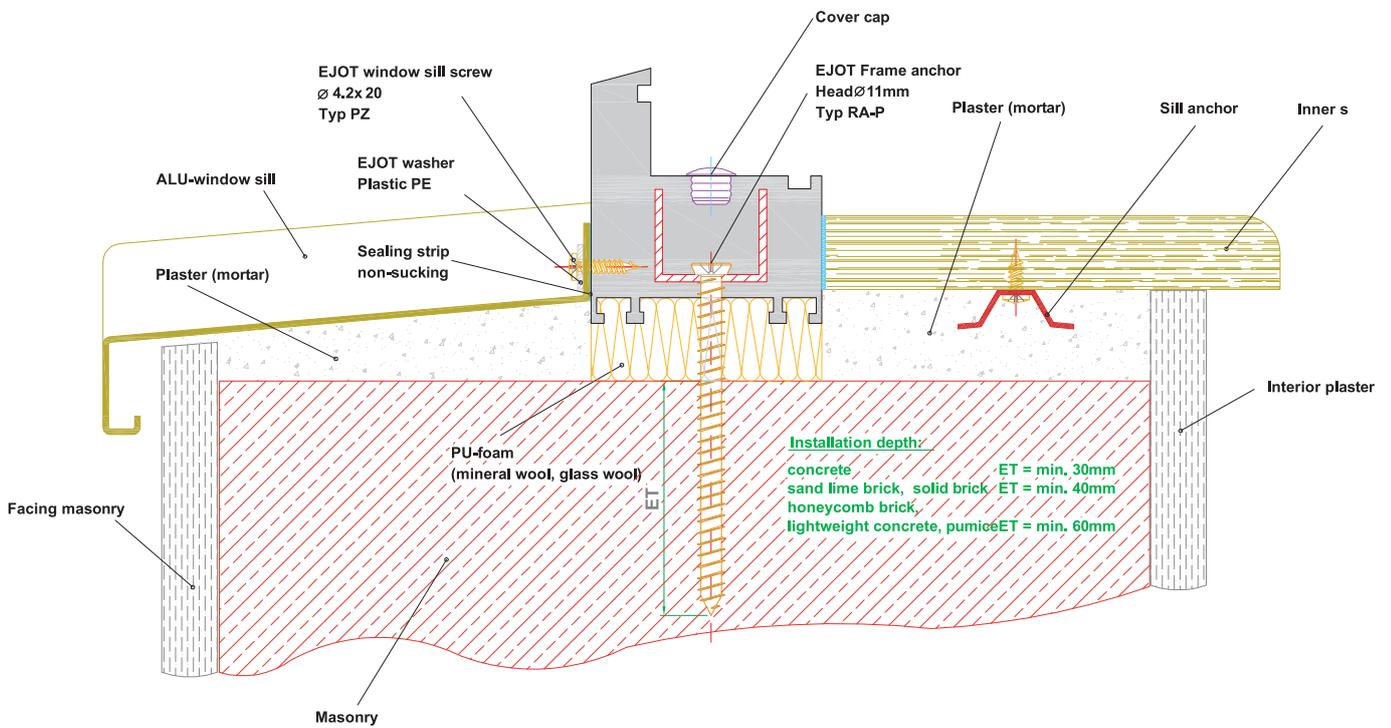


Anchorage distance of the horizontal parts of the frame:

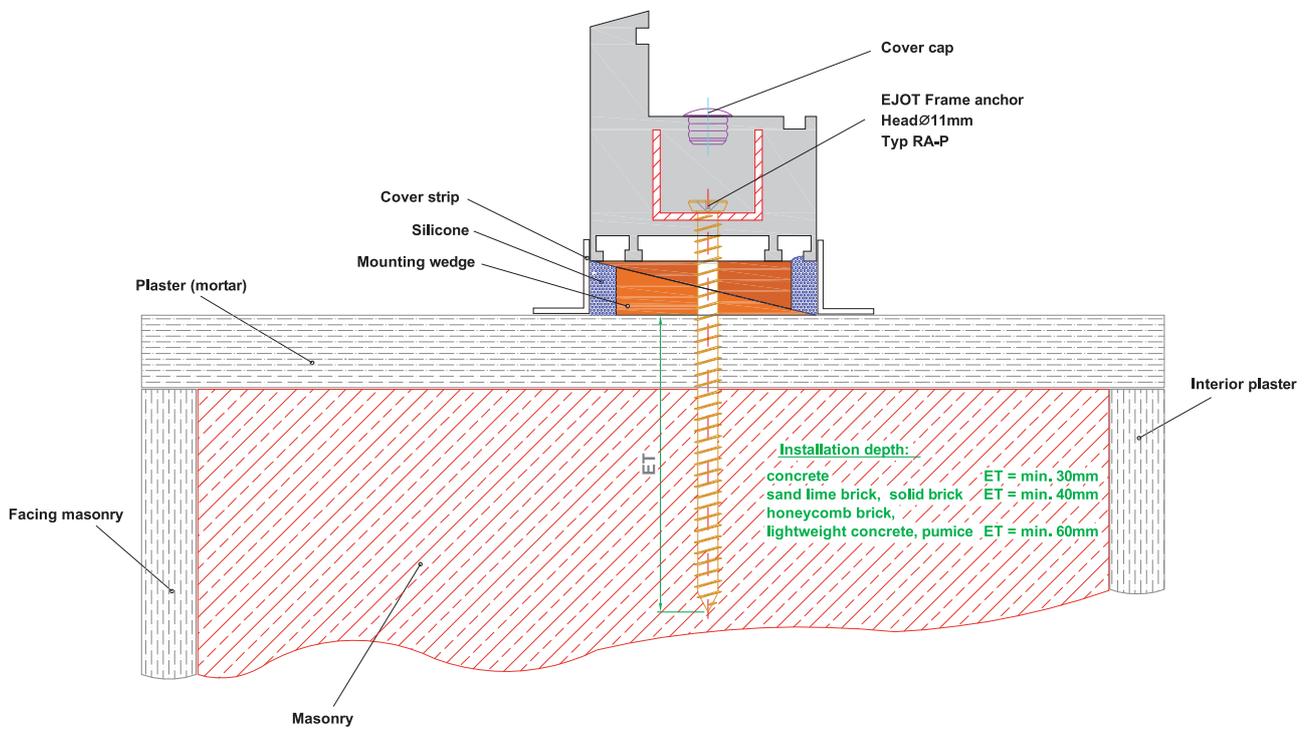
A = distance betw. fixing points
P = distance to mullion

for white profiles	for coloured profiles
max. 700 mm	max. 700 mm
ca. 150 mm	ca. 250 mm

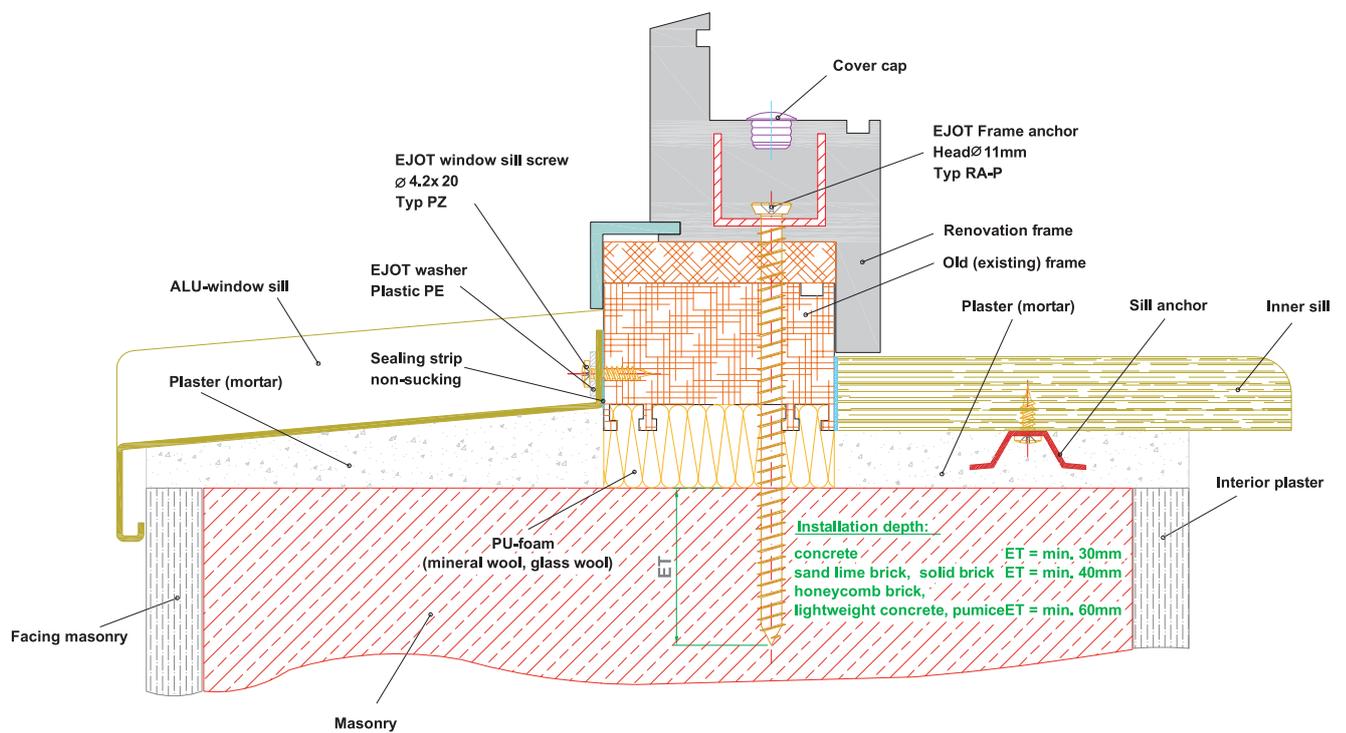
Structure connection, at the bottom

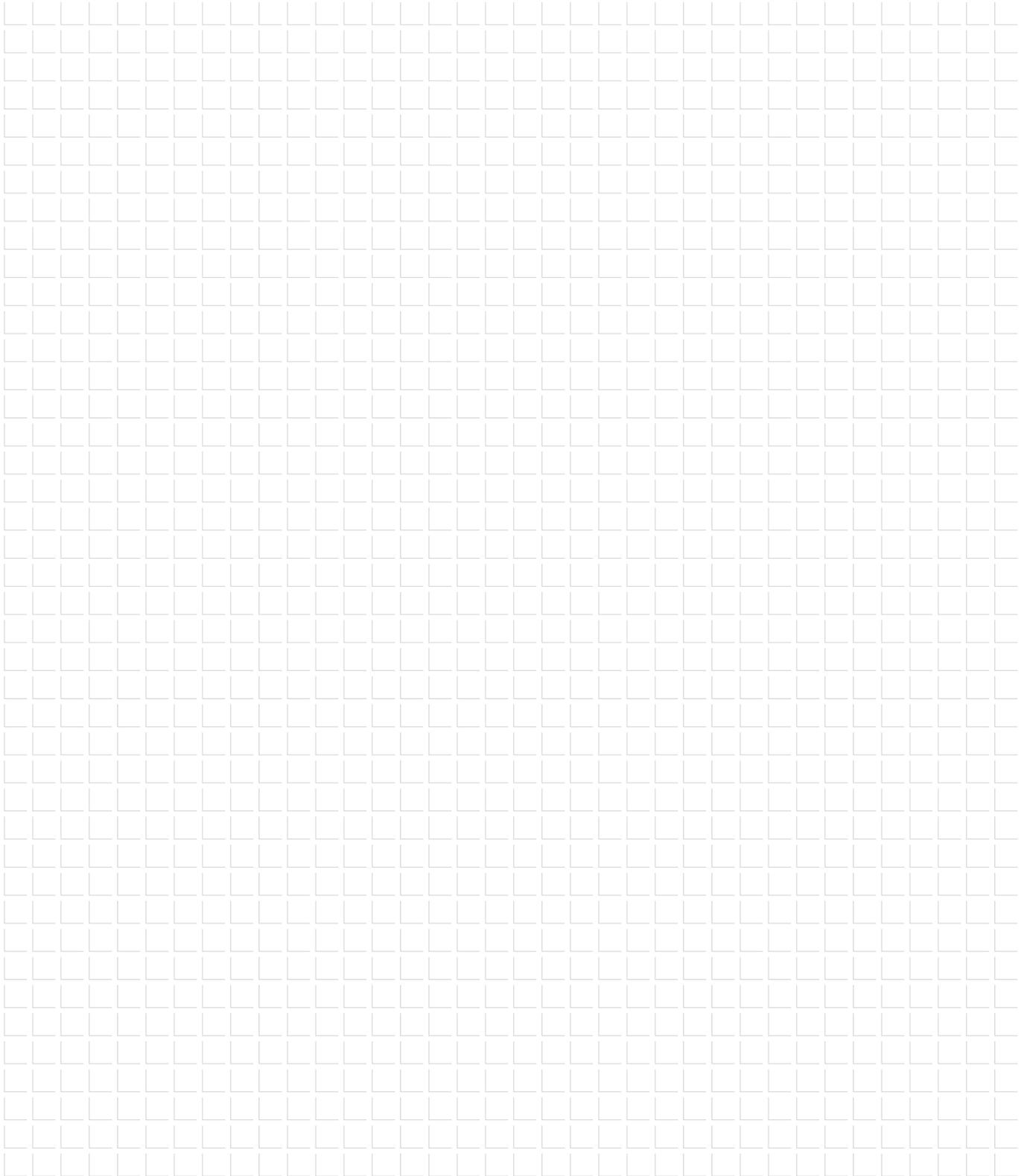


Structure connection, laterally and on the top



Structure connection, at the bottom

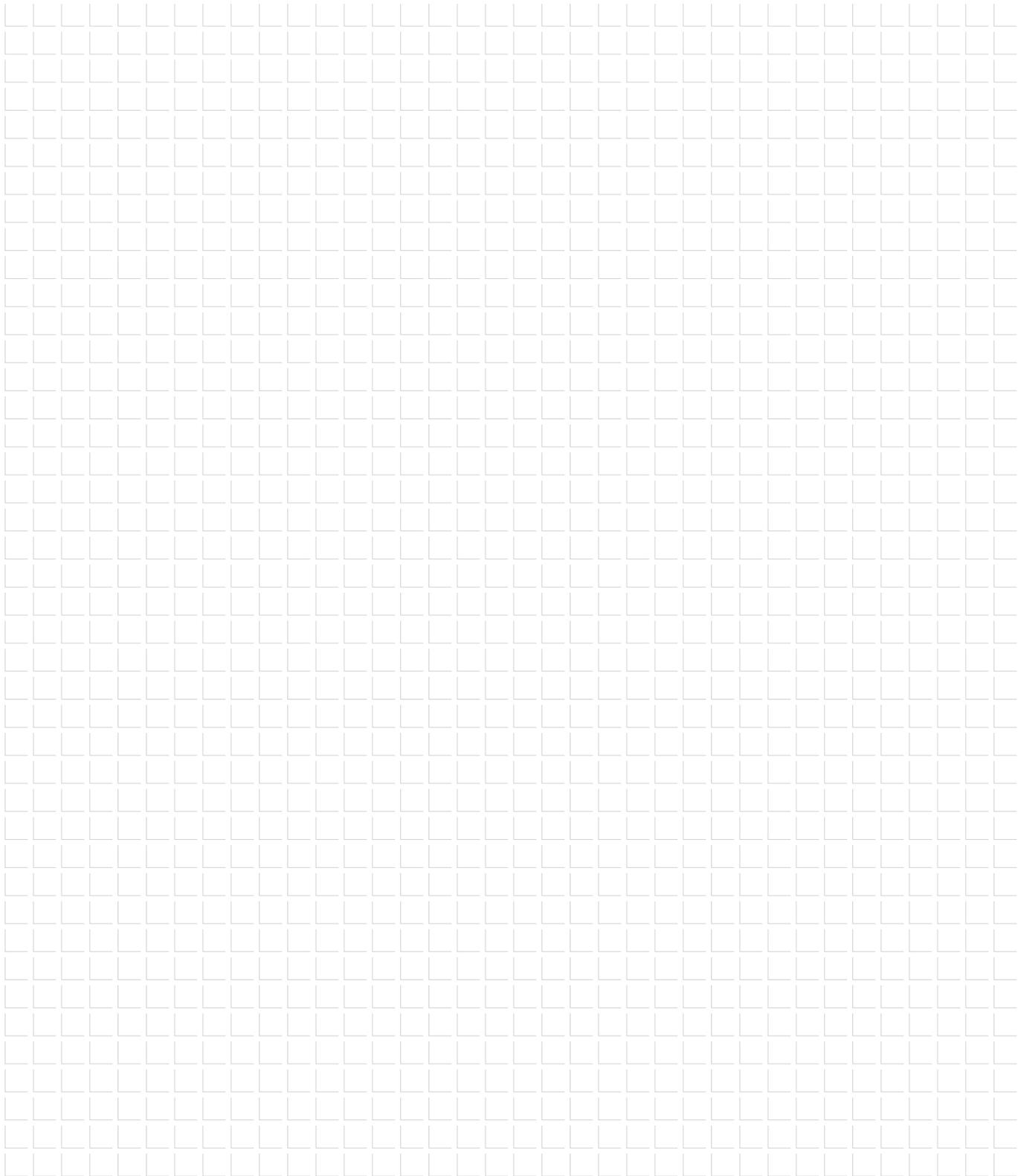


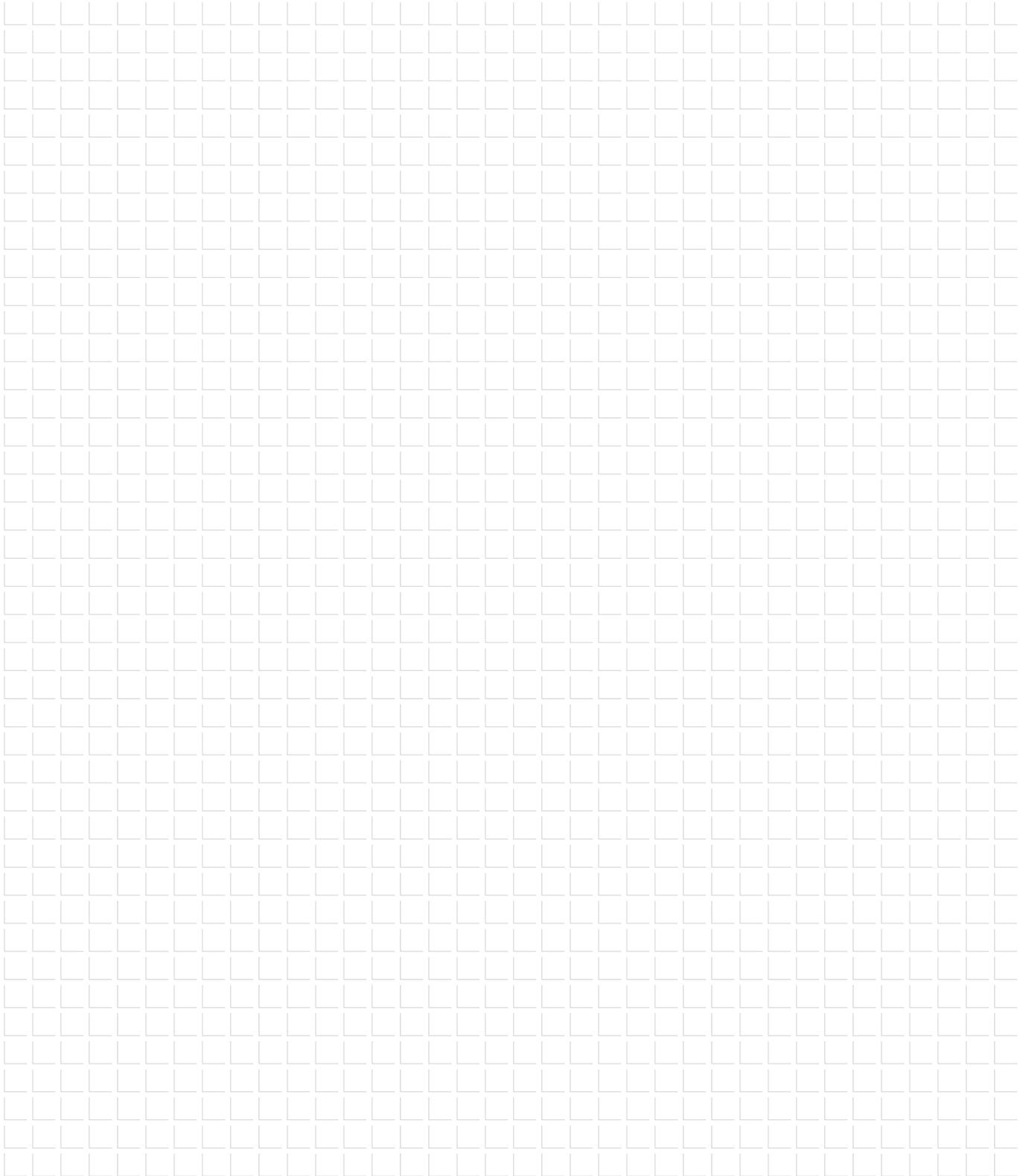


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VISTA BEST By using our own experience and the constructive recommendations of our colleagues within the industry, with all the power invested in us we have striven to maintain and strengthen our quality and originality. We will be introducing our new products shortly.

«ویستابست» با بهره‌گیری از تجارب خود و نقطه نظرات مفید و سازنده همکارانی که در این صنعت فعالیت دارند، با تمامی توان در جهت تقویت و تداوم کیفیت و نوآوری کوشش نموده و بزودی محصولات جدید دیگری را معرفی خواهد نمود.

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Tel (sales) : (+98 21) 2300 2100
Fax : (+98 21) 220 43 754
E-mail : info@vistabest.com

ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

دفتر مرکزی : تهران، بلوار آفریقا، خیابان شهید طاهری، پلاک ۱۲
تلفن واحد فروش : ۲۳۰۰۰ ۲۱۰۰۰ (۰۲۱)
فکس : ۲۲۰۴۳ ۷۵۴ (۰۲۱)
ایمیل : info@vistabest.com

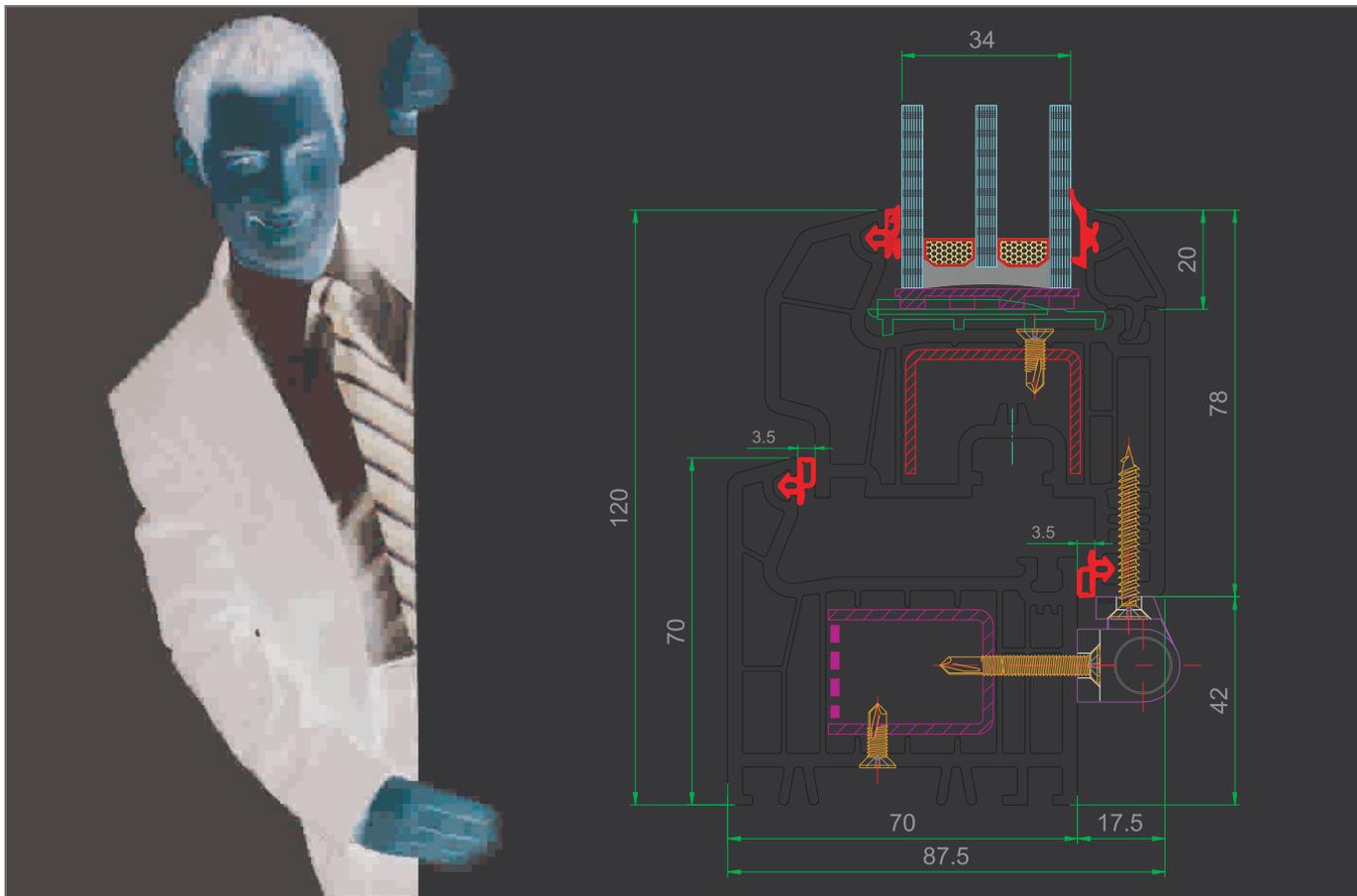
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تولیدکننده پروفیل یو پی وی سی



5 Chamber Profile System

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We offer a gem for you to create a jewel to adorn your buildings.

VISTA BEST a brand which is deeply embedded in everybody's mind.

VISTA BEST is a young team supported by a long line of production experience. Our products are produced on the basis of high quality, innovation and durability.

By implementing the best designs, the latest German and Austrian machinery and technology, employing the strongest professionals and using top European materials, we have been able to produce products that are easily approved by both European and Iranian research centers.

High market share in a short period and at a time of overwhelming foreign import has proven our ability to reach our goals. The use of our products by experienced UPVC window fabricators enforces us to continue and exceed all that we have achieved so far.

By complying with all the technical and production standards of high quality manufacturing we hope to boost our customers' confidence in Iranian quality.

ما گوهری در اختیار شما می‌گذاریم تا از آن جواهری بر سینه ساختمان‌ها بسازید.

«ویستا بست» برندی است که خود را در اعماق اذهان حک می‌کند.

«ویستا بست» متشکل از گروهی متخصص با تکیه بر تجربیات تولیدی طولانی بوده و محصولات خود را بر اصل مهم کیفیت، نوآوری و استمرار بنا نهاده است.

«ویستا بست» با بکار بردن طراحی مدرن روز، ماشین‌آلات و تکنولوژی پیشرفته کشورهای آلمان و اتریش، همراه با پرسنل متخصص و مواد اولیه برتر اروپایی توانسته است محصولاتی را تولید نماید که کیفیت آن‌ها توسط مراکز تحقیقاتی مرجع ایرانی و اروپایی به تایید رسیده است.

بدست آوردن سهم قابل توجهی از بازار در زمانی کوتاه در مقابله با سیل عظیم محصولات وارداتی؛ سندی بر تحقق اهداف «ویستا بست» بوده و بکار گرفتن این محصولات توسط سازندگان توانمند در ب و پنجره‌های یو پی وی سی باعث تقویت انگیزه‌های «ویستا بست» برای استمرار و ارائه محصولات جدید می‌باشد.

امید است با رعایت نکات فنی و اصول ساخت، اعتماد مصرف‌کنندگان به محصولات با کیفیت ایرانی را افزون نماییم.

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UPVC Profile Producer

ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی



With
Technology of 
greiner
EXTRUSION
KRAUSSMAFFEI
Germany

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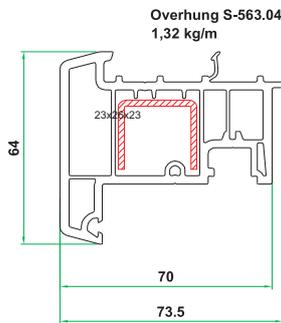
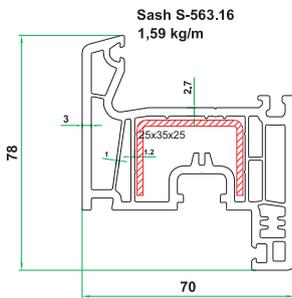
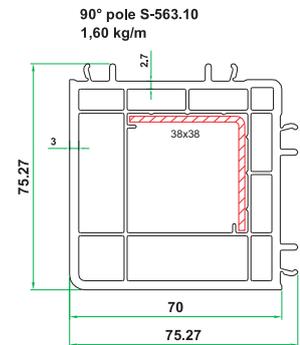
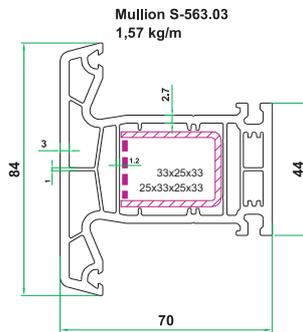
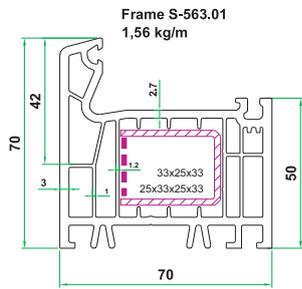
System Profiles And Auxiliary Products

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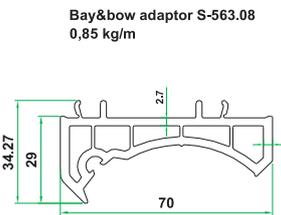
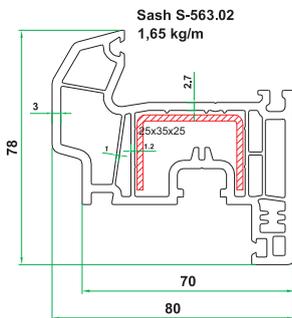
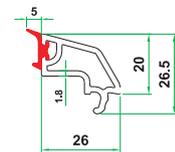
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UPVC Profile Producer

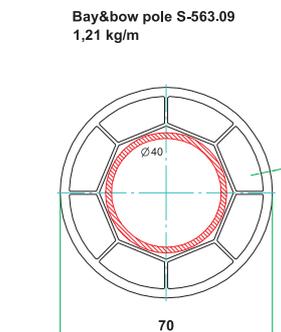
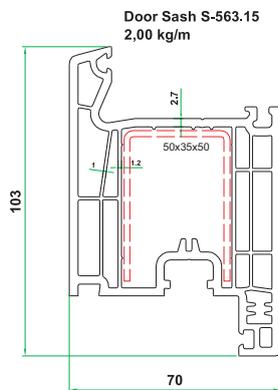
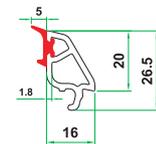
System Profiles



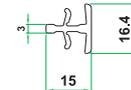
Glassbead 24mm S-563.06
0,23 kg/m; PCE: 38 g/m



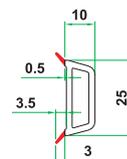
Glassbead 34mm S-563.07
0,17 kg/m; PCE: 38 g/m



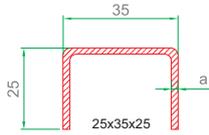
Coupling S-563.11
0,11 kg/m



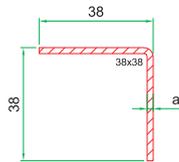
Georgian bar S-563.12
0,16kg/m 9,5 g/m Co-Extrusion



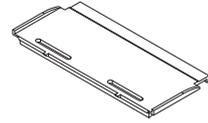
S-563TRE01
= S-507TRE01



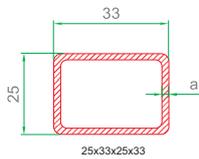
S-563TRE07



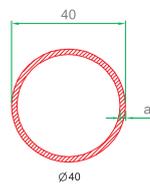
Glazing Bridge



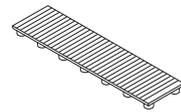
S-563TRE03
= S-507TRE10



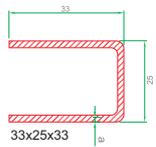
S-563TRE06
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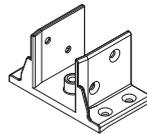
Glazing Block 02



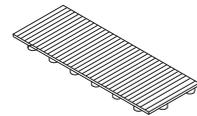
S-563TRE02
= S-507TRE09



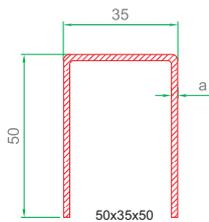
Mullion Connector



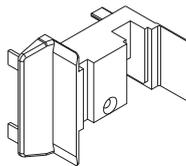
Glazing Block 03



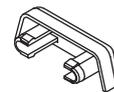
S-563TRE04
= S-507TRE04



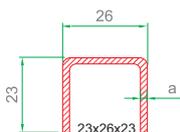
Overhung cover



Water drainage cover



S-563TRE05
= S-507TRE05



Gaskets 01



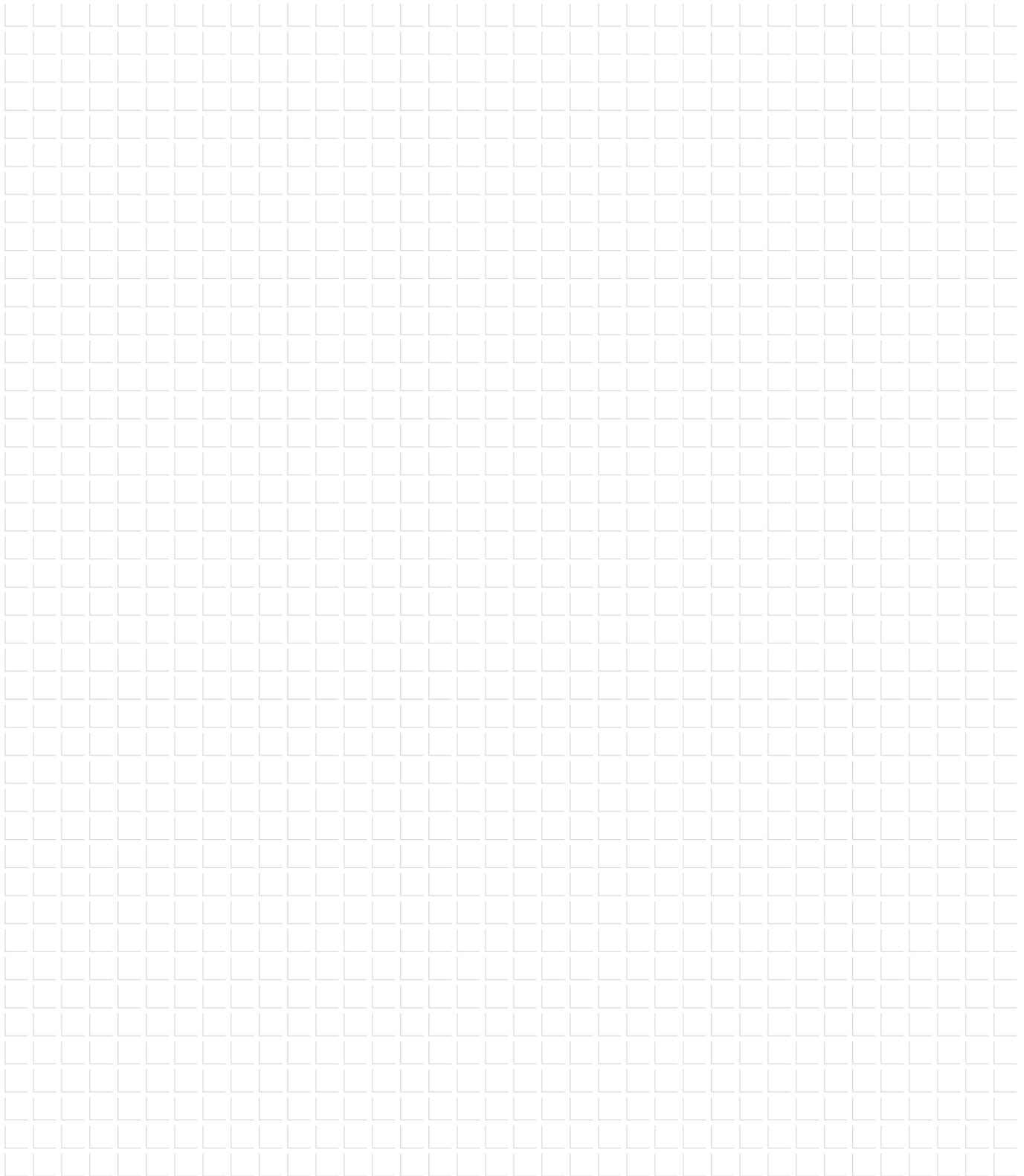
Gaskets 02



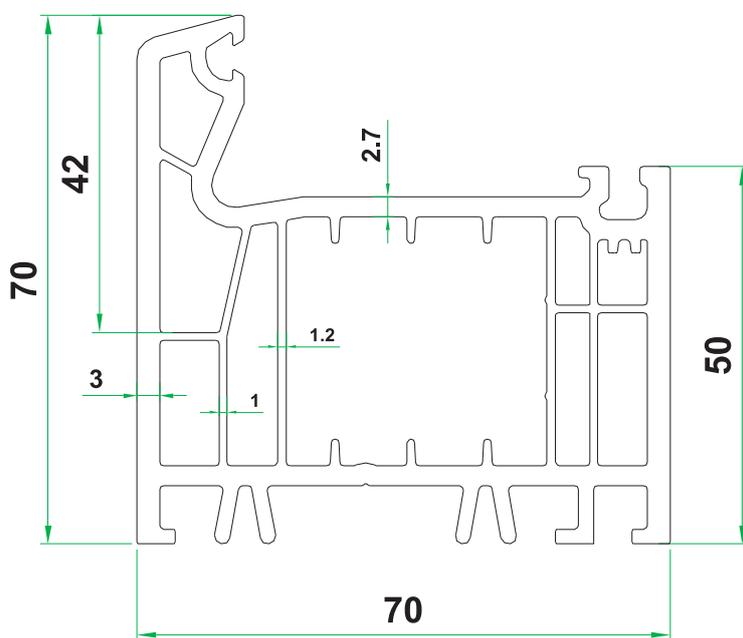
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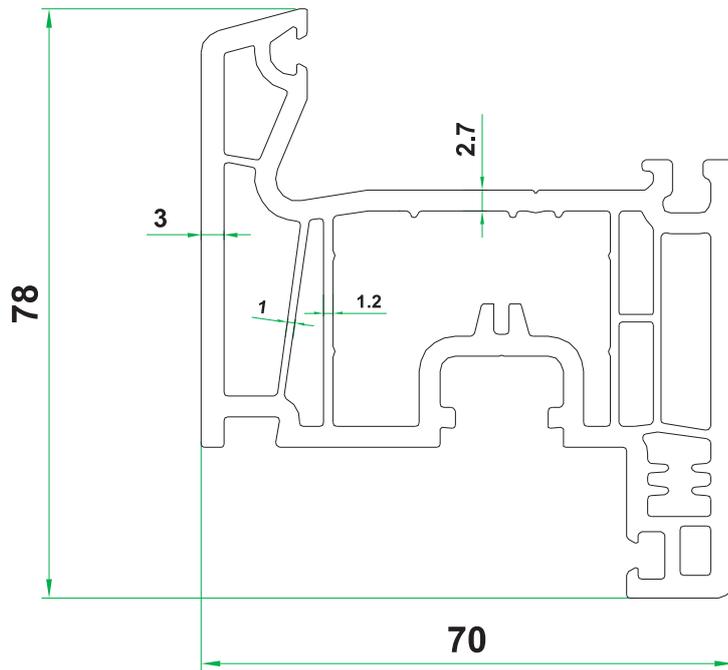
UPVC Profile Producer



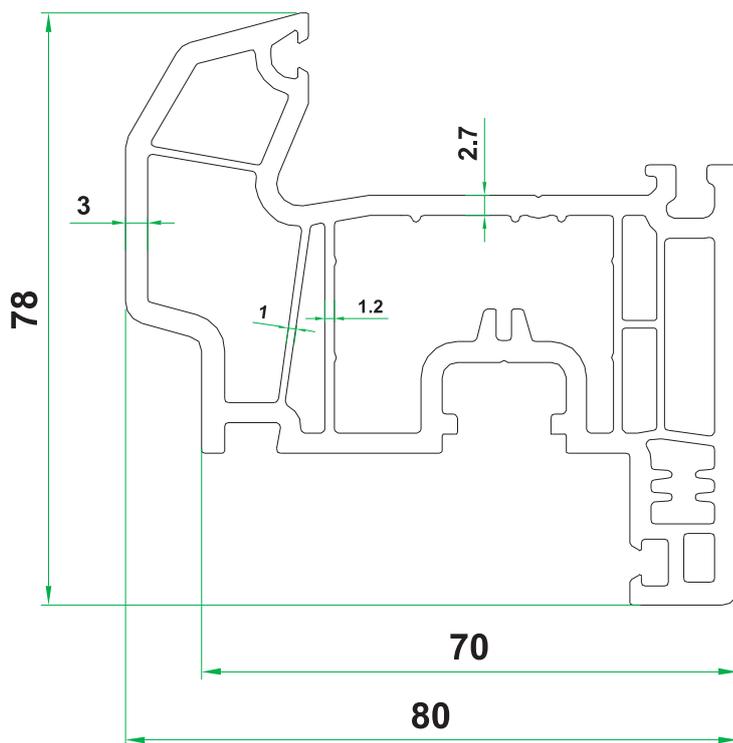
Main Profiles



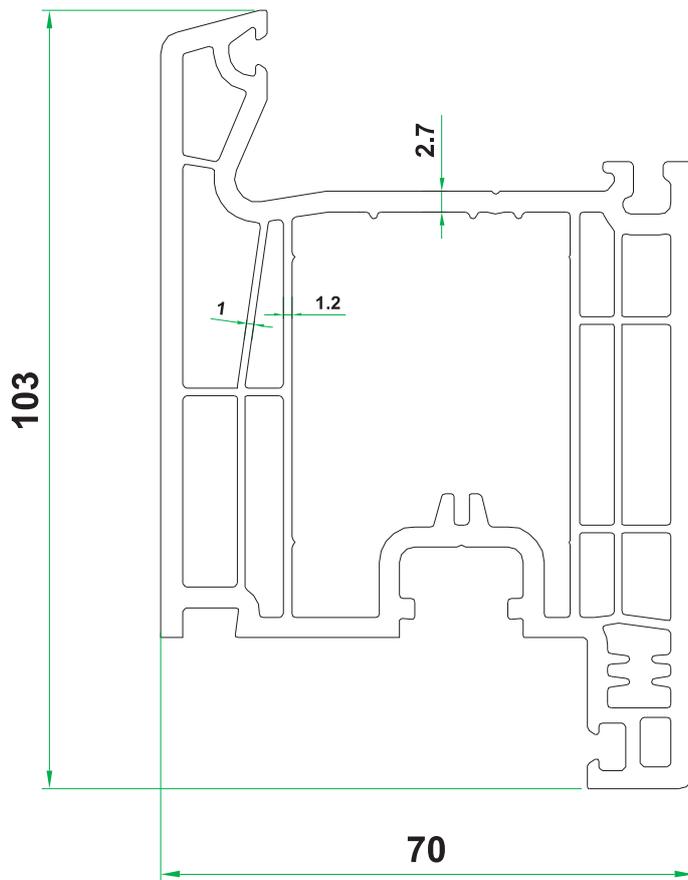
Frame S-563.01
1,56 kg/m



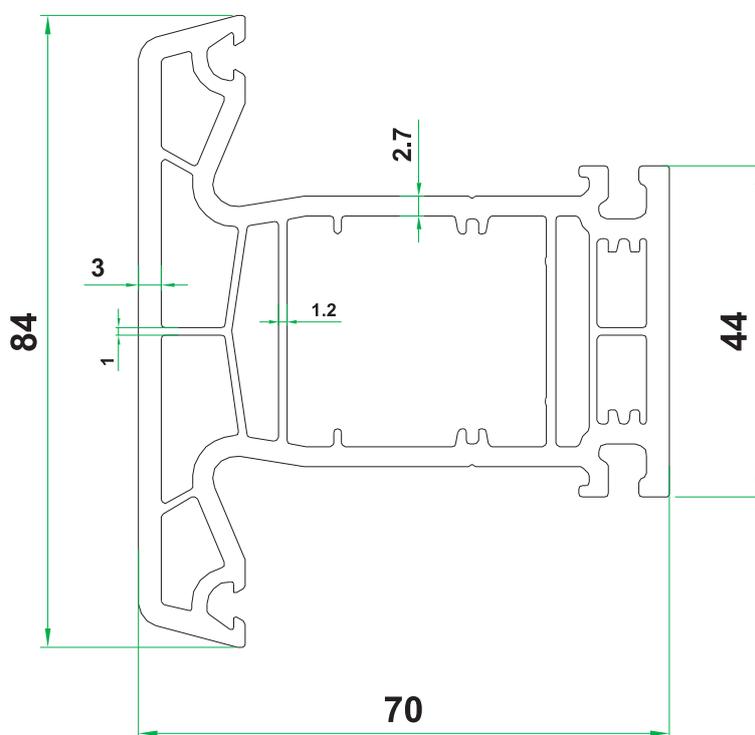
Sash S-563.16
1,59 kg/m



Sash S-563.02
1,65 kg/m

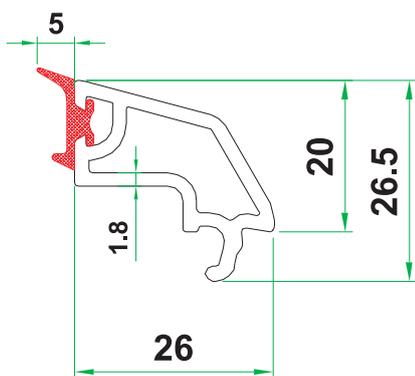


Door Sash S-563.15
2,00 kg/m

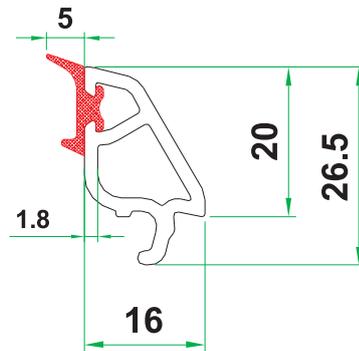


Mullion S-563.03

1,57 kg/m



Glassbead 24mm S-563.06
0,23 kg/m; PCE: 38 g/m

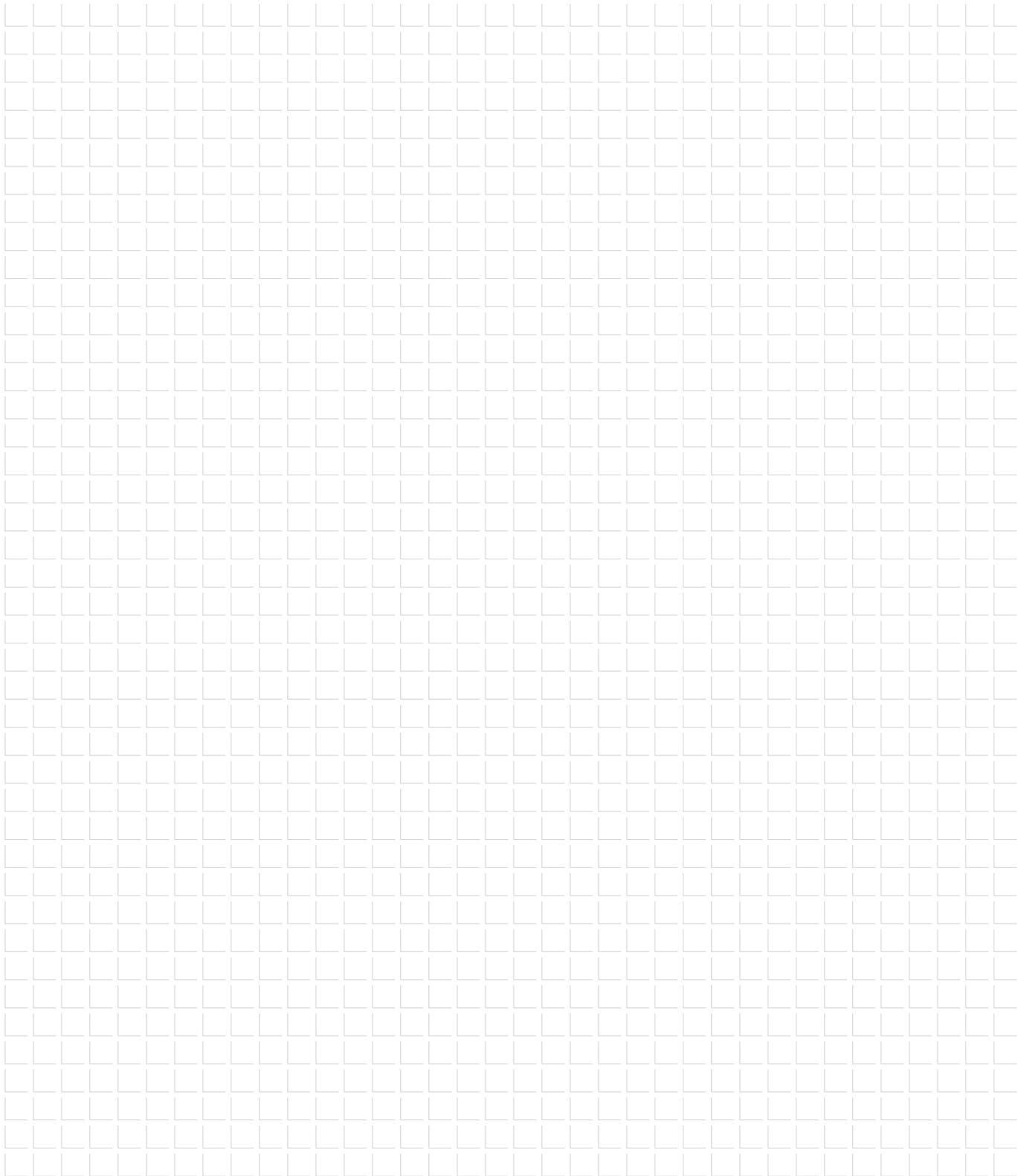


Glassbead 34mm S-563.07
0,17 kg/m; PCE: 38 g/m

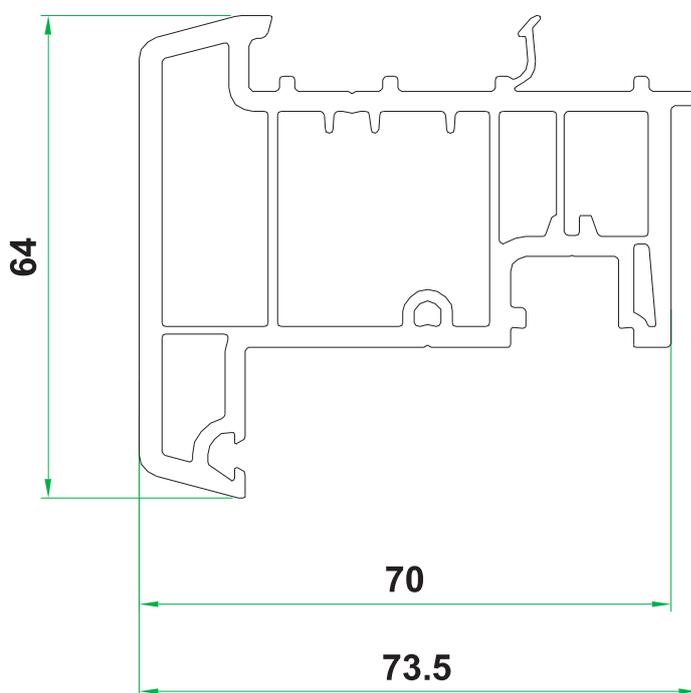
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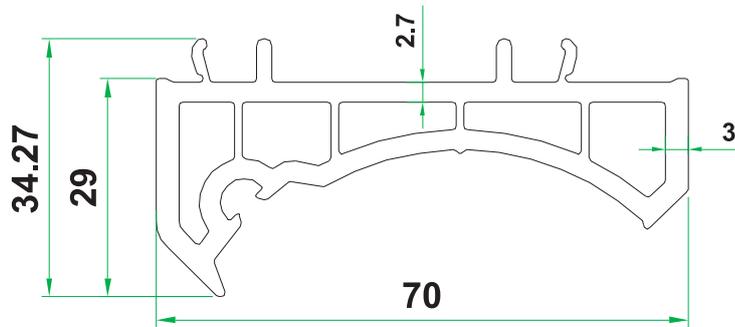
UPVC Profile Producer



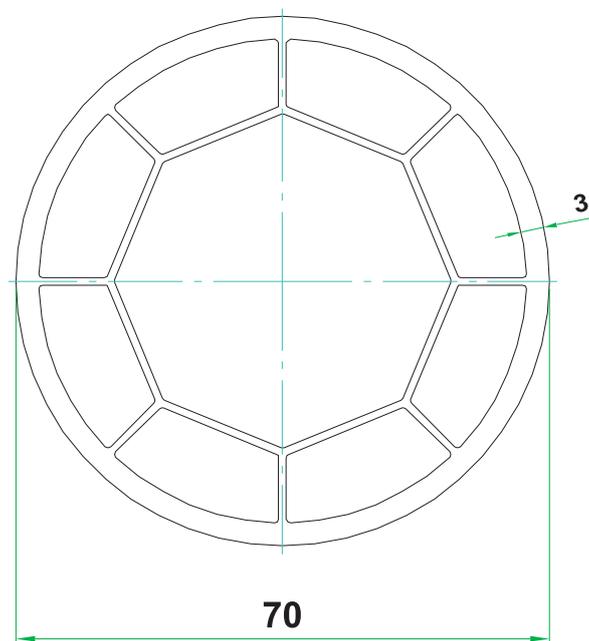
Auxiliary Profiles



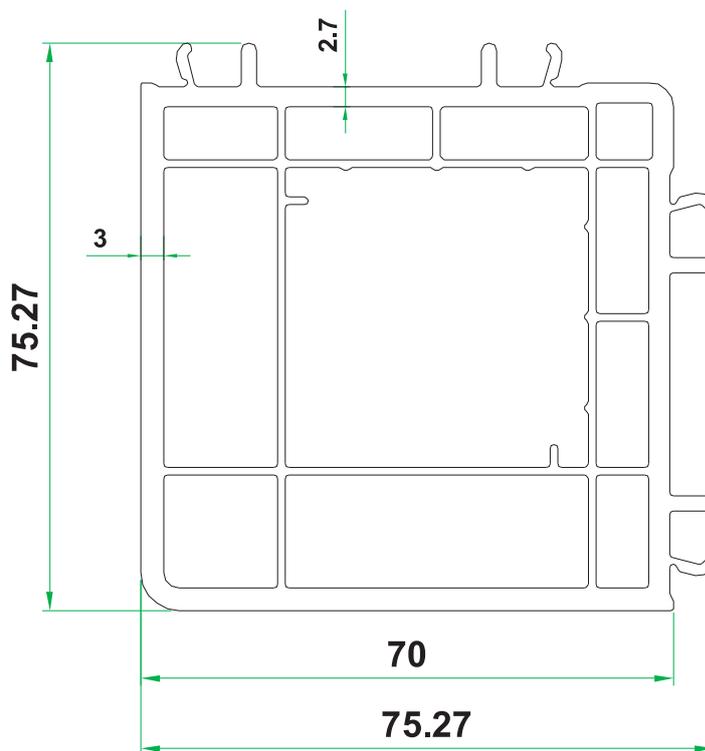
Overhung S-563.04
1,32 kg/m



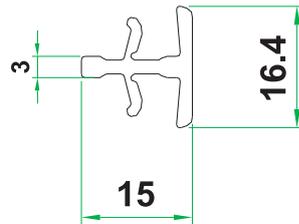
Bay&bow adaptor S-563.08
0,85 kg/m



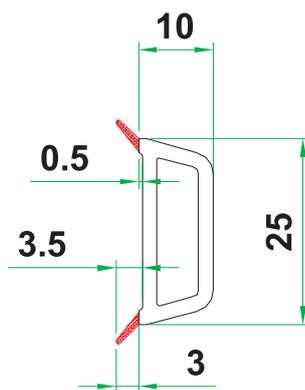
Bay&bow pole S-563.09
1,21 kg/m



90° pole S-563.10
1,60 kg/m



Coupling S-563.11
0,11 kg/m

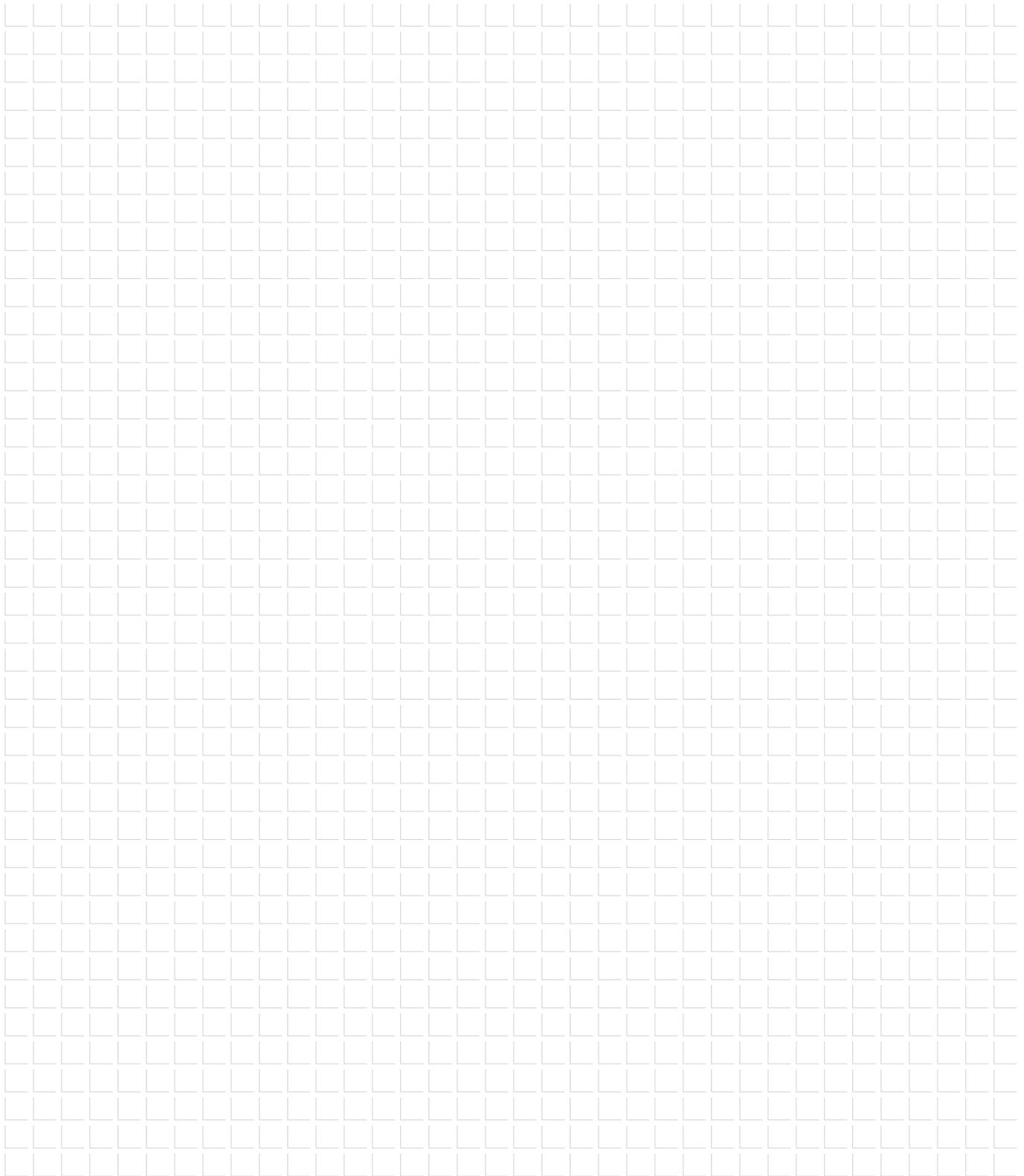


Georgian bar S-563.12
0,16kg/m 9,5 g/m Co-Extrusion

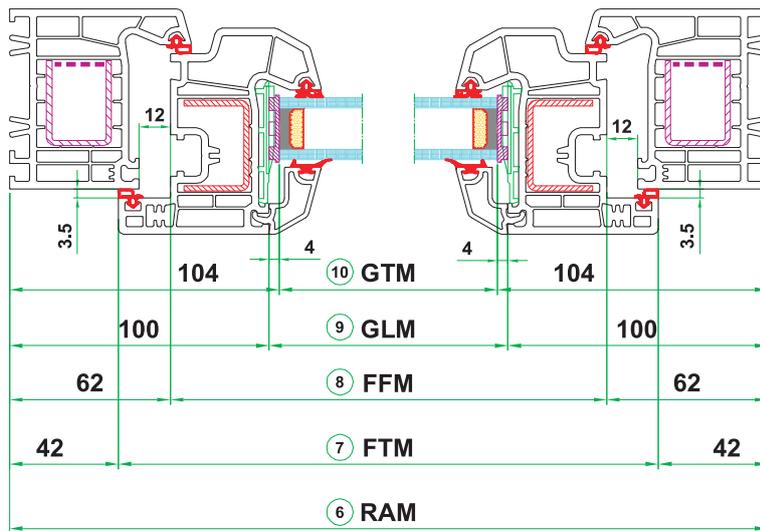
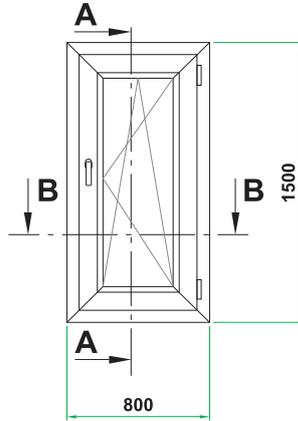
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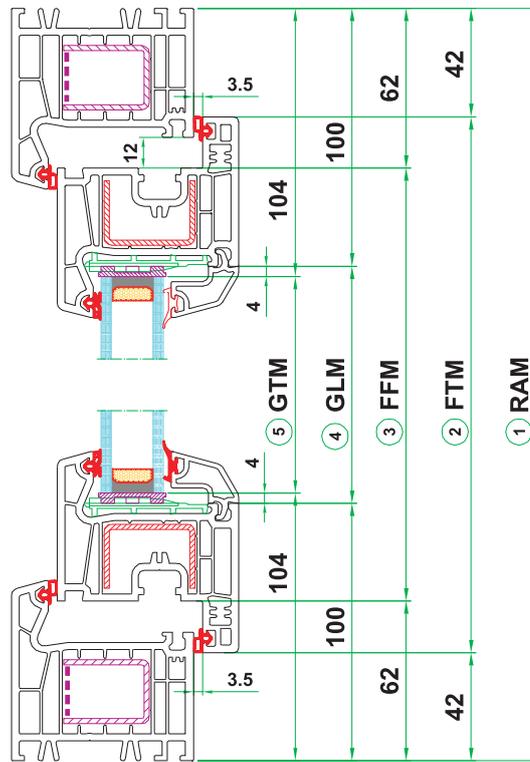
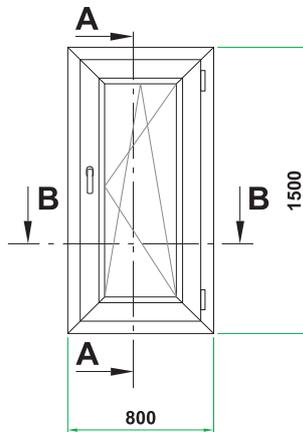


Section B-B



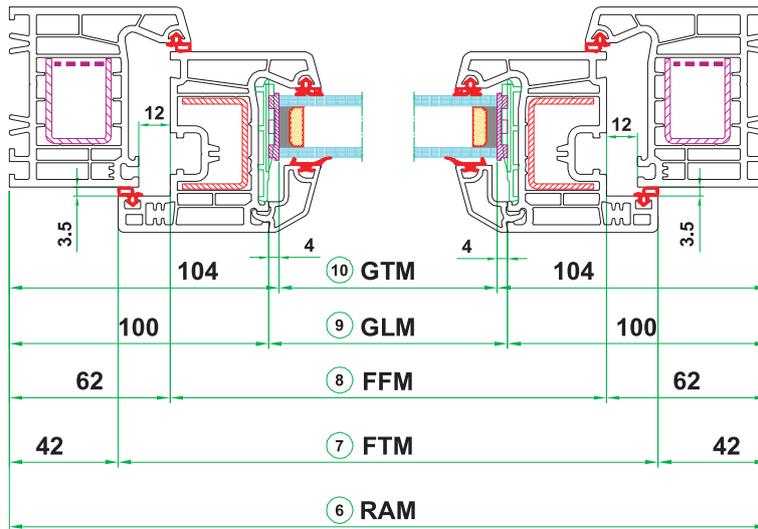
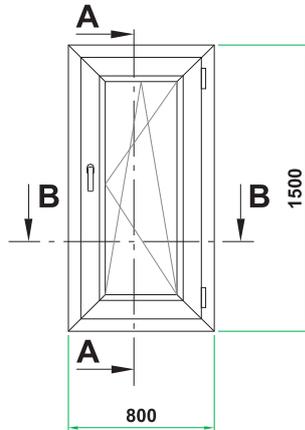
6	RAM = Frame reference size		e.g. 800
7	FTM = Sash size	= RAM - 84	= 716
8	FFM = Rebate size	= RAM - 124	= 676
9	GLM = Glassbead size	= RAM - 200	= 600
10	GTM = Glass size	= RAM - 208	= 592
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

Section A-A



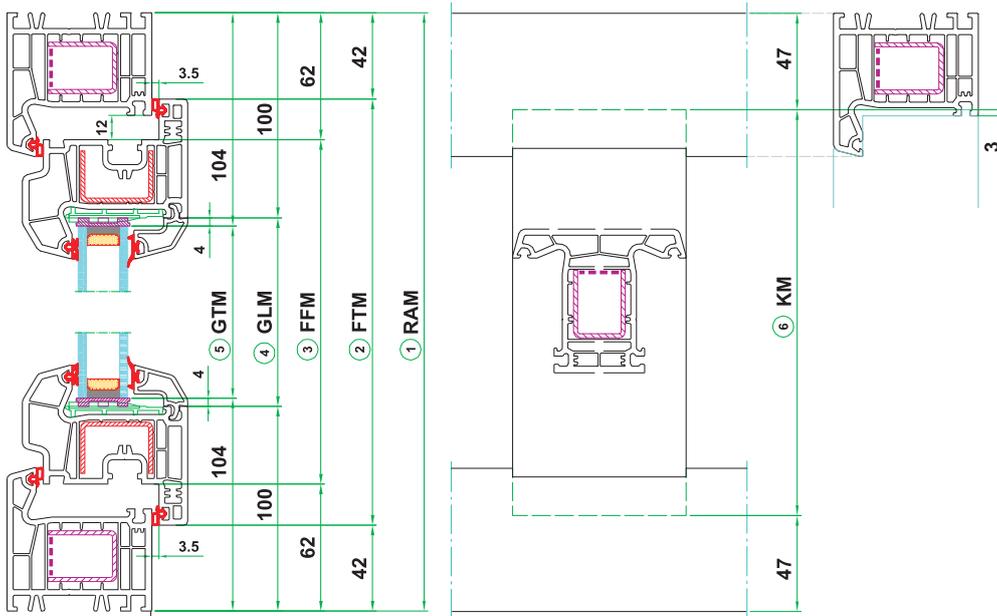
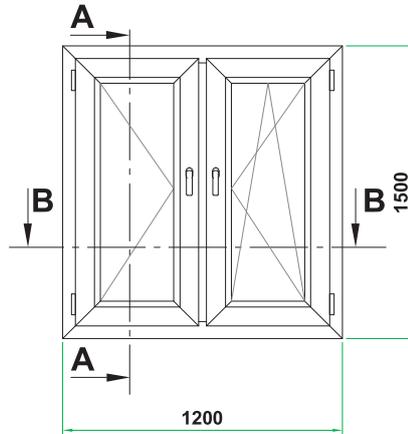
1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash size	= RAM - 84	= 1416
3	FFM = Rebate size	= RAM - 124	= 1376
4	GLM = Glassbead size	= RAM - 200	= 1300
5	GTM = Glass size	= RAM - 208	= 1292
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B



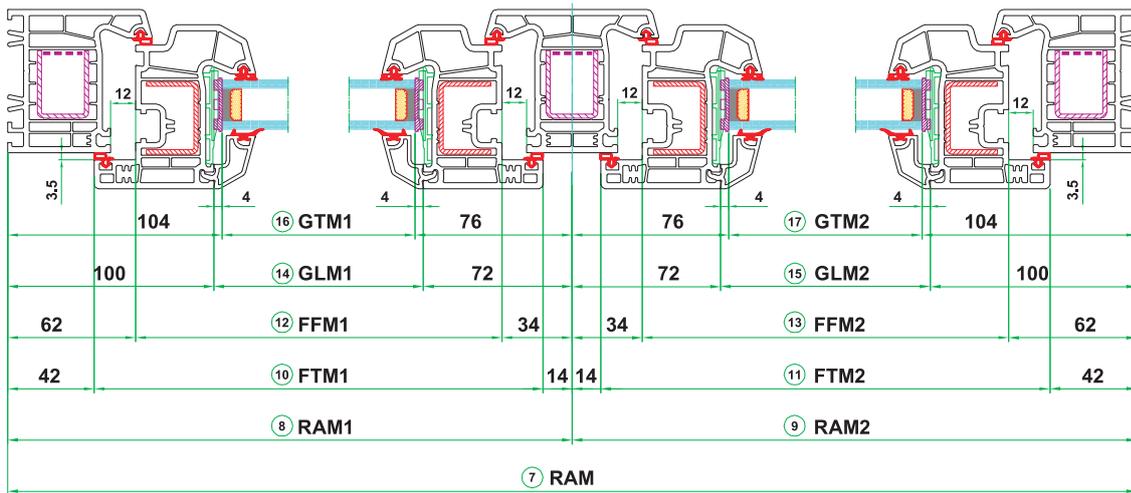
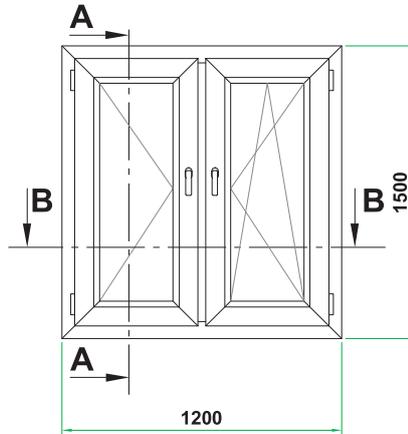
6	RAM = Frame reference size		e.g. 800
7	FTM = Sash size	= RAM - 84	= 716
8	FFM = Rebate size	= RAM - 124	= 676
9	GLM = Glassbead size	= RAM - 200	= 600
10	GTM = Glass size	= RAM - 208	= 592
Pos.	Description	Formula	mm
Cutting dimensions - Section B-B			

Section A-A



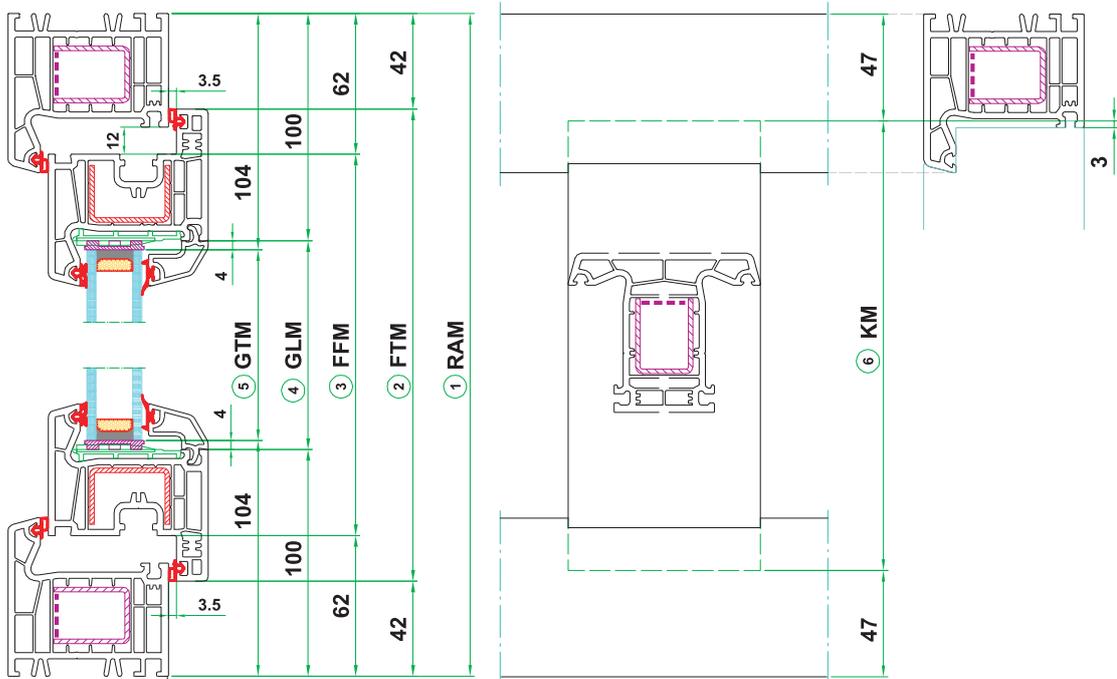
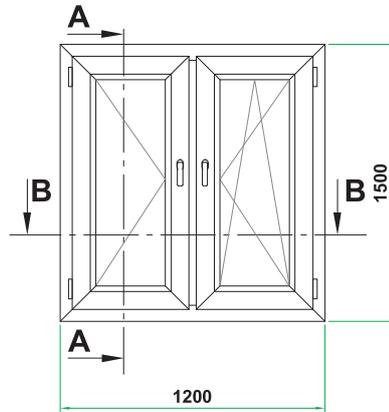
1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash size	= RAM - 84	= 1416
3	FFM = Rebate size	= RAM - 124	= 1376
4	GLM = Glassbead size	= RAM - 200	= 1300
5	GTM = Glass size	= RAM - 208	= 1292
6	KM = Mullion size	= RAM - 94	= 1406
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B



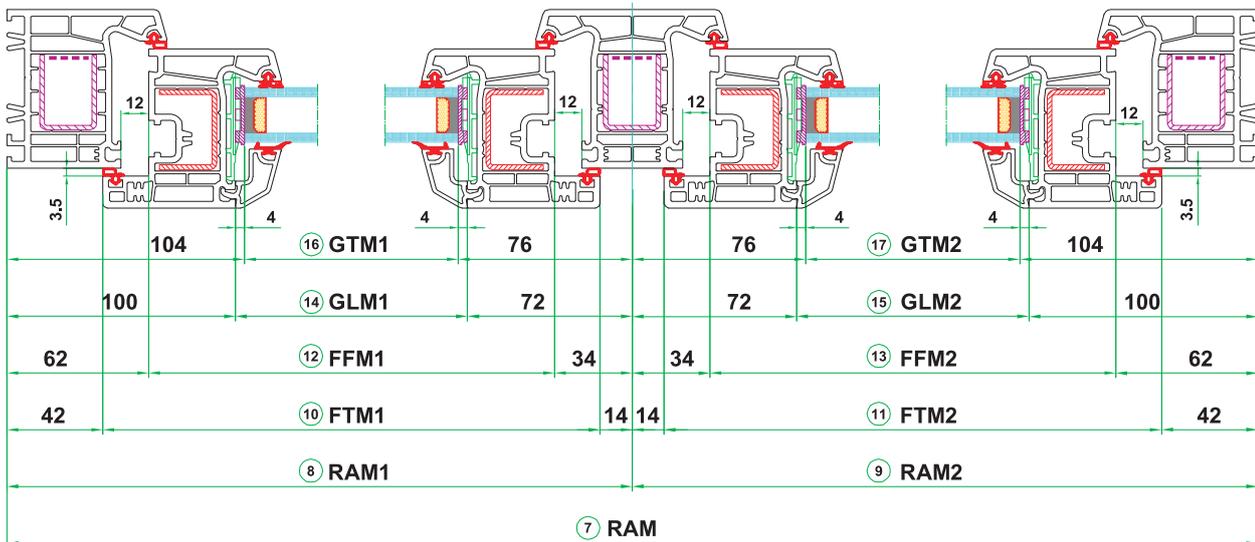
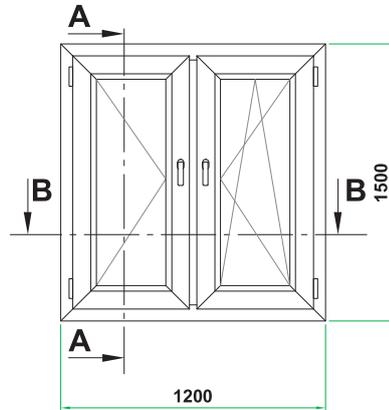
Pos.	Description	Formula	mm
7	RAM = Frame reference size		e.g. 1200
8	RAM 1		e.g. 600
9	RAM 2		e.g. 600
10	FTM 1 = Sash size	= RAM1 - 56	= 544
11	FTM 2 = Sash size	= RAM2 - 56	= 544
12	FFM 1 = Rebate size	= RAM1 - 96	= 504
13	FFM 2 = Rebate size	= RAM2 - 96	= 504
14	GLM 1 = Glassbead size	= RAM1 - 172	= 428
15	GLM 2 = Glassbead size	= RAM2 - 172	= 428
16	GTM 1 = Glass size	= RAM1 - 180	= 420
17	GTM 2 = Glass size	= RAM2 - 180	= 420
Cutting dimensions - Section B-B			

Section A-A

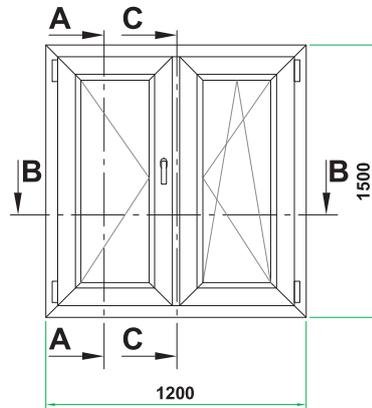


1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash size	= RAM - 84	= 1416
3	FFM = Rebate size	= RAM - 124	= 1376
4	GLM = Glassbead size	= RAM - 200	= 1300
5	GTM = Glass size	= RAM - 208	= 1292
6	KM = Mullion size	= RAM - 94	= 1406
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

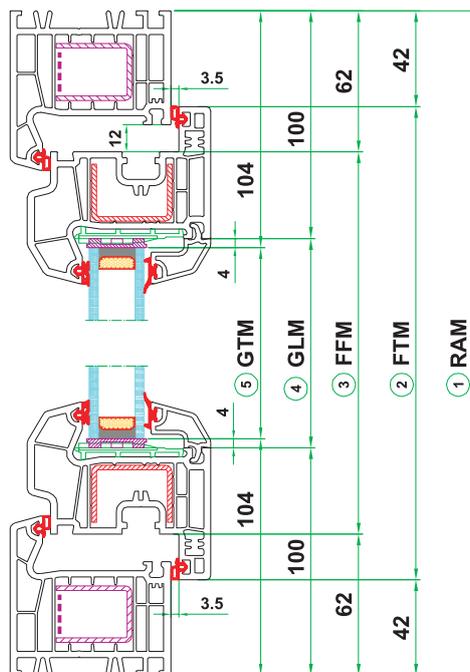
Section B-B



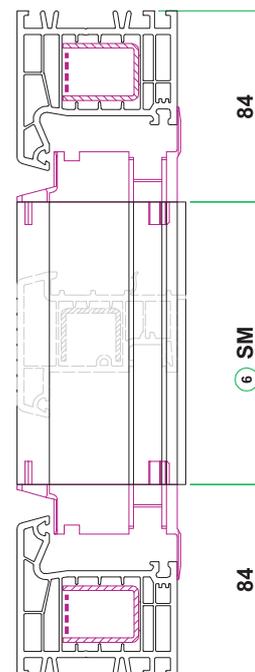
Pos.	Description	Formula	mm
7	RAM = Frame reference size		e.g. 1200
8	RAM 1		e.g. 600
9	RAM 2		e.g. 600
10	FTM 1 = Sash size	= RAM1 - 56	= 544
11	FTM 2 = Sash size	= RAM2 - 56	= 544
12	FFM 1 = Rebate size	= RAM1 - 96	= 504
13	FFM 2 = Rebate size	= RAM2 - 96	= 504
14	GLM 1 = Glassbead size	= RAM1 - 172	= 428
15	GLM 2 = Glassbead size	= RAM2 - 172	= 428
16	GTM 1 = Glass size	= RAM1 - 180	= 420
17	GTM 2 = Glass size	= RAM2 - 180	= 420
Cutting dimensions - Section B-B			



Section A-A

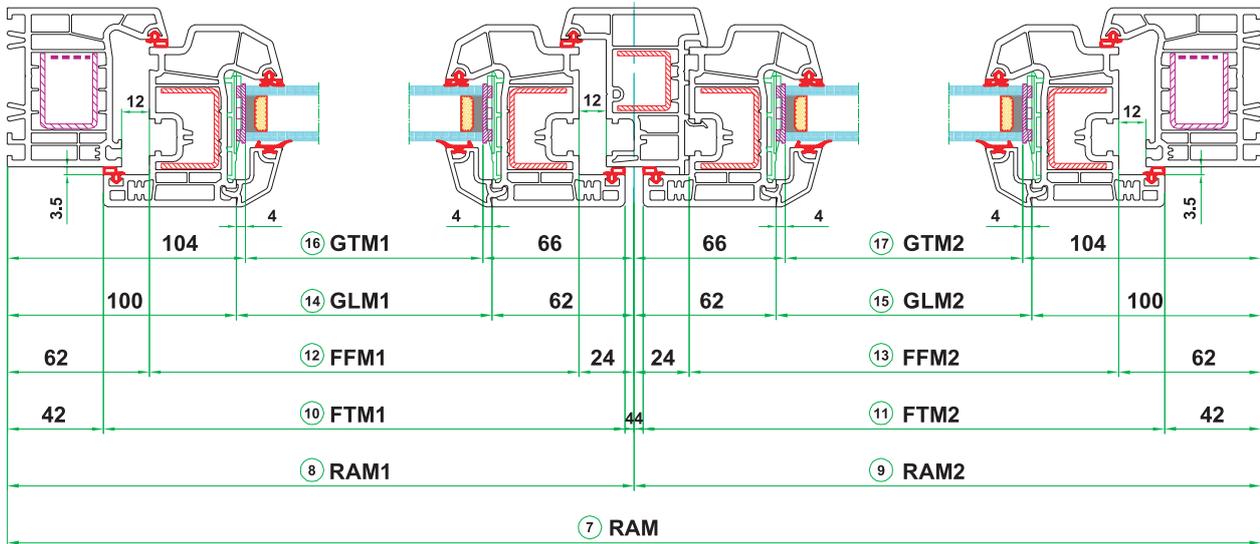
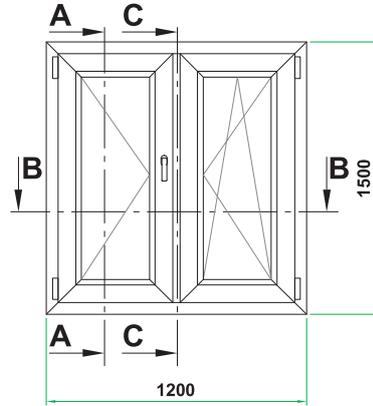


Section C-C

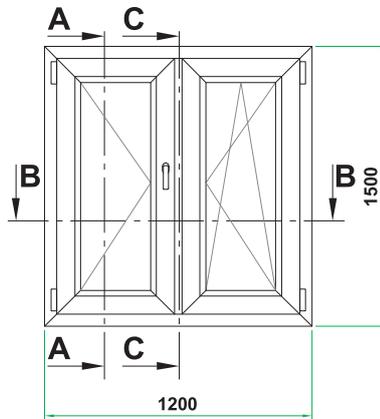


1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash size	= RAM - 84	= 1416
3	FFM = Rebate size	= RAM - 124	= 1376
4	GLM = Glassbead size	= RAM - 200	= 1300
5	GTM = Glass size	= RAM - 208	= 1292
6	SM = Overhung size	= RAM - 168	= 1332
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B

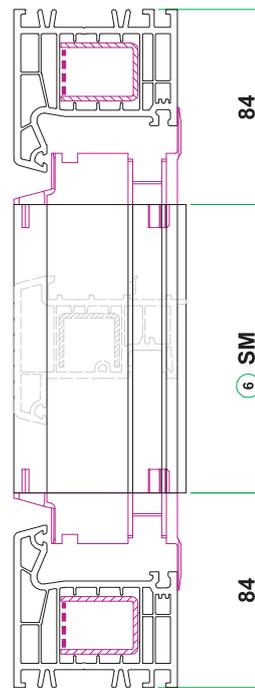
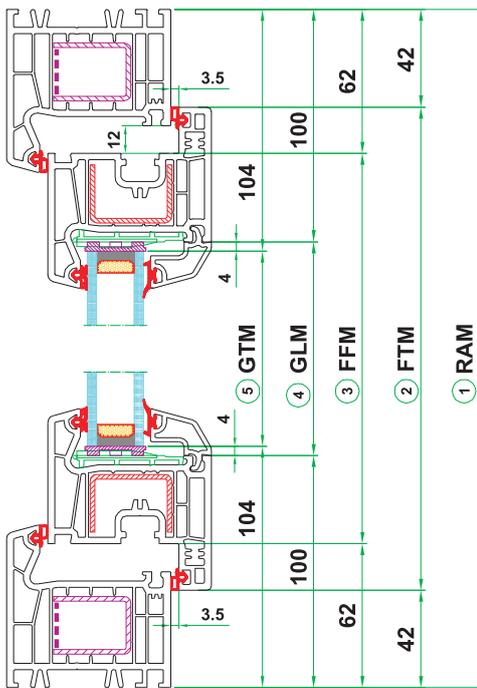


Pos.	Description	Formula	mm
7	RAM = Frame reference size		e.g. 1200
8	RAM 1		e.g. 600
9	RAM 2		e.g. 600
10	FTM 1 = Sash size	= RAM1 - 46	= 554
11	FTM 2 = Sash size	= RAM2 - 46	= 554
12	FFM 1 = Rebate size	= RAM1 - 86	= 514
13	FFM 2 = Rebate size	= RAM2 - 86	= 514
14	GLM 1 = Glassbead size	= RAM1 - 162	= 438
15	GLM 2 = Glassbead size	= RAM2 - 162	= 438
16	GTM 1 = Glass size	= RAM1 - 170	= 430
17	GTM 2 = Glass size	= RAM2 - 170	= 430
Cutting dimensions - Section B-B			



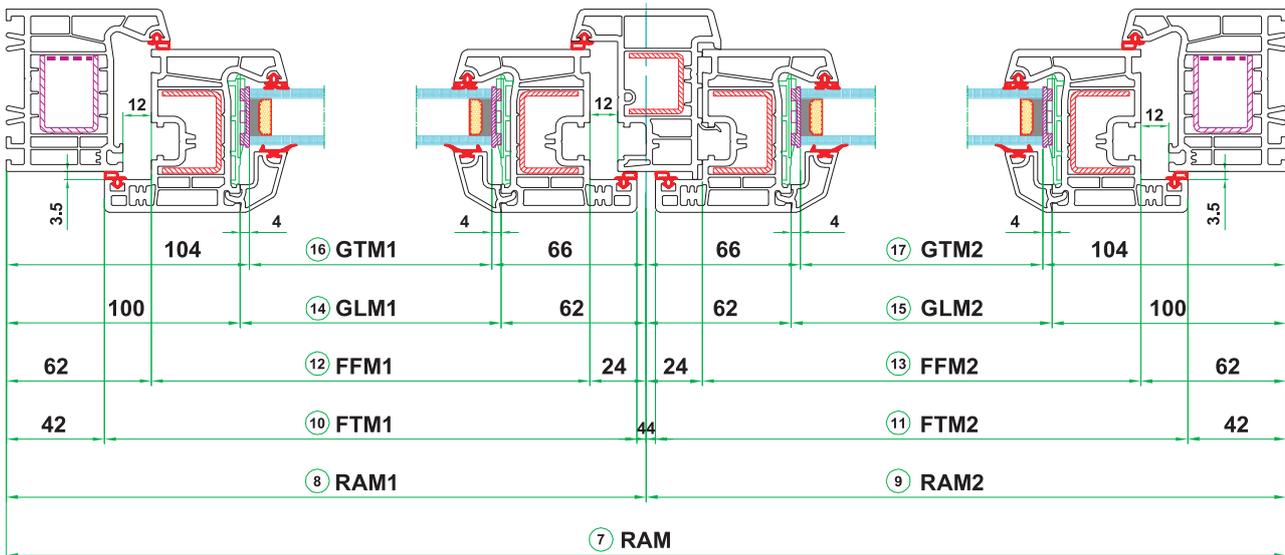
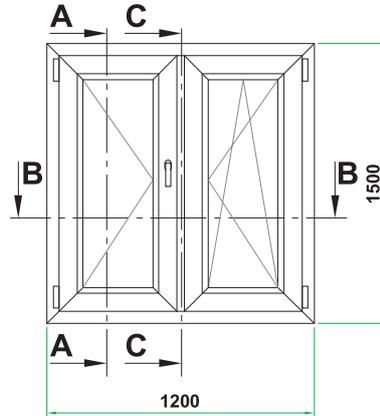
Section A-A

Section C-C

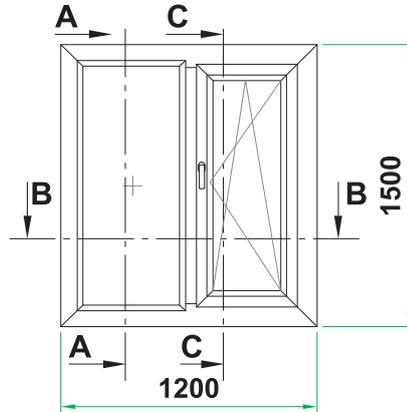


1	RAM = Frame reference size		e.g. 1500
2	FTM = Sash size	= RAM - 84	= 1416
3	FFM = Rebate size	= RAM - 124	= 1376
4	GLM = Glassbead size	= RAM - 200	= 1300
5	GTM = Glass size	= RAM - 208	= 1292
6	SM = Overhung size	= RAM - 168	= 1332
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B

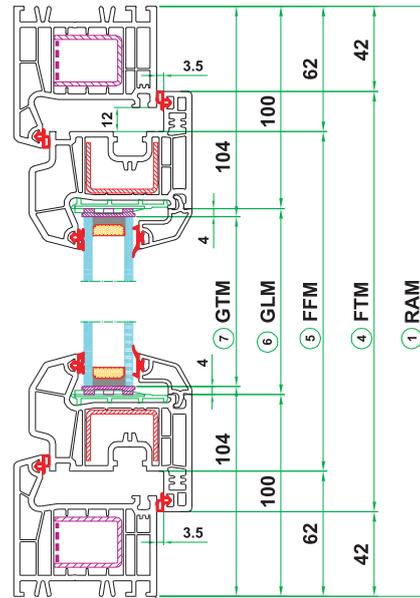
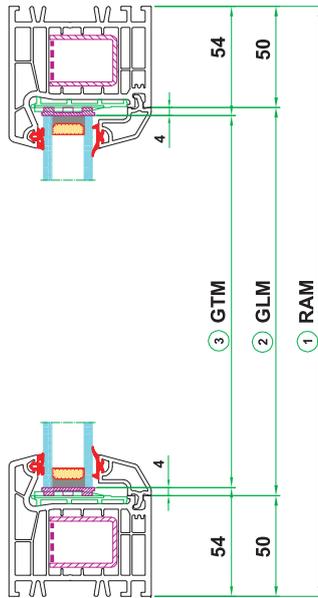


Pos.	Description	Formula	mm
7	RAM = Frame reference size		e.g. 1200
8	RAM 1		e.g. 600
9	RAM 2		e.g. 600
10	FTM 1 = Sash size	= RAM1 - 46	= 554
11	FTM 2 = Sash size	= RAM2 - 46	= 554
12	FFM 1 = Rebate size	= RAM1 - 86	= 514
13	FFM 2 = Rebate size	= RAM2 - 86	= 514
14	GLM 1 = Glassbead size	= RAM1 - 162	= 438
15	GLM 2 = Glassbead size	= RAM2 - 162	= 438
16	GTM 1 = Glass size	= RAM1 - 170	= 430
17	GTM 2 = Glass size	= RAM2 - 170	= 430
	Cutting dimensions - Section B-B		

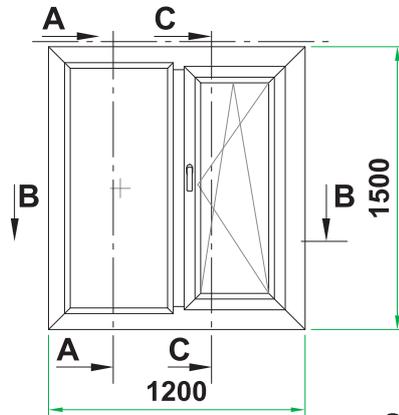


Section A-A

Section C-C

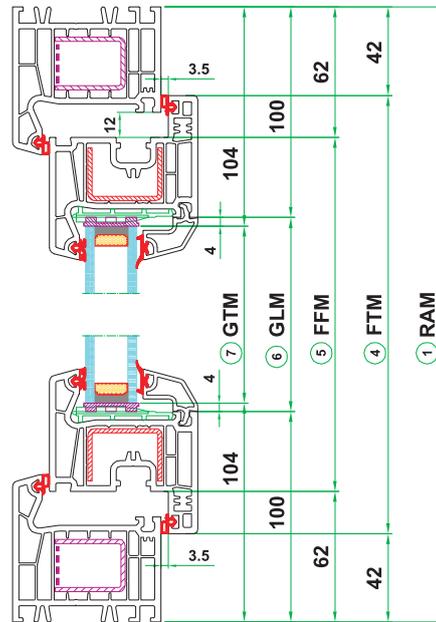
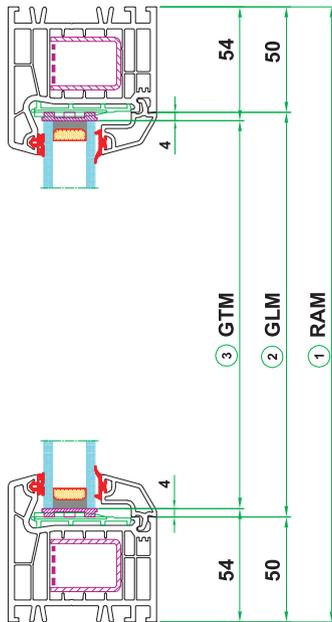


1	RAM = Frame reference size		e.g. 1500
2	GLM = Glassbead size	= RAM - 100	= 1400
3	GTM = Glass size	= RAM - 108	= 1392
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			
4	FTM = Sash size	= RAM - 84	= 1416
5	FFM = Rebate size	= RAM - 124	= 1376
6	GLM = Glassbead size	= RAM - 200	= 1300
7	GTM = Glass size	= RAM - 208	= 1292
	KM = Mullion size (S-563AZP03 & 04)	= RAM - 94	= 1406
Pos.	Description	Formula	mm
Cutting dimensions - Section C-C			



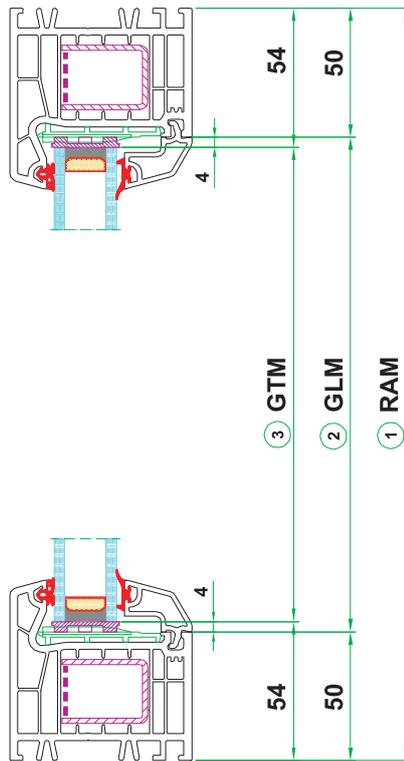
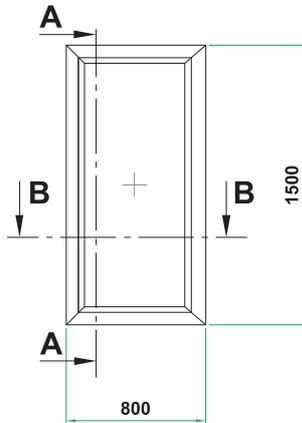
Section A-A

Section C-C



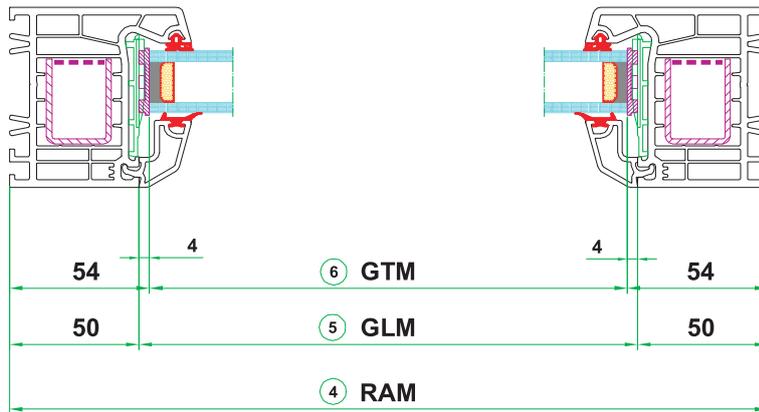
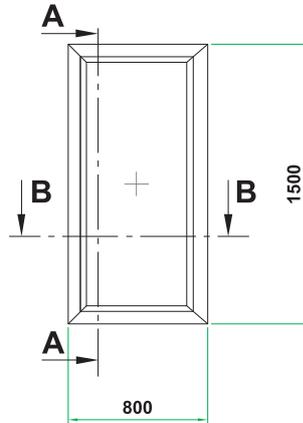
1	RAM = Frame reference size		e.g. 1500
2	GLM = Glassbead size	= RAM - 100	= 1400
3	GTM = Glass size	= RAM - 108	= 1392
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			
4	FTM = Sash size	= RAM - 84	= 1416
5	FFM = Rebate size	= RAM - 124	= 1376
6	GLM = Glassbead size	= RAM - 200	= 1300
7	GTM = Glass size	= RAM - 208	= 1292
	KM = Mullion size (S-563AZP03 & 04)	= RAM - 94	= 1406
Pos.	Description	Formula	mm
Cutting dimensions - Section C-C			

Section A-A



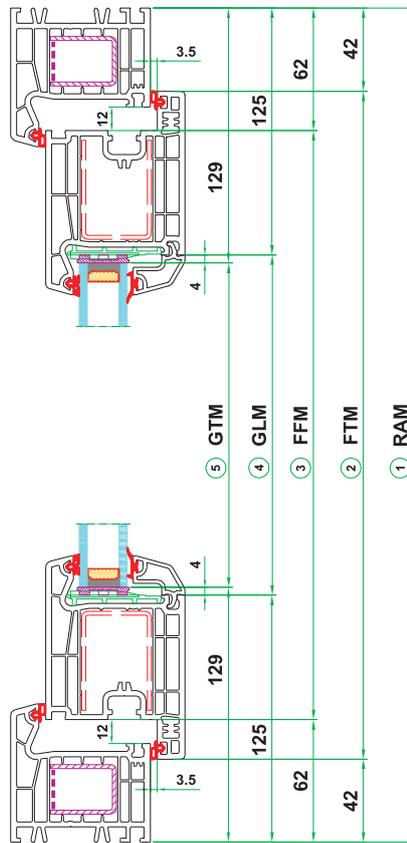
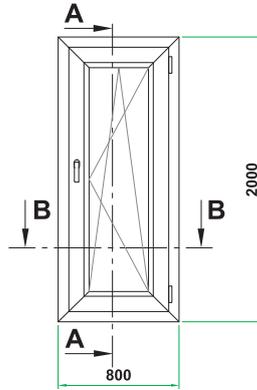
1	RAM = Frame reference size		e.g. 1500
2	GLM = Glassbead size	= RAM - 100	= 1400
3	GTM = Glass size	= RAM - 108	= 1392
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B



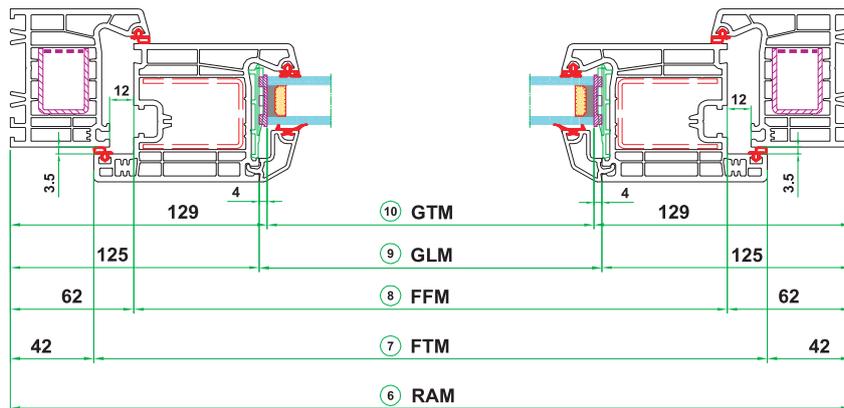
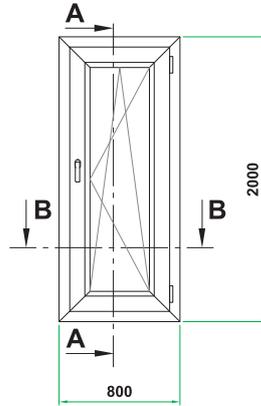
Pos.	Description	Formula	mm
4	RAM = Frame reference size		e.g. 800
5	GLM = Glassbead size	= RAM - 100	= 700
6	GTM = Glass size	= RAM - 108	= 692
Cutting dimensions - Section B-B			

Section A-A



1	RAM = Frame reference size		e.g. 2000
2	FTM = Sash size	= RAM - 84	= 1916
3	FFM = Rebate size	= RAM - 124	= 1876
4	GLM = Glassbead size	= RAM - 250	= 1750
5	GTM = Glass size	= RAM - 258	= 1742
Pos.	Description	Formula	mm
Cutting dimensions - Section A-A			

Section B-B

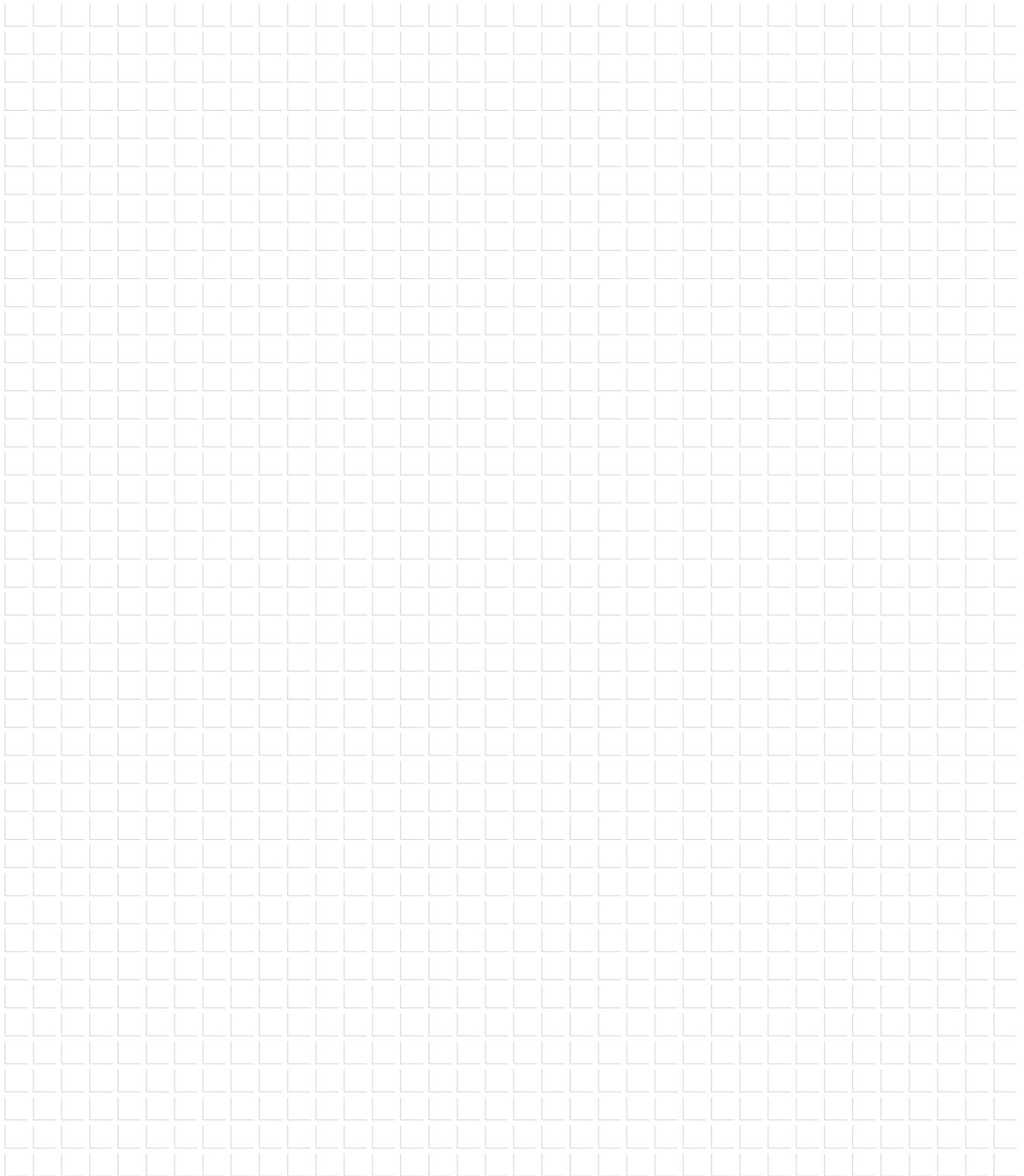


Pos.	Description	Formula	mm
6	RAM = Frame reference size		e.g. 800
7	FTM = Sash size	= RAM - 84	= 716
8	FFM = Rebate size	= RAM - 124	= 676
9	GLM = Glassbead size	= RAM - 250	= 550
10	GTM = Glass size	= RAM - 258	= 542
Cutting dimensions - Section B-B			

VISTA BEST®

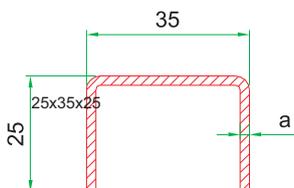
Best of the Best

UPVC Profile Producer

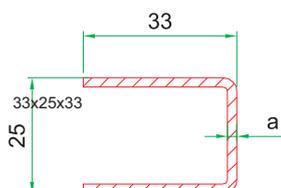


Reinforcement (Info & Cutting Dimensions)

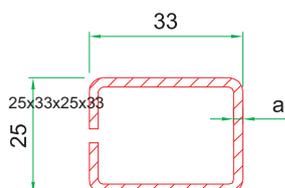
S-563TRE01
= S-507TRE01



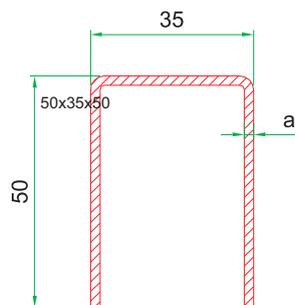
S-563TRE02
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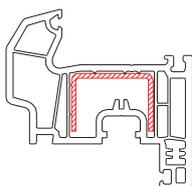
S-563TRE03
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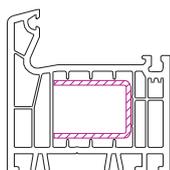
S-563TRE04
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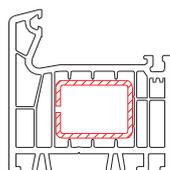
Sash S-563.02



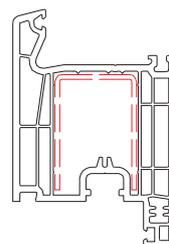
Frame S-563.01



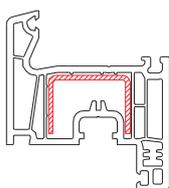
Frame S-563.01



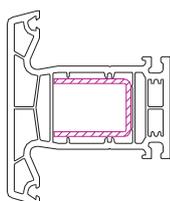
Door Sash S-563.15



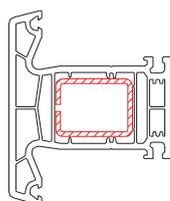
Sash S-563.16



Mullion S-563.03



Mullion S-563.03



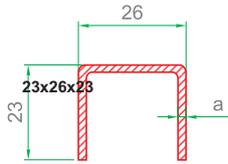
thickness a [mm]	weight [kg/m]
1,50	0,93
2,00	1,22
2,50	1,50
3,00	1,76

thickness a [mm]	weight [kg/m]
1,50	0,99
2,00	1,31
2,50	1,63
3,00	1,93

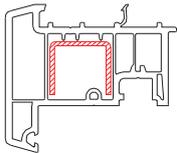
thickness a [mm]	weight [kg/m]
1,50	1,19
2,00	1,56
2,50	1,93
3,00	2,27

thickness a [mm]	weight [kg/m]
1,50	1,51
2,00	1,99
2,50	2,47
3,00	2,93

S-563TRE05
= S-507TRE05

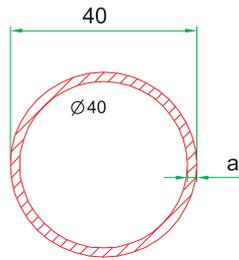


Overhung S-563.04

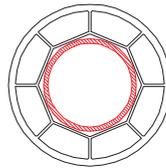


thickness a [mm]	weight [kg/m]
1,50	0,78
2,00	1,02
2,50	1,25
3,00	1,48

S-563TRE06
= S-507TRE07

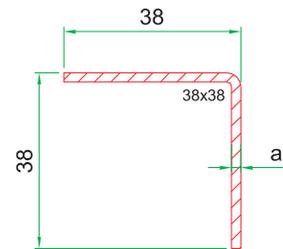


Bay&bow pole S-563.09

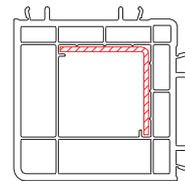


thickness a [mm]	weight [kg/m]
1,50	1,40
2,00	1,84
2,50	2,27
3,00	2,69

S-563TRE07

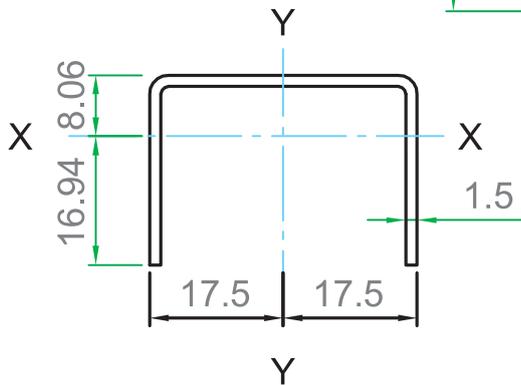
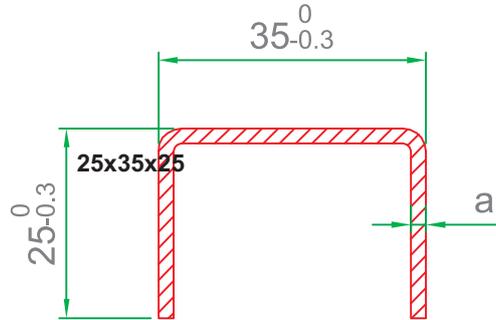


90° pole S-563.10



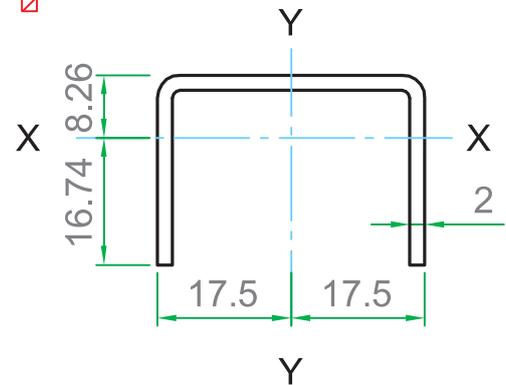
thickness a [mm]	weight [kg/m]
1,50	0,85
2,00	1,13
2,50	1,40
3,00	1,66

S-563TRE01
= S-507TRE01



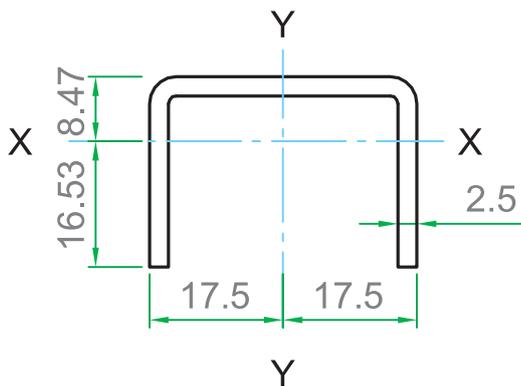
$$I_x = 0.78 \text{ [cm}^4\text{]}$$

$$I_y = 2.45 \text{ [cm}^4\text{]}$$



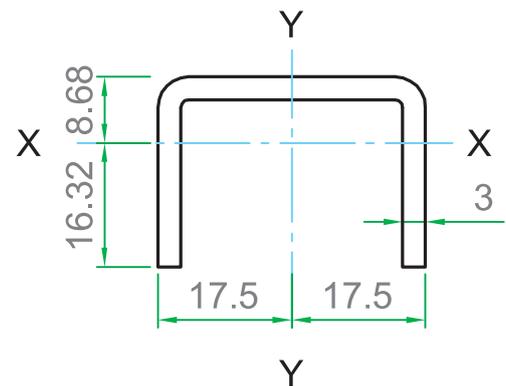
$$I_x = 1.01 \text{ [cm}^4\text{]}$$

$$I_y = 3.12 \text{ [cm}^4\text{]}$$



$$I_x = 1.22 \text{ [cm}^4\text{]}$$

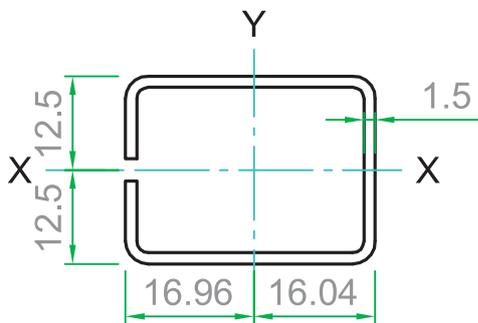
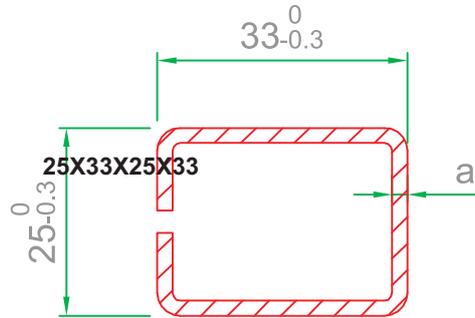
$$I_y = 3.73 \text{ [cm}^4\text{]}$$



$$I_x = 1.41 \text{ [cm}^4\text{]}$$

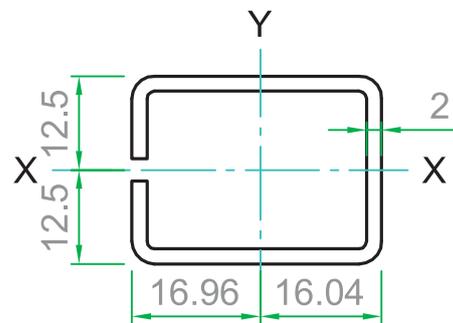
$$I_y = 4.28 \text{ [cm}^4\text{]}$$

S-563TRE03
= S-507TRE10



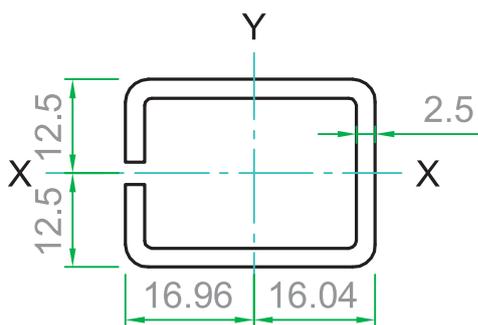
$$I_x = 1.55 \text{ [cm}^4\text{]}$$

$$I_y = 2.27 \text{ [cm}^4\text{]}$$



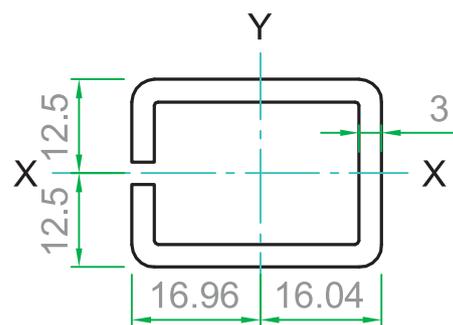
$$I_x = 1.96 \text{ [cm}^4\text{]}$$

$$I_y = 2.89 \text{ [cm}^4\text{]}$$



$$I_x = 2.33 \text{ [cm}^4\text{]}$$

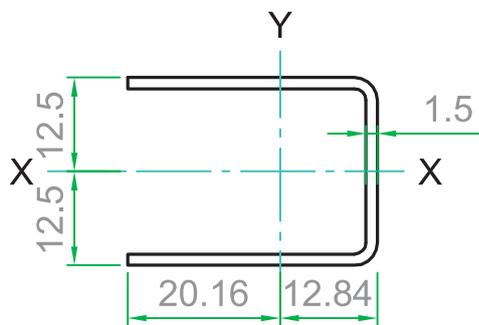
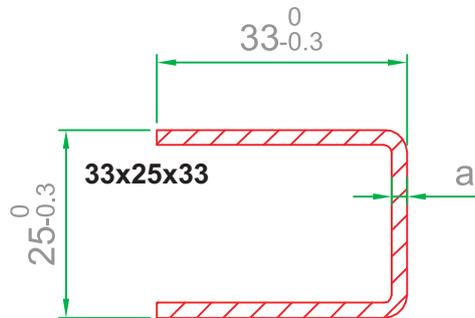
$$I_y = 3.47 \text{ [cm}^4\text{]}$$



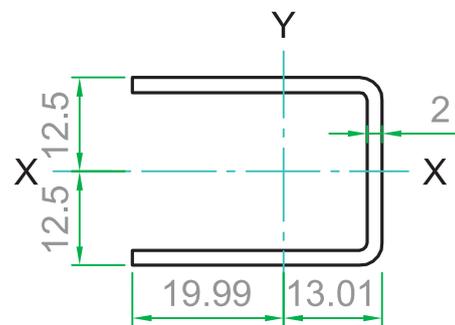
$$I_x = 2.65 \text{ [cm}^4\text{]}$$

$$I_y = 3.97 \text{ [cm}^4\text{]}$$

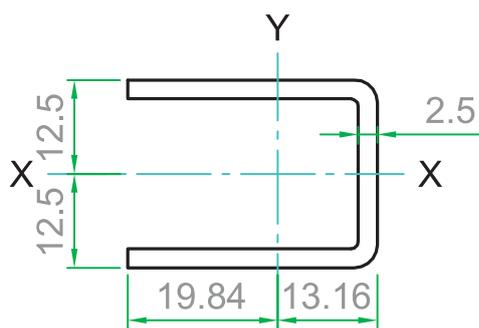
S-563TRE02
= S-507TRE09



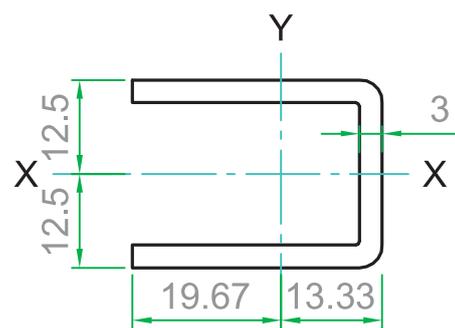
$I_x = 1.46 \text{ [cm}^4\text{]}$
 $I_y = 1.47 \text{ [cm}^4\text{]}$



$I_x = 1.85 \text{ [cm}^4\text{]}$
 $I_y = 1.91 \text{ [cm}^4\text{]}$

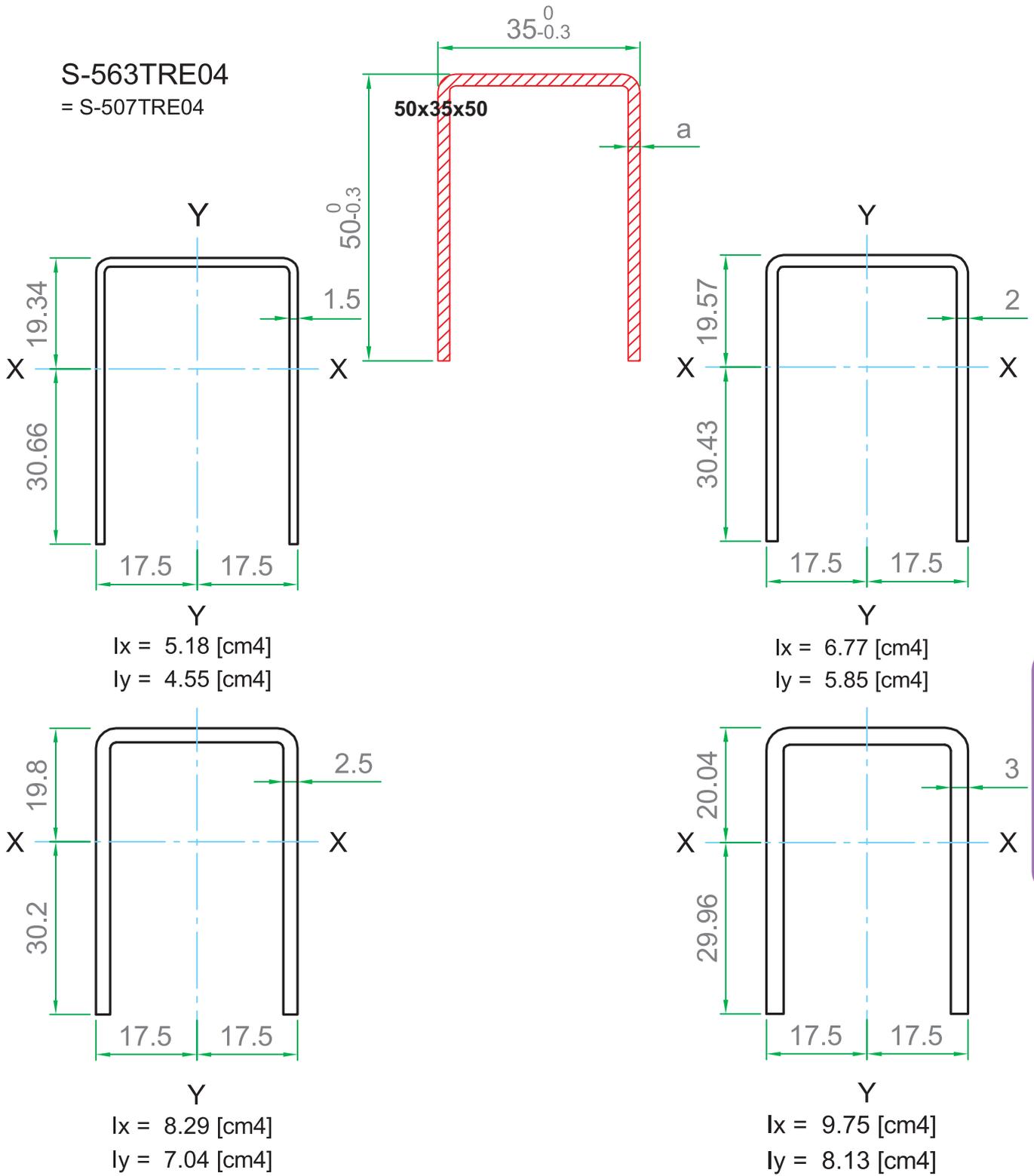


$I_x = 2.21 \text{ [cm}^4\text{]}$
 $I_y = 2.34 \text{ [cm}^4\text{]}$



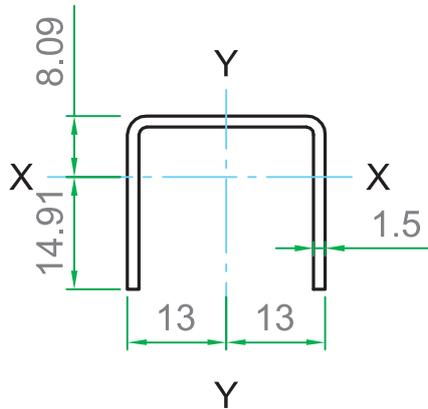
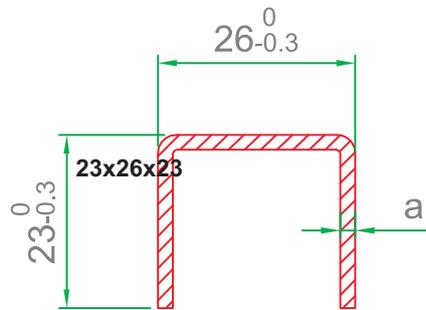
$I_x = 2.53 \text{ [cm}^4\text{]}$
 $I_y = 2.74 \text{ [cm}^4\text{]}$

S-563TRE04
= S-507TRE04

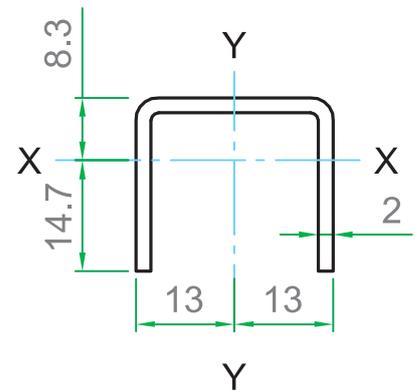


S-563TRE05

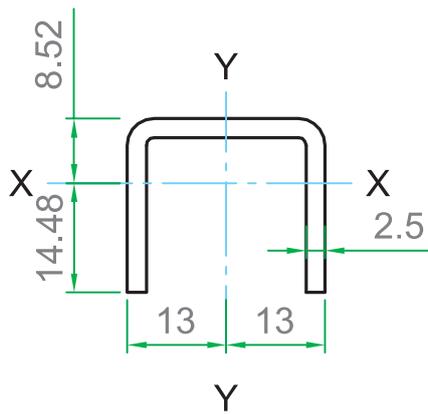
= S-507TRE05



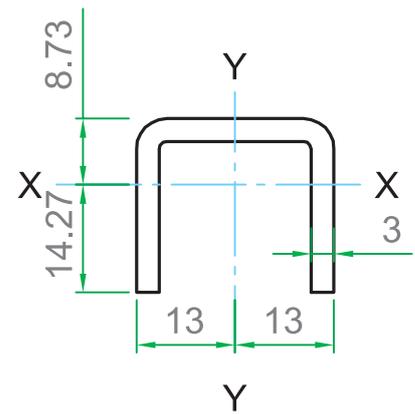
$I_x = 0.56 \text{ [cm}^4\text{]}$
 $I_y = 1.15 \text{ [cm}^4\text{]}$



$I_x = 0.71 \text{ [cm}^4\text{]}$
 $I_y = 1.45 \text{ [cm}^4\text{]}$

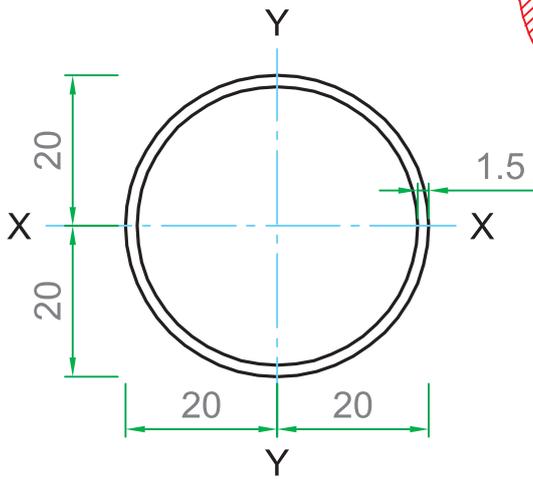
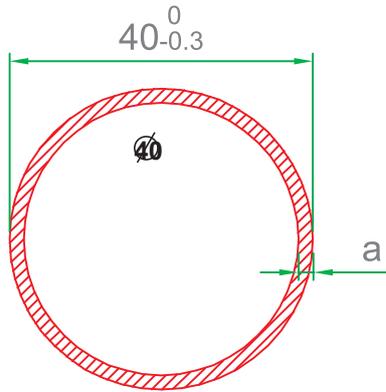


$I_x = 0.86 \text{ [cm}^4\text{]}$
 $I_y = 1.71 \text{ [cm}^4\text{]}$



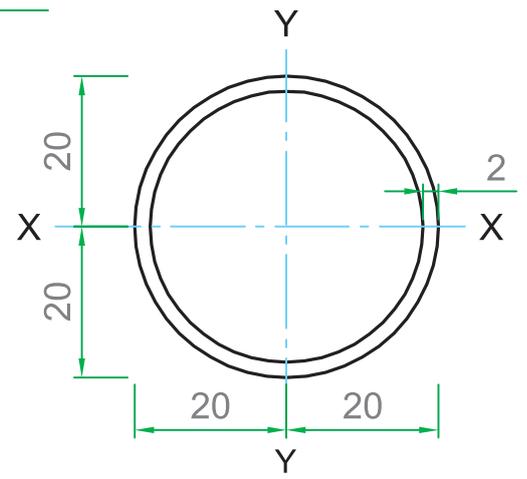
$I_x = 0.99 \text{ [cm}^4\text{]}$
 $I_y = 1.94 \text{ [cm}^4\text{]}$

S-563TRE06
= S-507TRE07



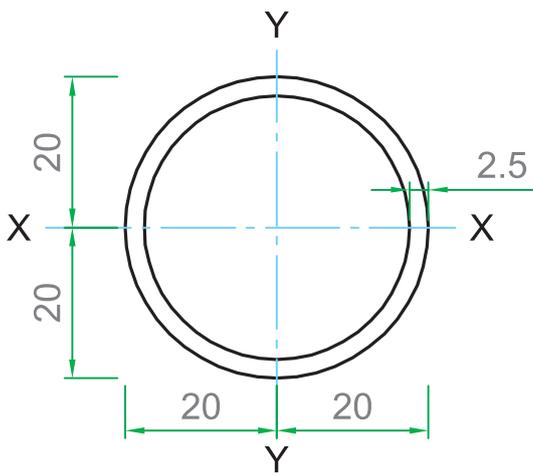
$$I_x = 3.37 \text{ [cm}^4\text{]}$$

$$I_y = 3.37 \text{ [cm}^4\text{]}$$



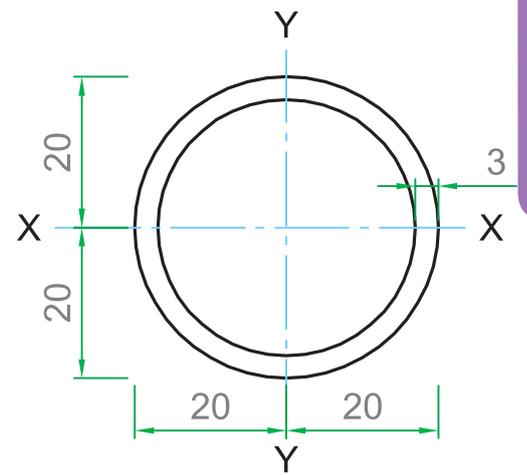
$$I_x = 4.32 \text{ [cm}^4\text{]}$$

$$I_y = 4.32 \text{ [cm}^4\text{]}$$



$$I_x = 5.2 \text{ [cm}^4\text{]}$$

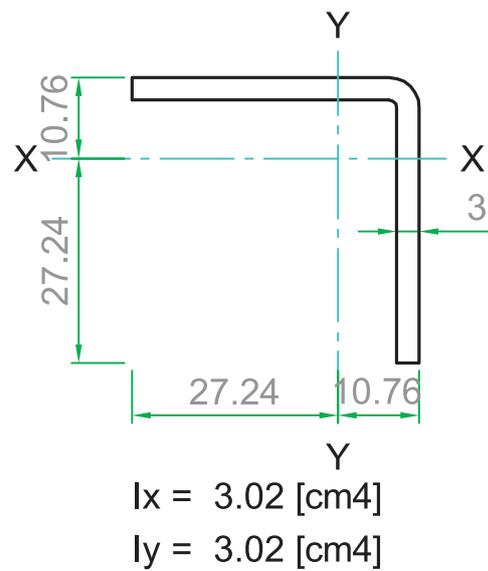
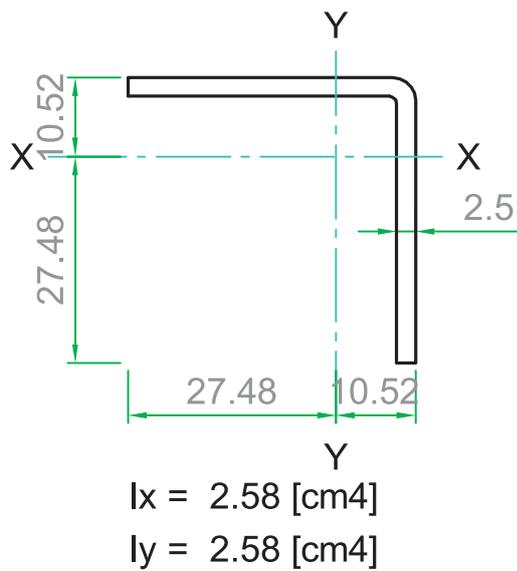
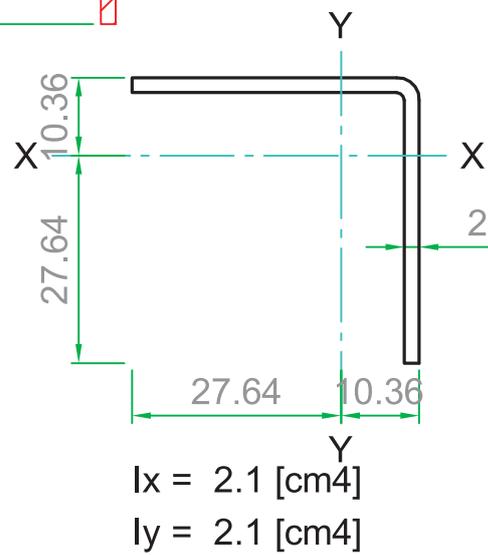
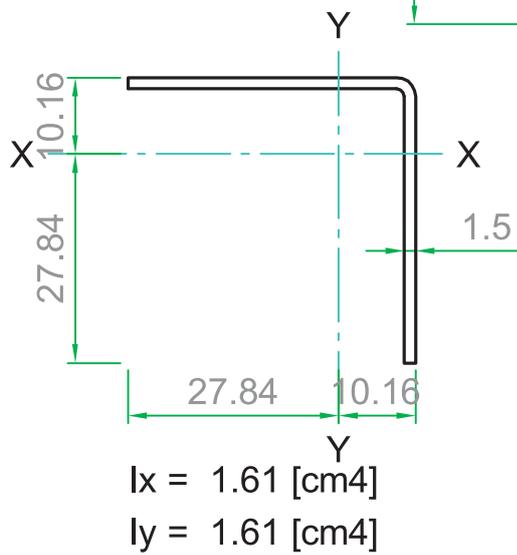
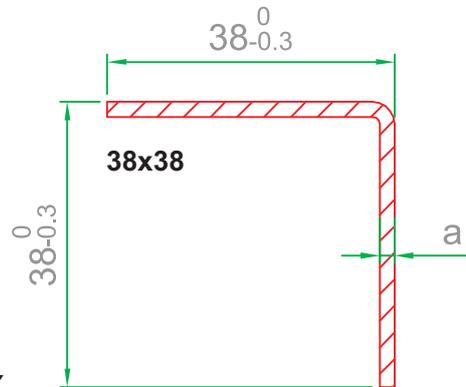
$$I_y = 5.2 \text{ [cm}^4\text{]}$$

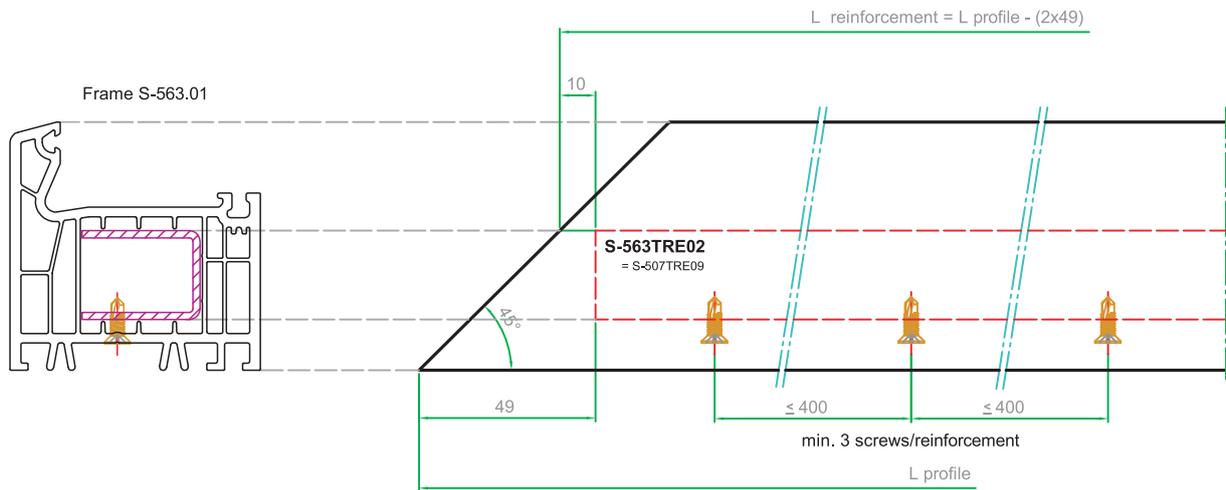


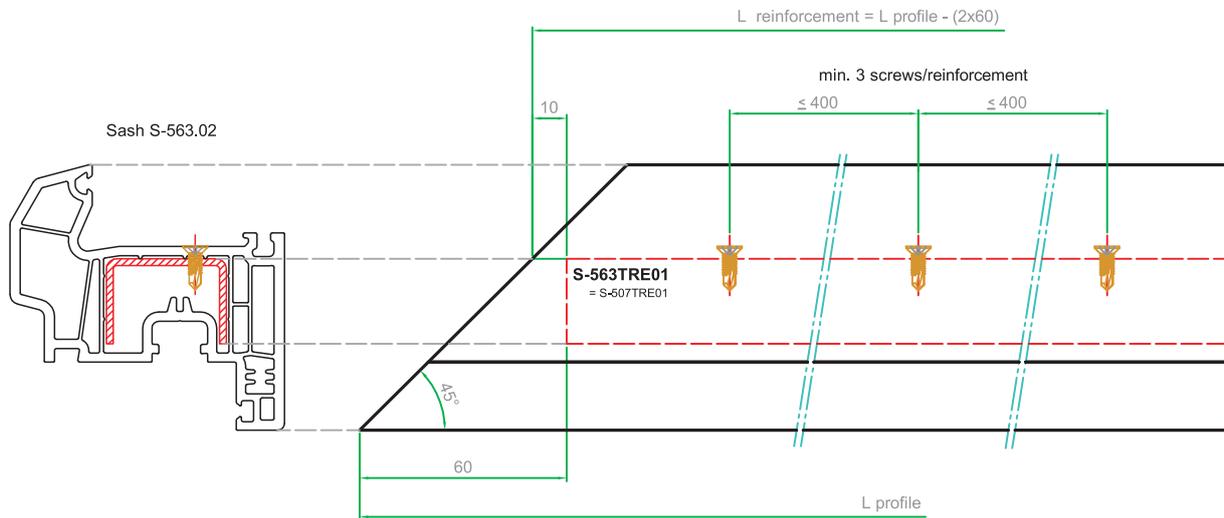
$$I_x = 6.01 \text{ [cm}^4\text{]}$$

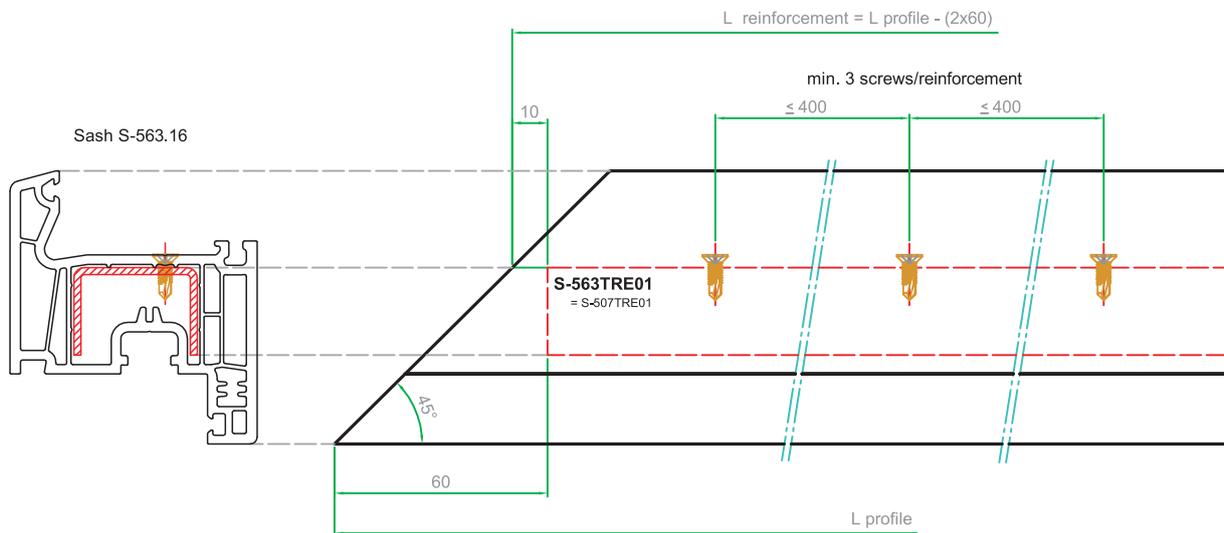
$$I_y = 6.01 \text{ [cm}^4\text{]}$$

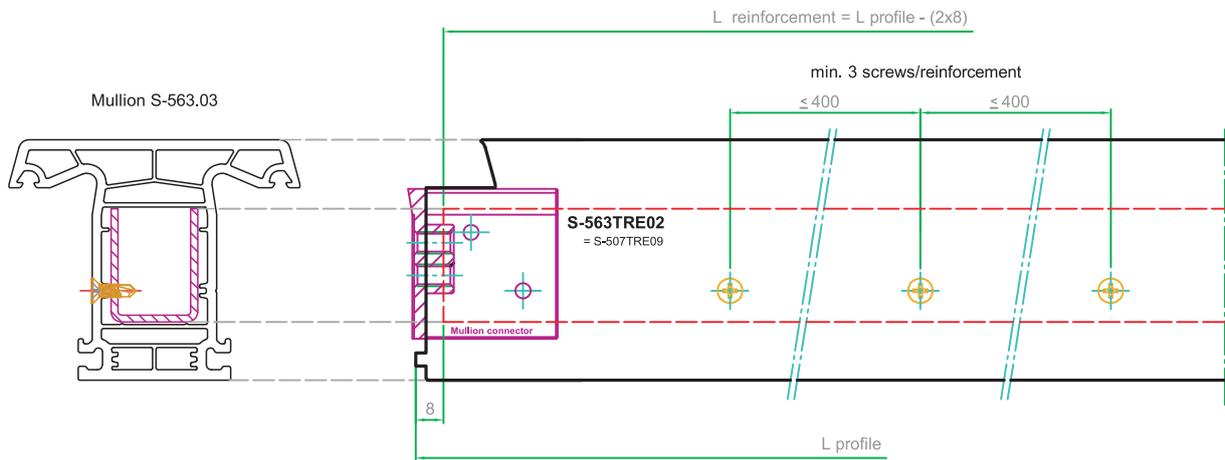
S-563TRE07

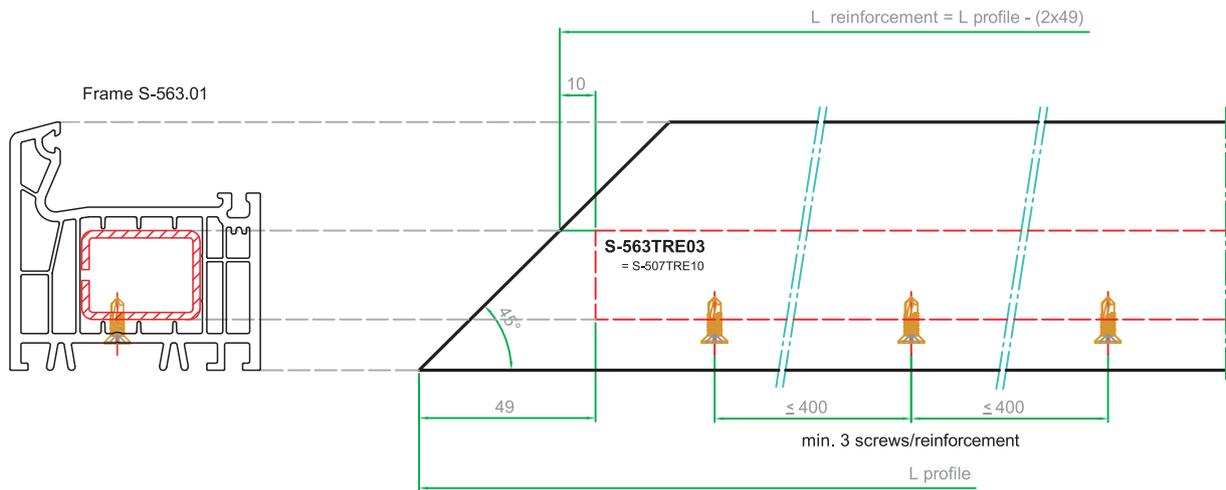


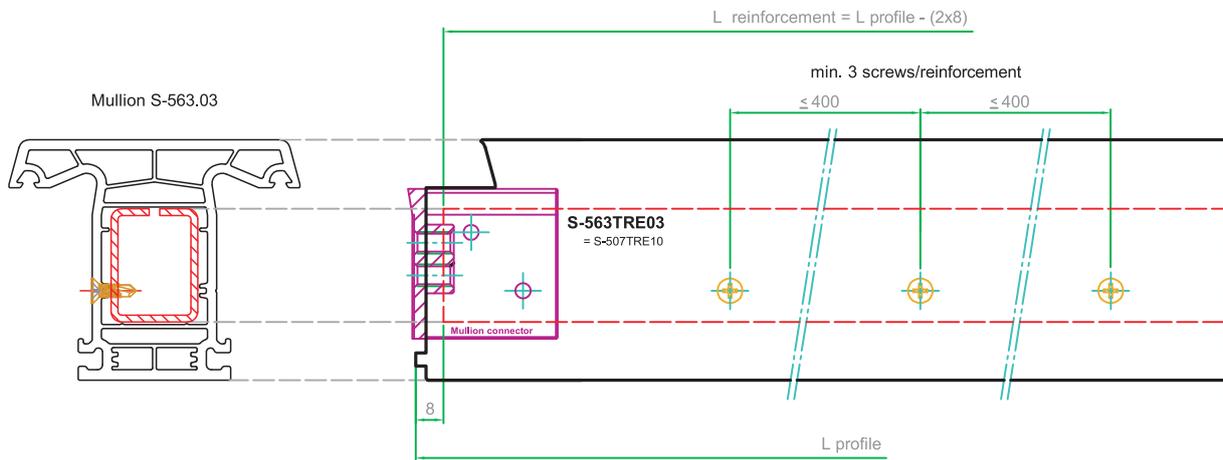


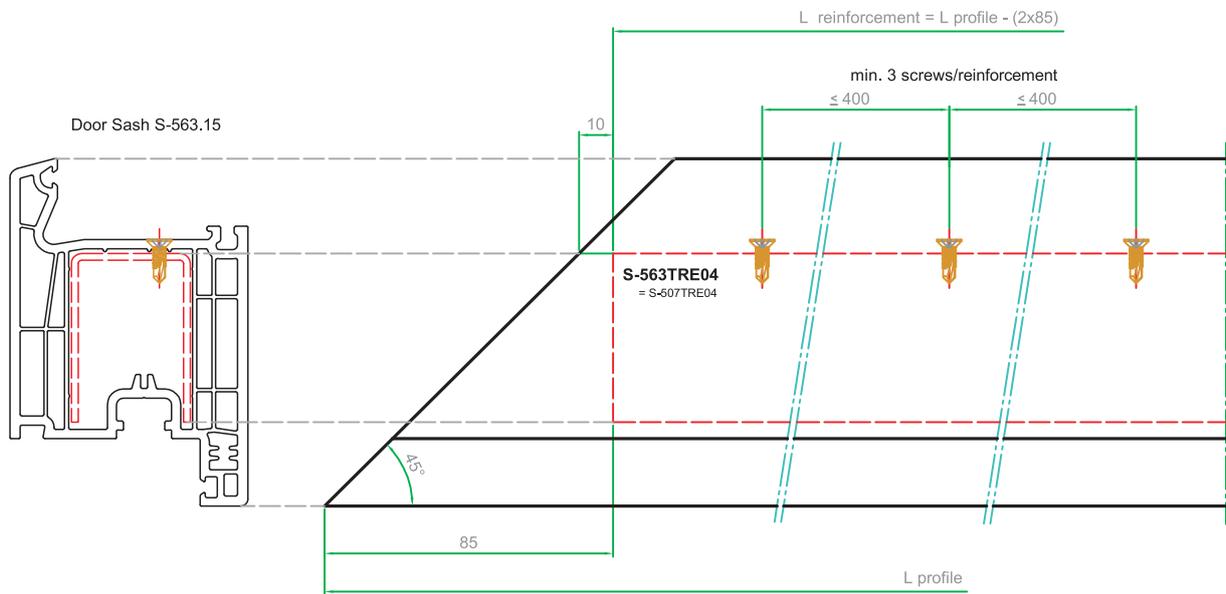


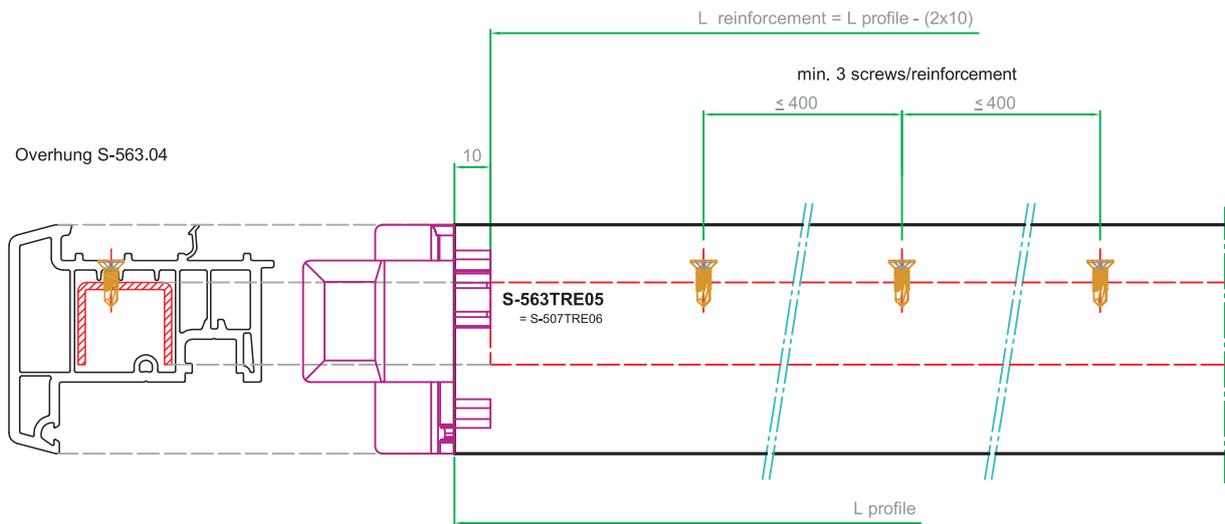


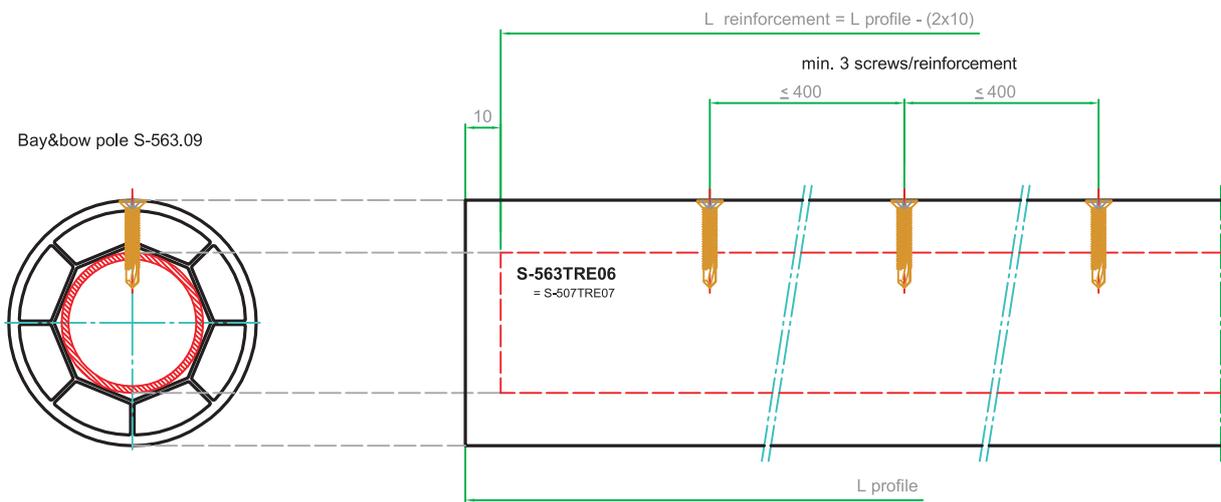


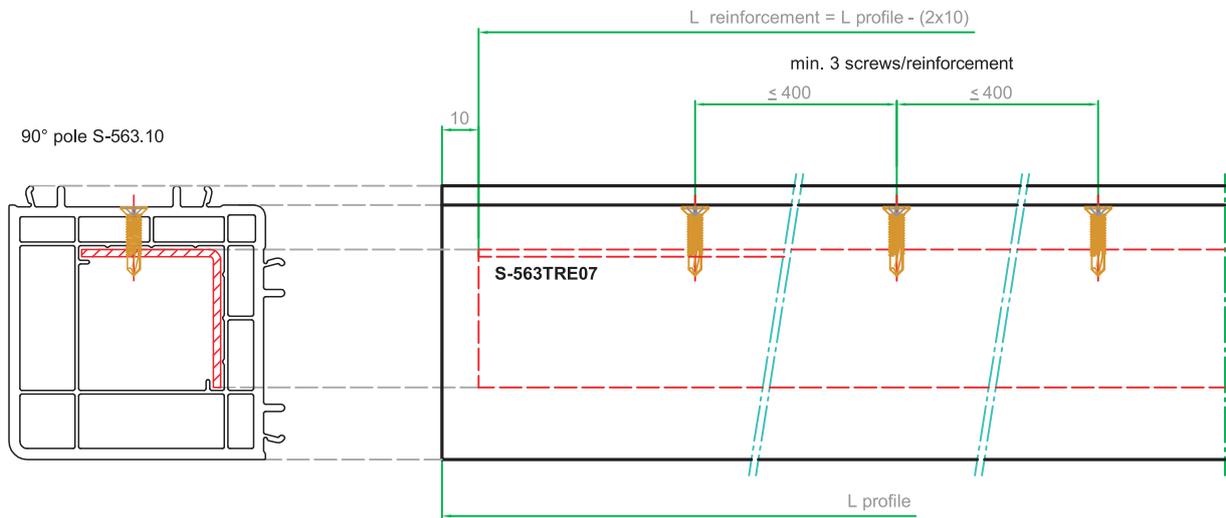










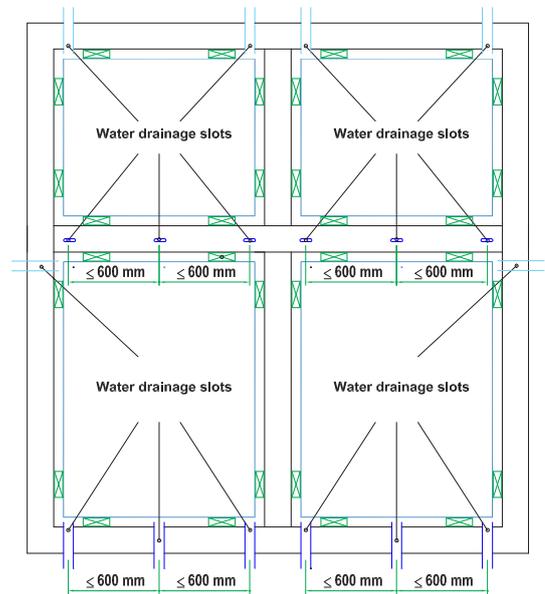
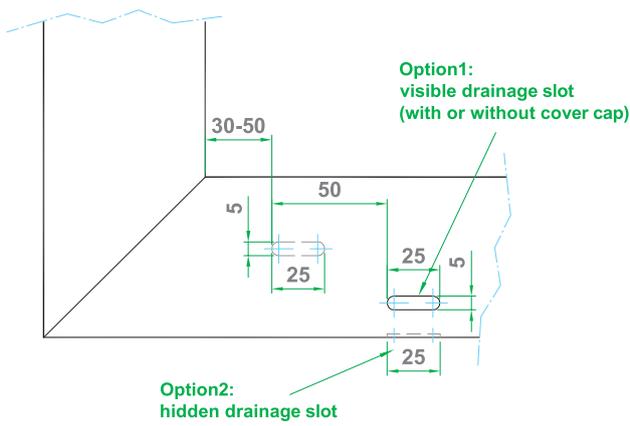
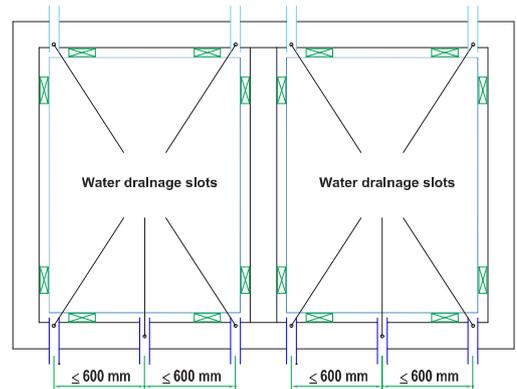
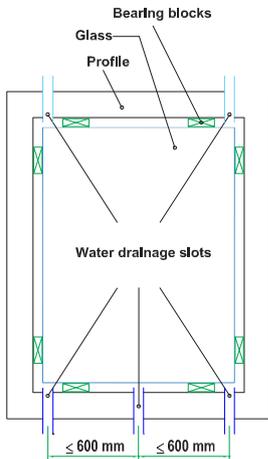


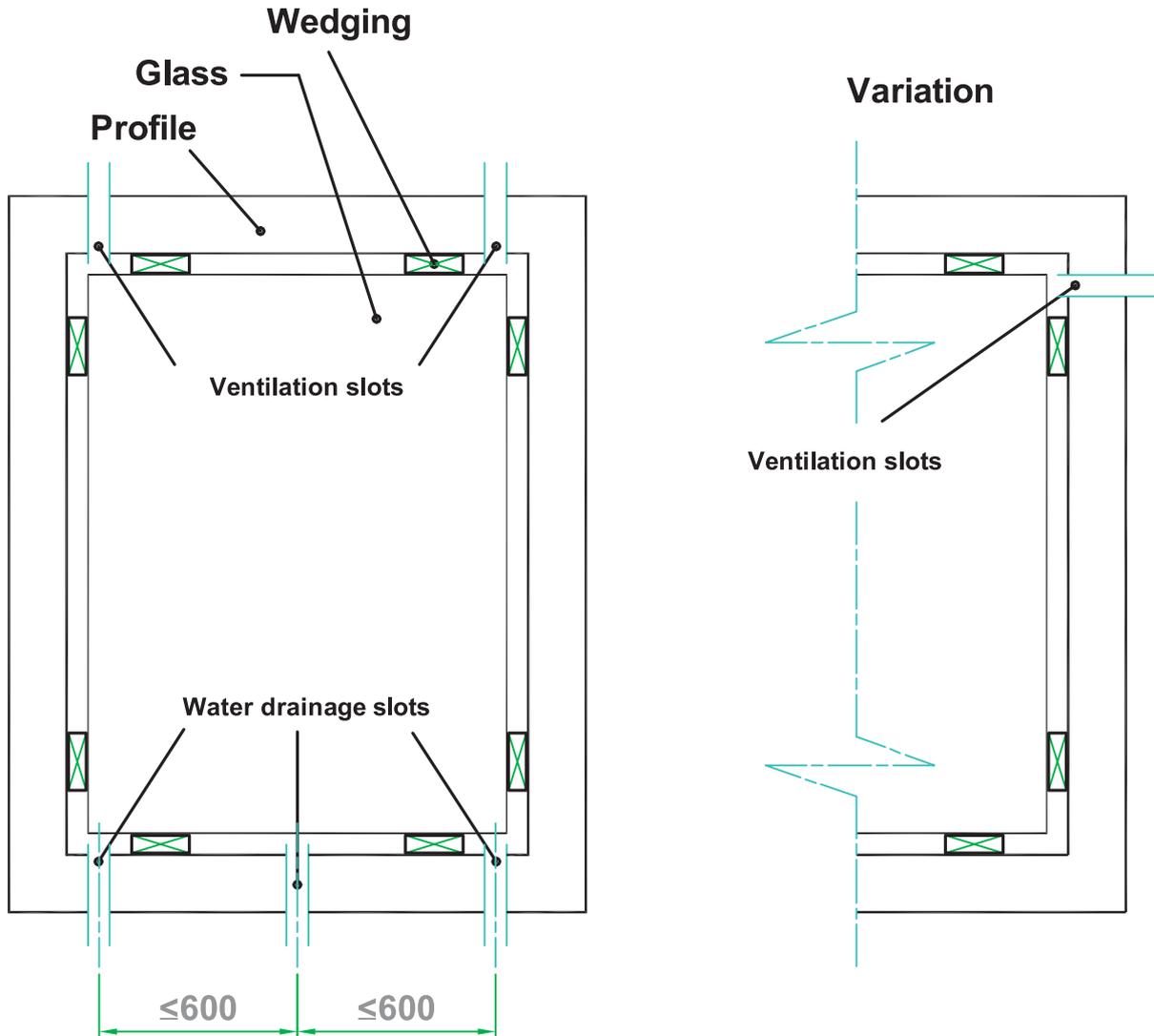
Drainage

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Minimum dimensions for water drainage slots/ventilation slots:

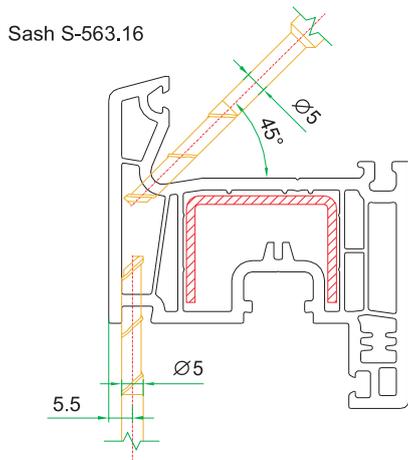
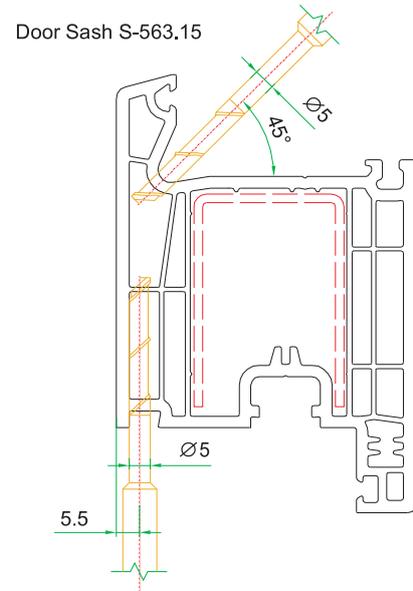
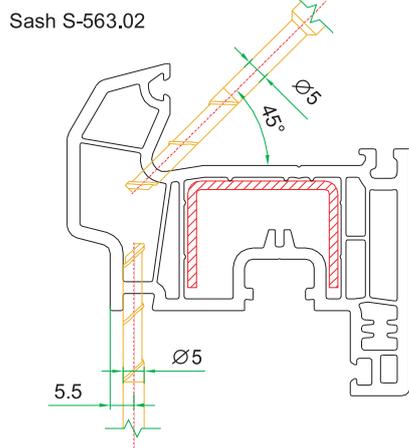
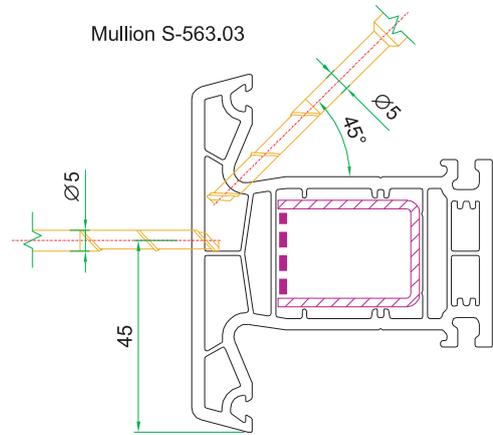
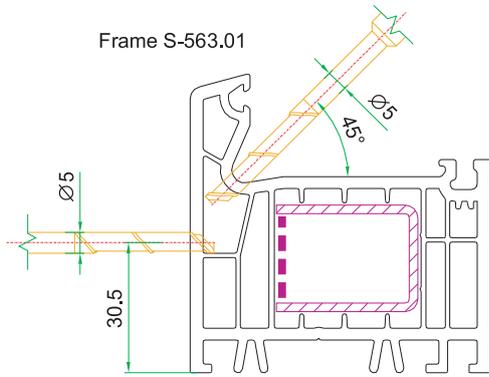
Slots: 5x25 mm or

Hole: \varnothing 8 mm (\varnothing 5 mm for ventilation slots)

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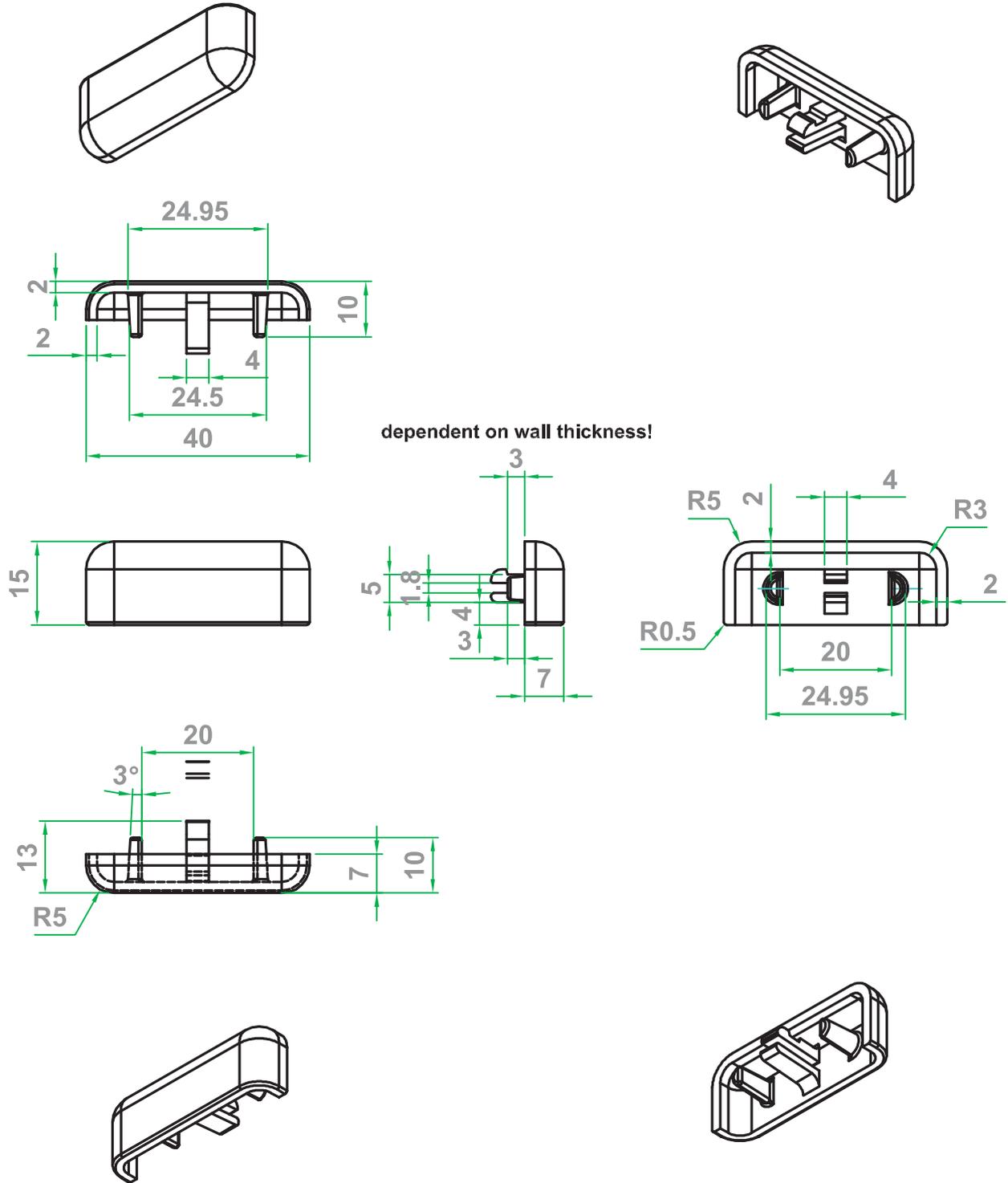
UPVC Profile Producer



Drainage

ویستا بست (سهامی خاص)

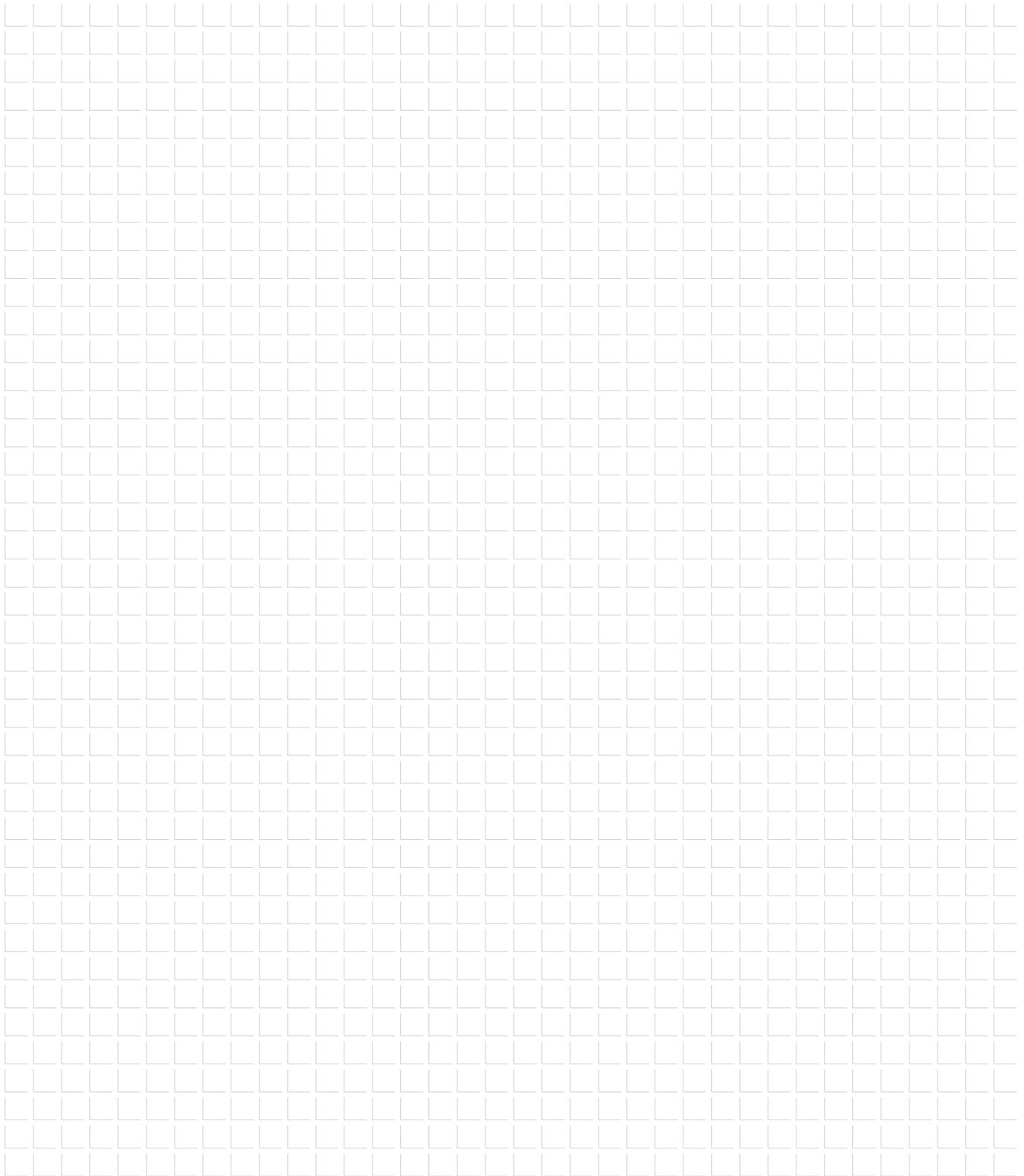
تولیدکننده پروفیل یو پی وی سی



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UPVC Profile Producer

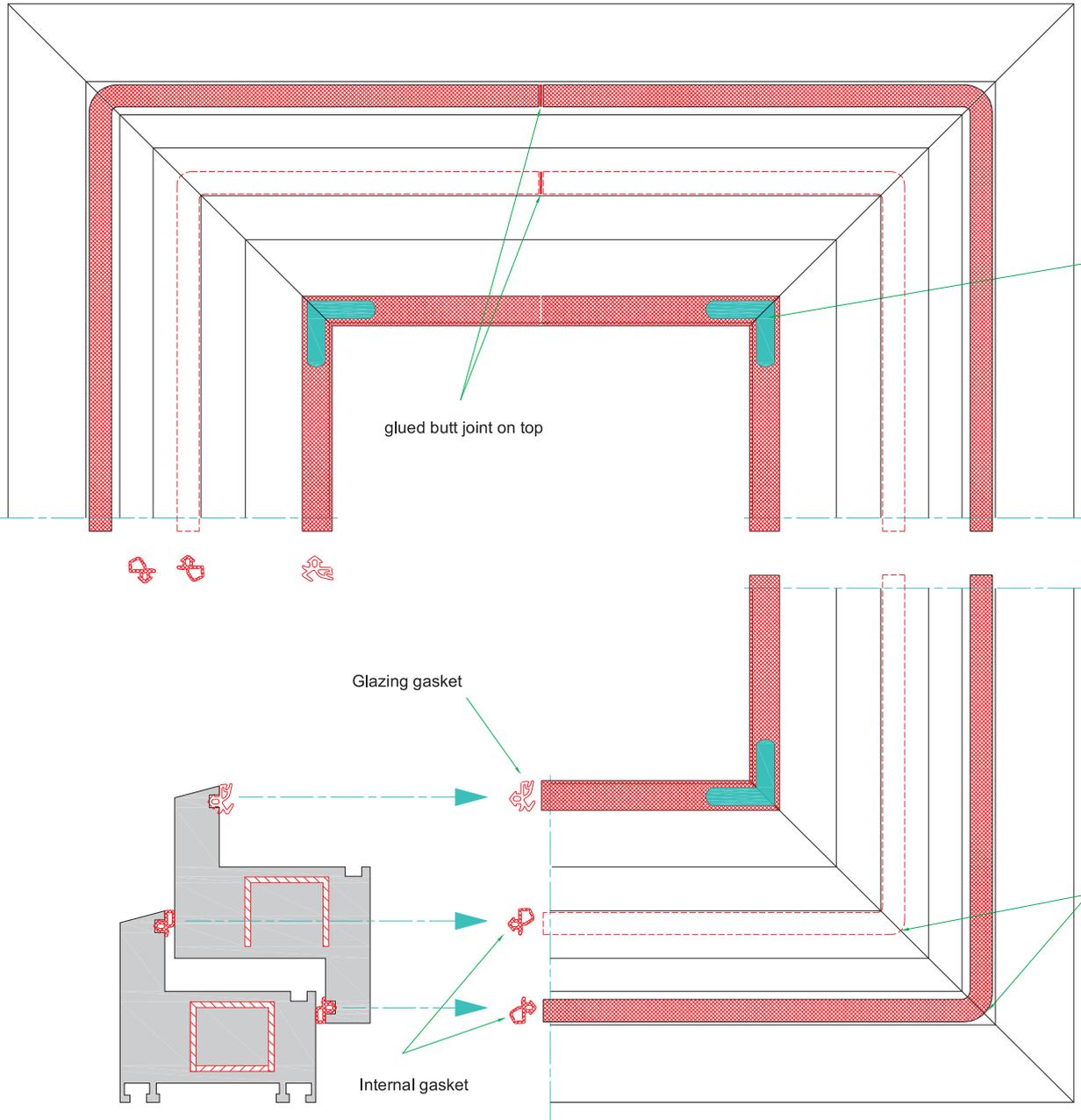


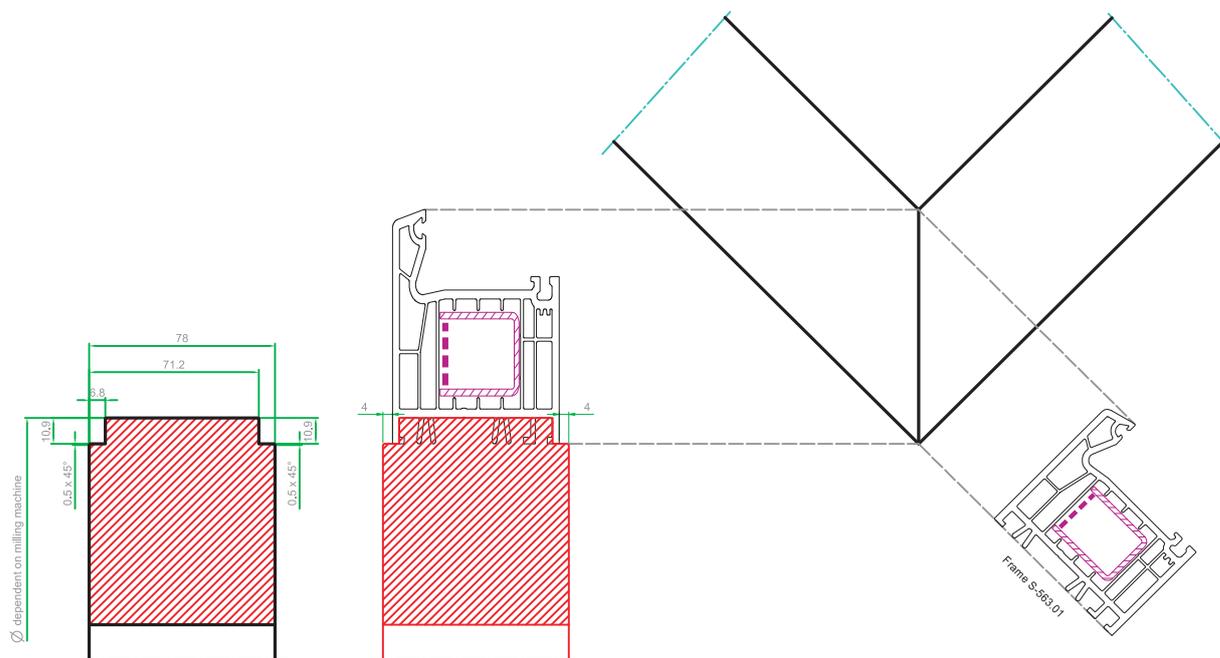
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Sealing

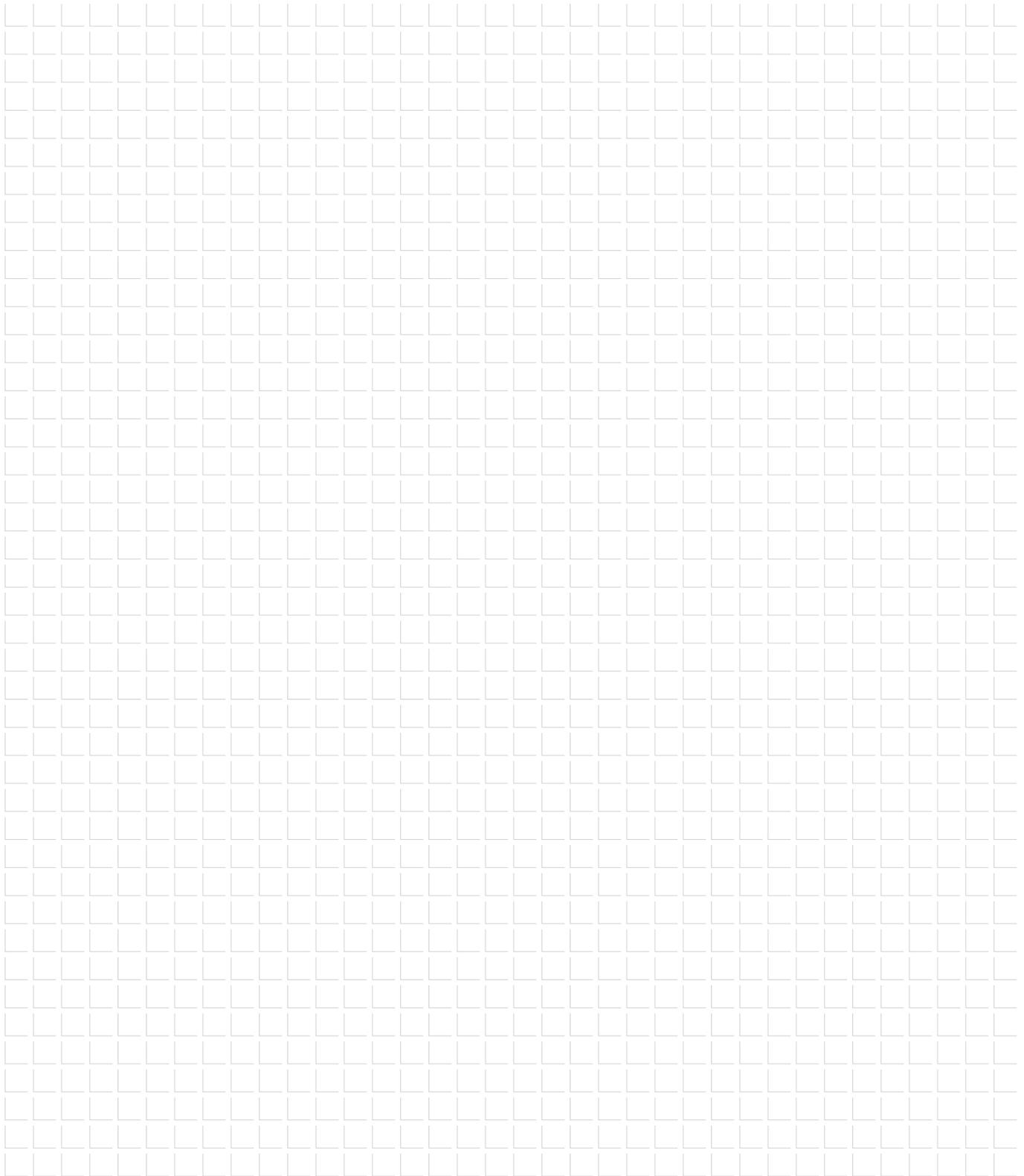




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UPVC Profile Producer

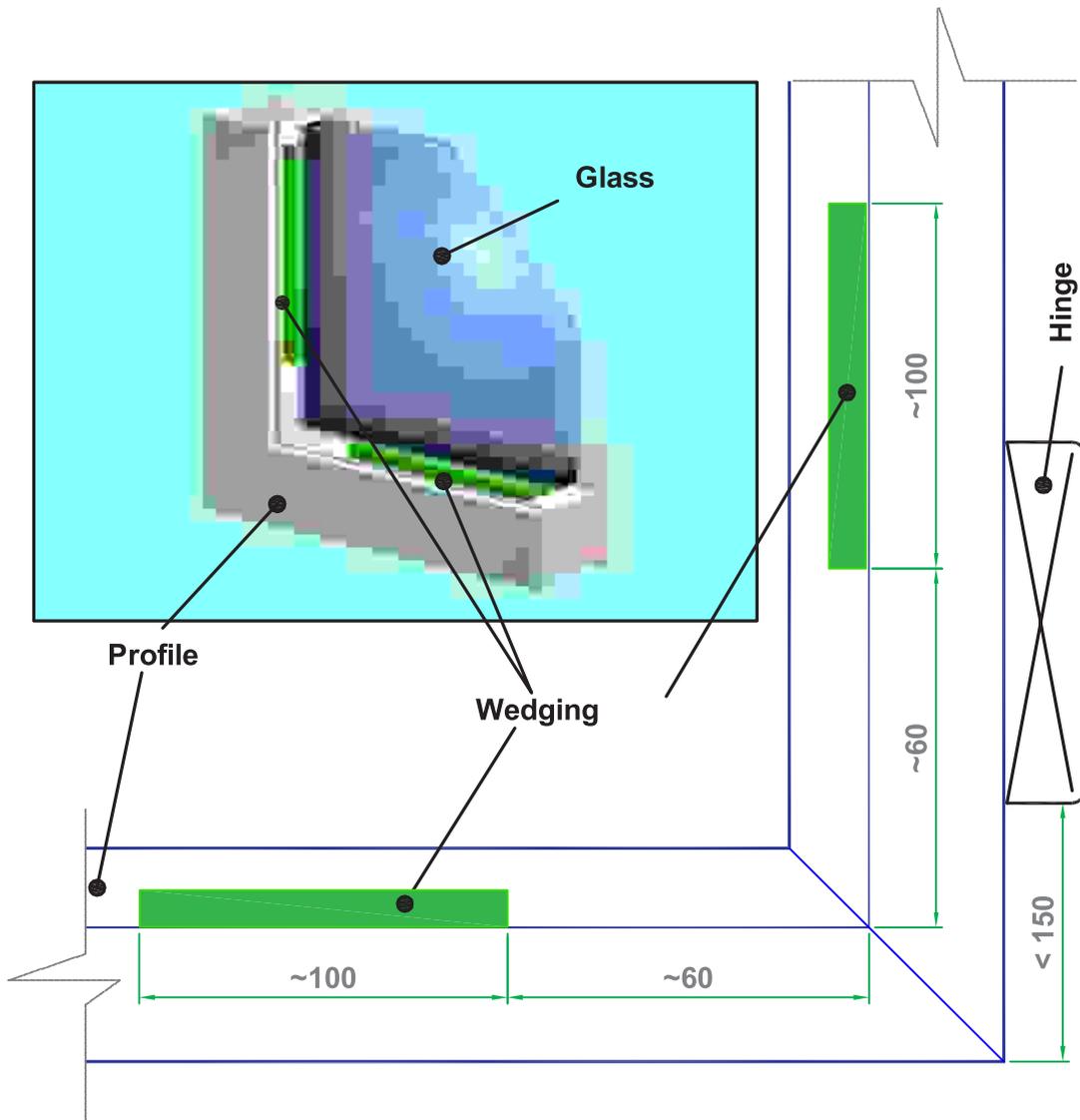


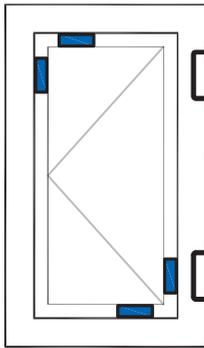
Glazing Guide Lines

VISTA BEST[®]

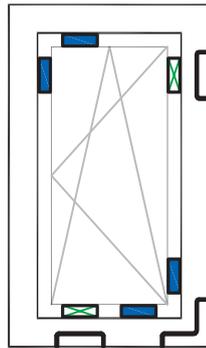
Best of the Best

UPVC Profile Producer

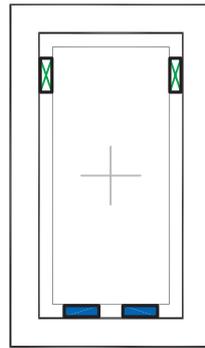




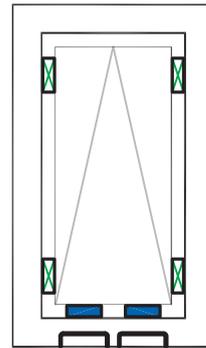
Side hung window



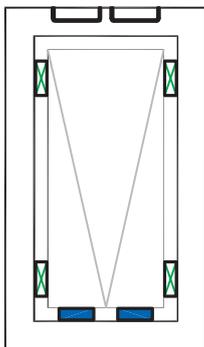
Tilt&turn window



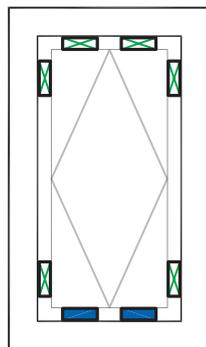
Picture window
(Fixed glazing)



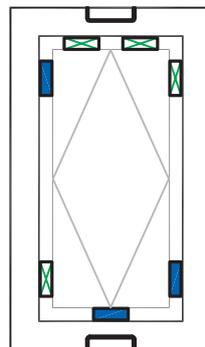
bottom hung window



Top hung window



Pivot window



Pivot window centric

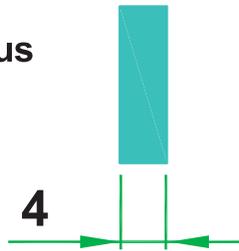
 = Distance block

 = Bearing block

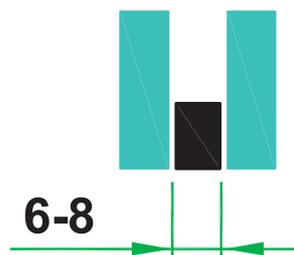
Heat transfer coefficient of various glazing units

$$U_g =$$

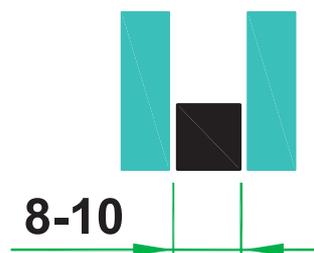
5,7 W/m² K



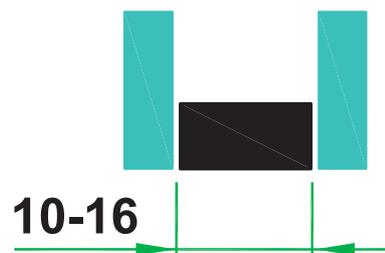
3,3 W/m² K



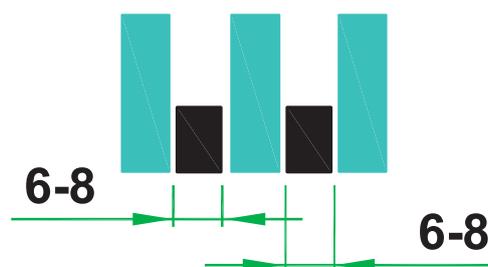
3,1 W/m² K



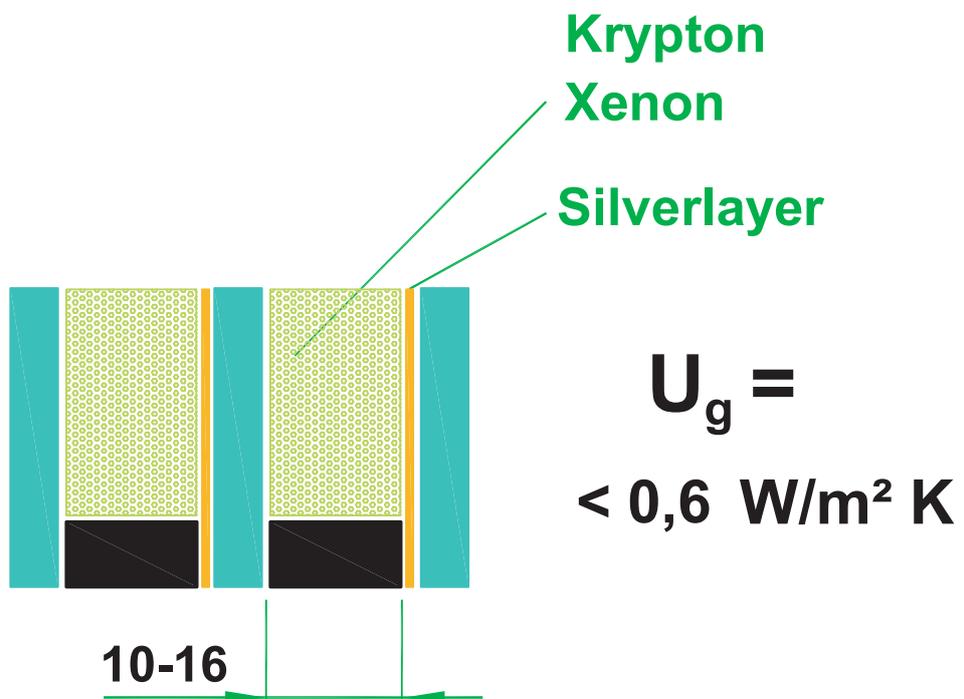
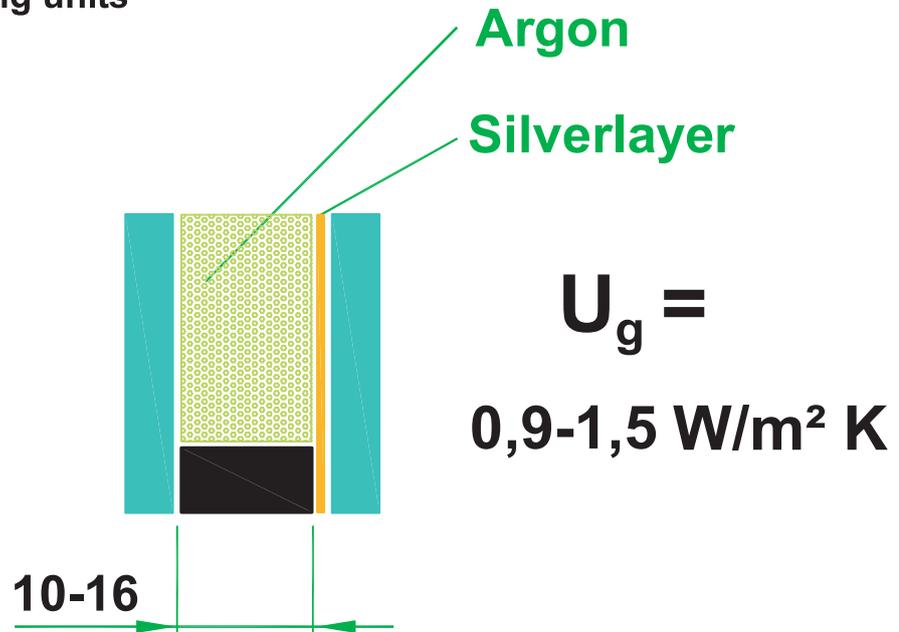
2,9 W/m² K



2,3 W/m² K



Heat transfer coefficient of various glazing units

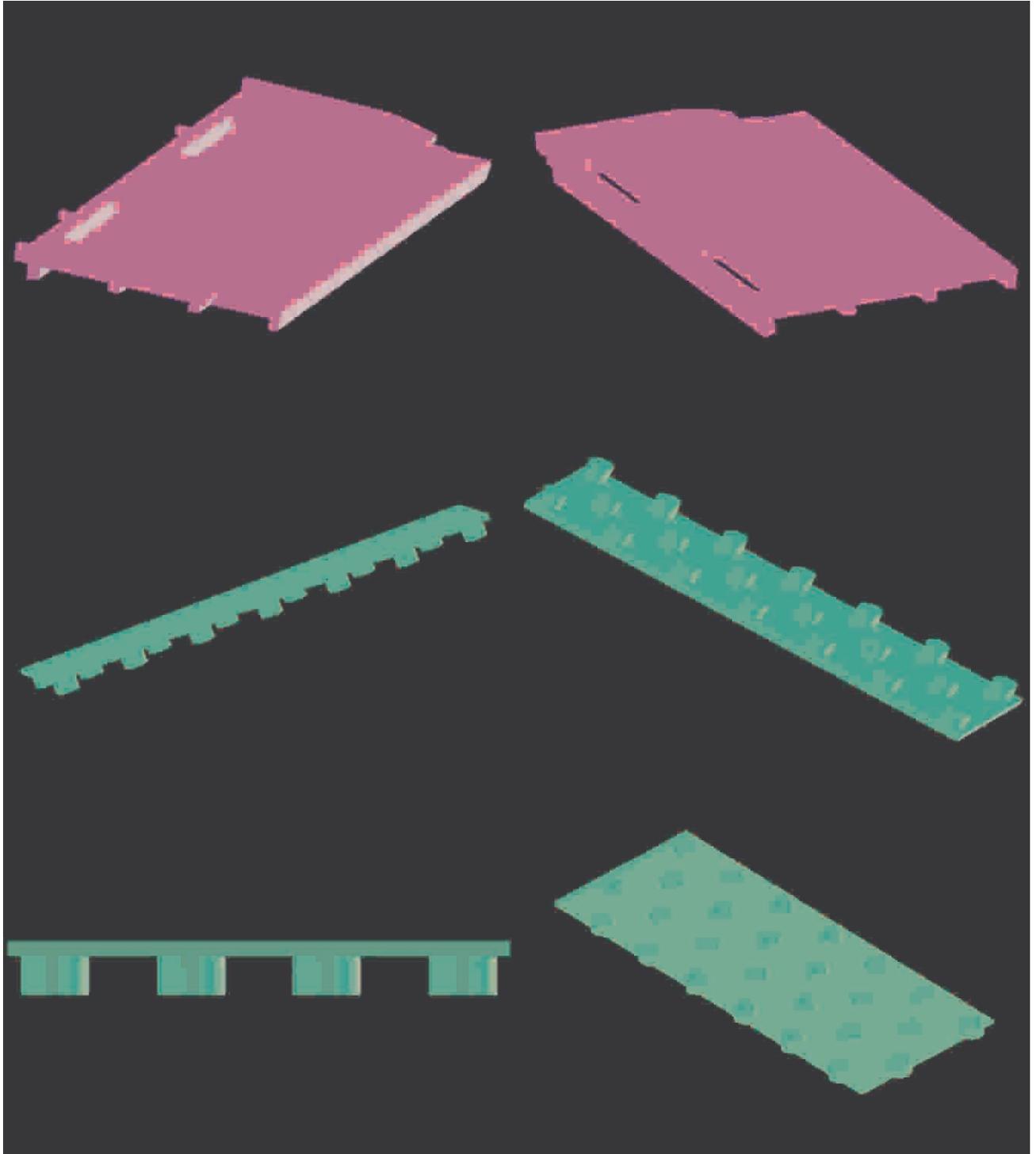


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Glazing Guidelines



Sectional Drawings

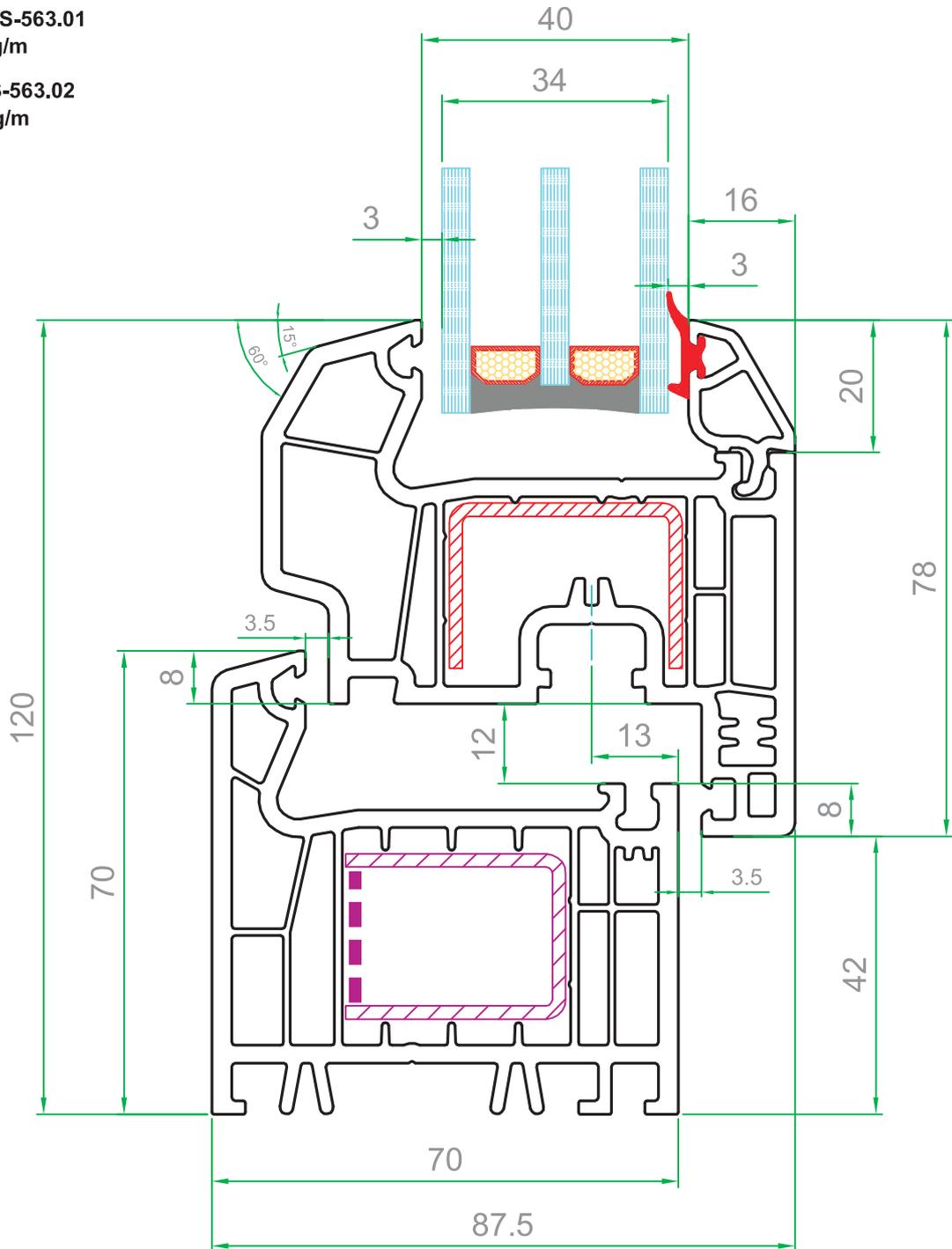
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Frame S-563.01
1,56 kg/m

Sash S-563.02
1,65 kg/m



Sectional Drawing

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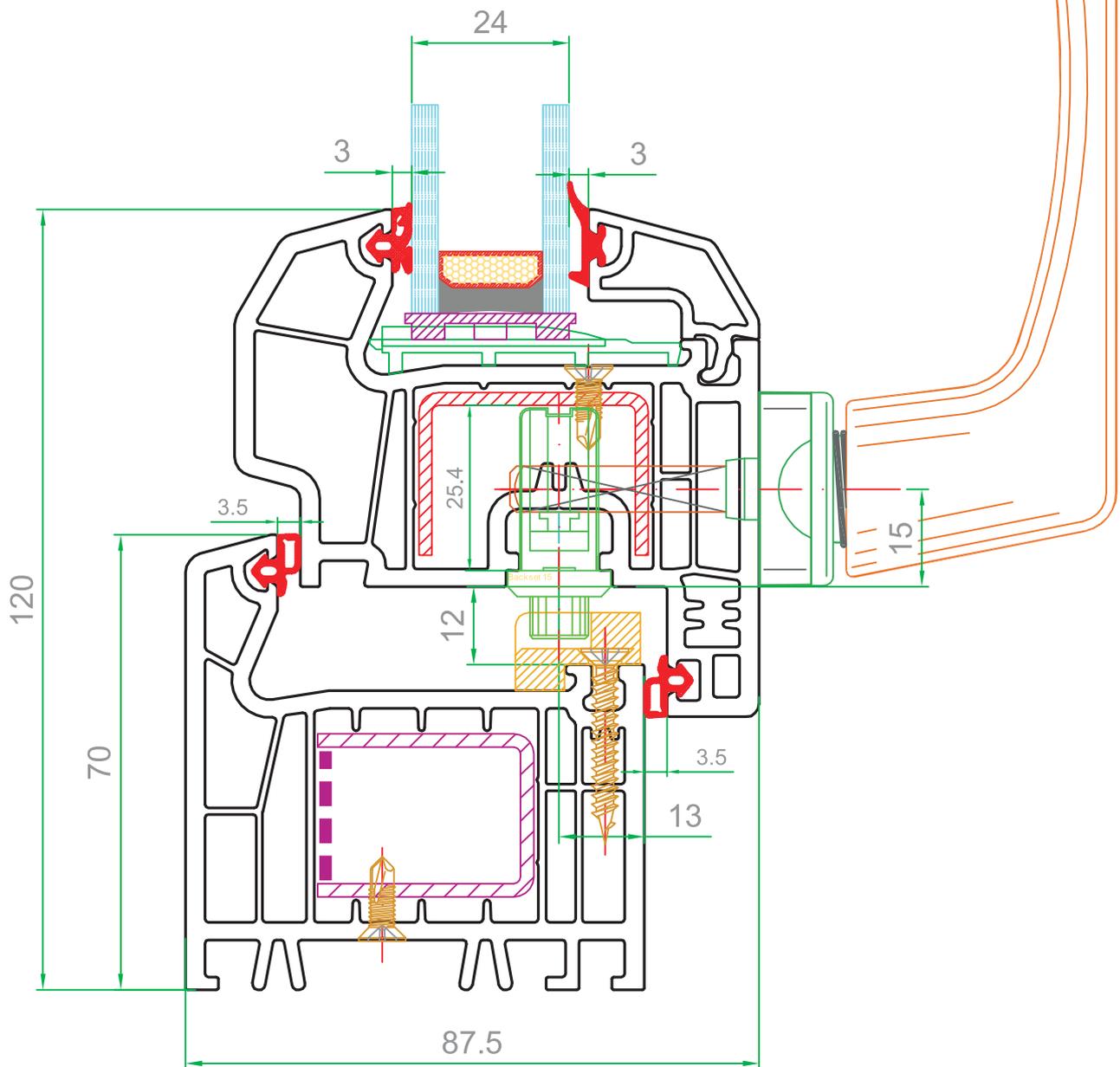
UPVC Profile Producer

Frame S-563.01

1,56 kg/m

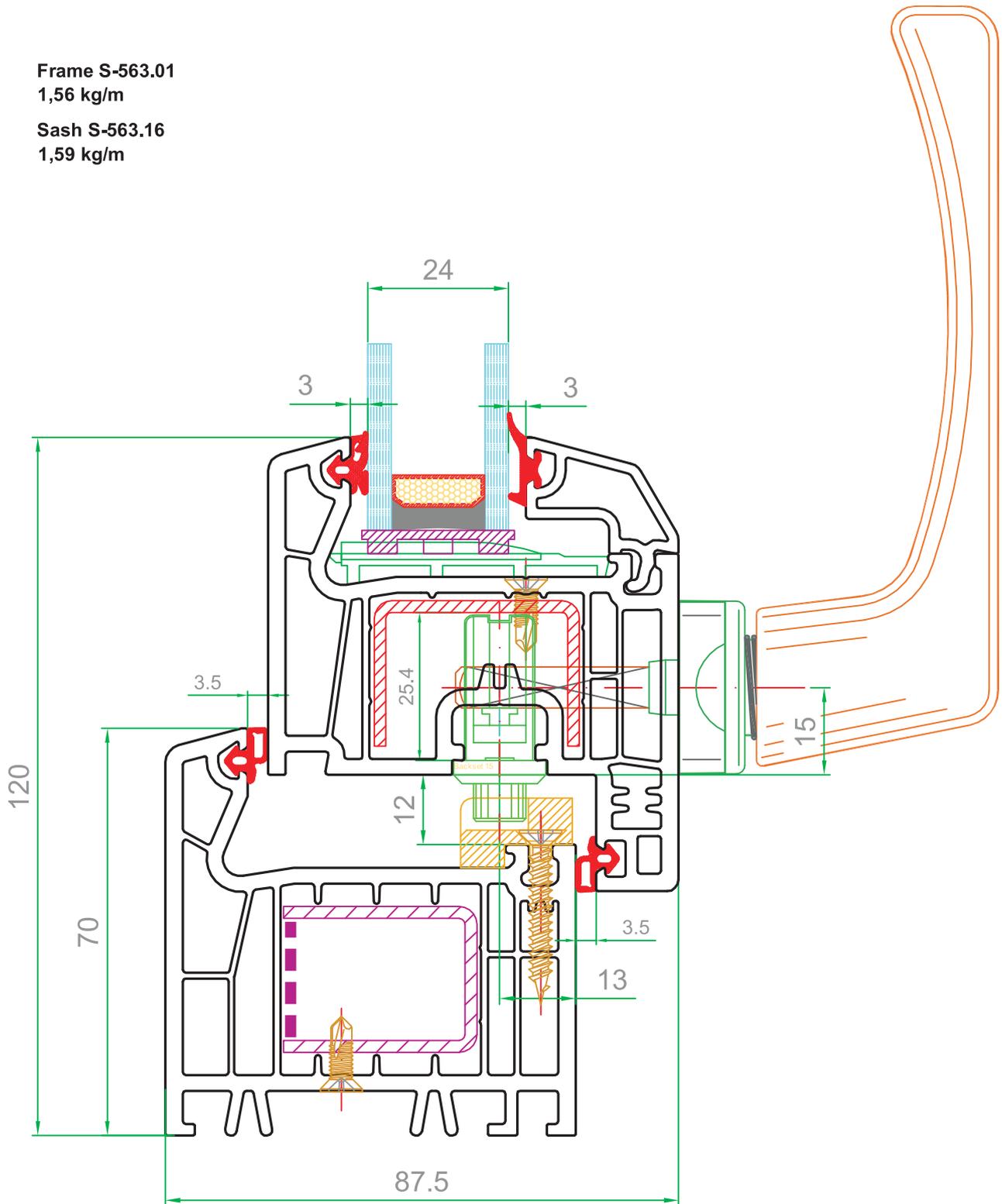
Sash S-563.02

1,65 kg/m



Sectional Drawing

Frame S-563.01
1,56 kg/m
Sash S-563.16
1,59 kg/m



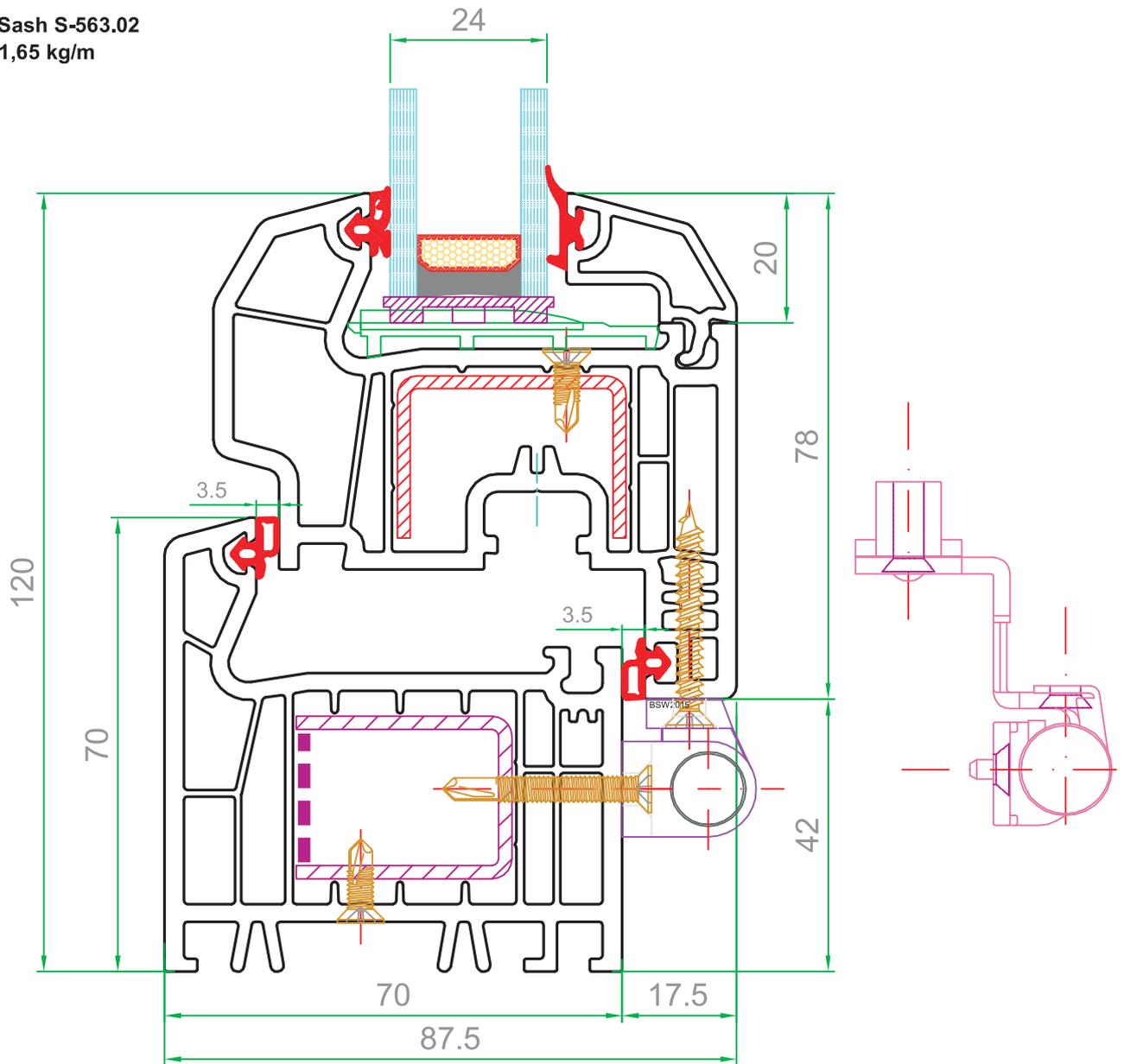
VISTA BEST®

Best of the Best

UPVC Profile Producer

Frame S-563.01
1,56 kg/m

Sash S-563.02
1,65 kg/m

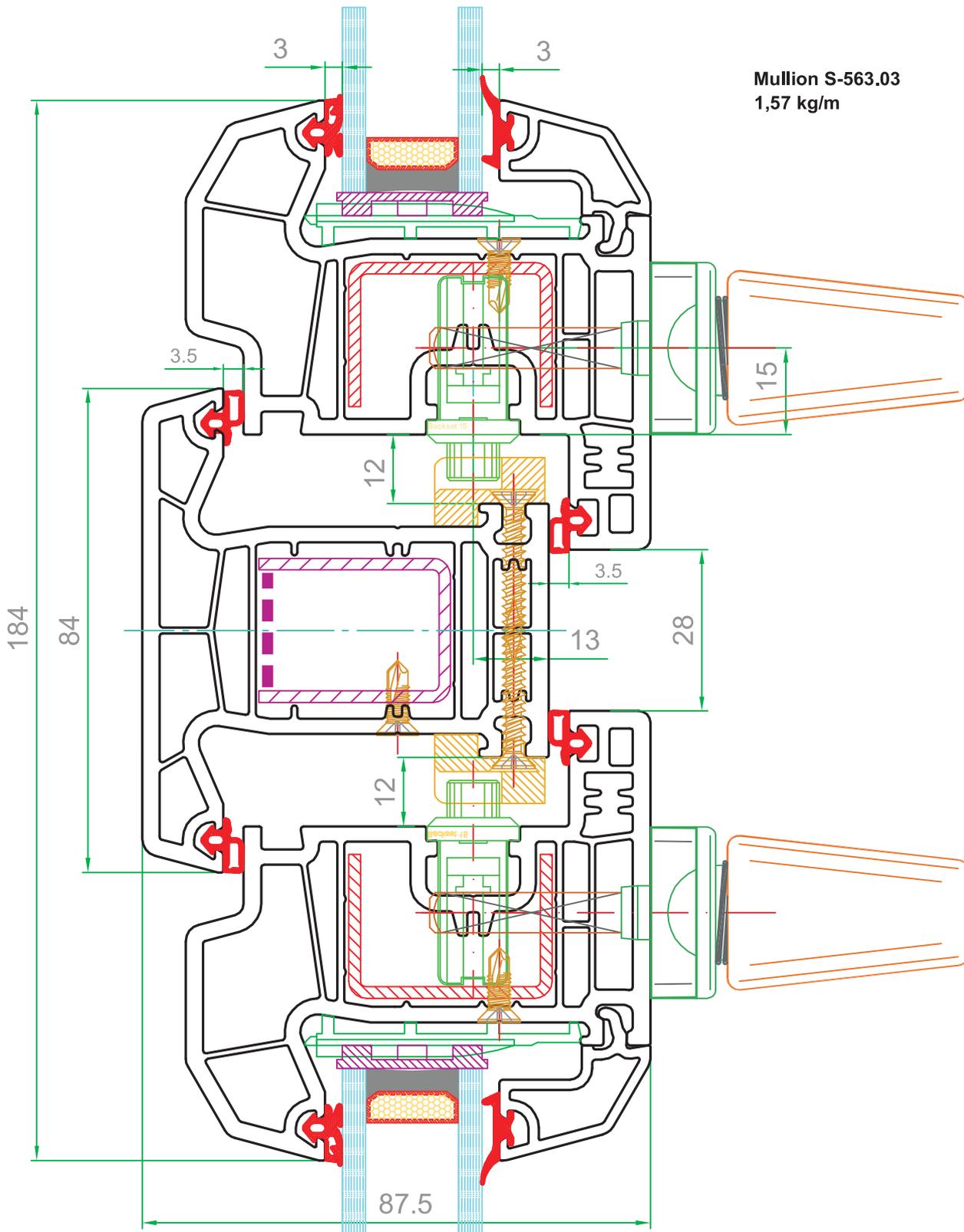


Sectional Drawing

ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

Mullion S-563.03
1,57 kg/m



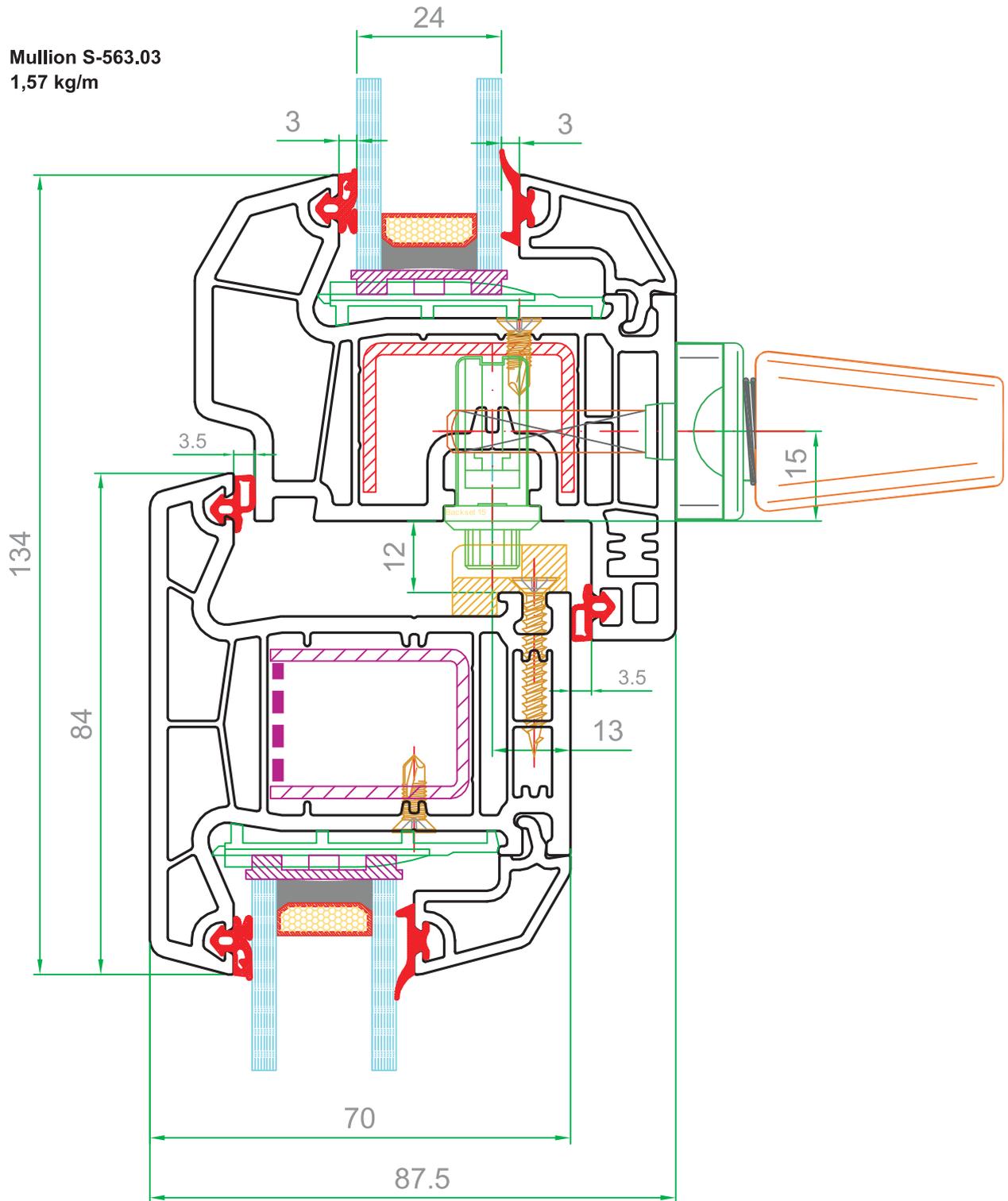
Sectional Drawing

VISTA BEST®

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UPVC Profile Producer

Mullion S-563.03
1,57 kg/m

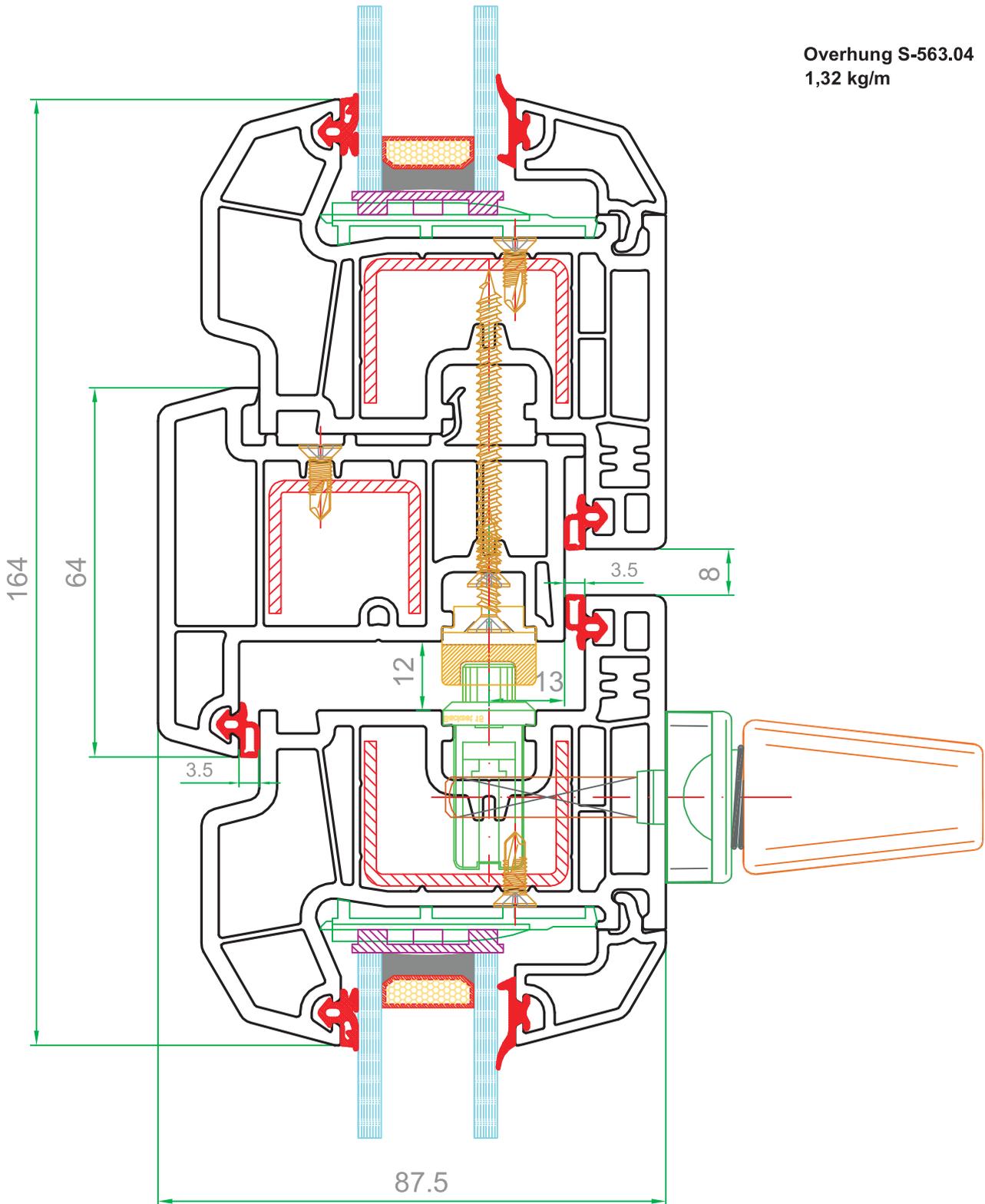


Sectional Drawing

ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

Overhung S-563.04
1,32 kg/m

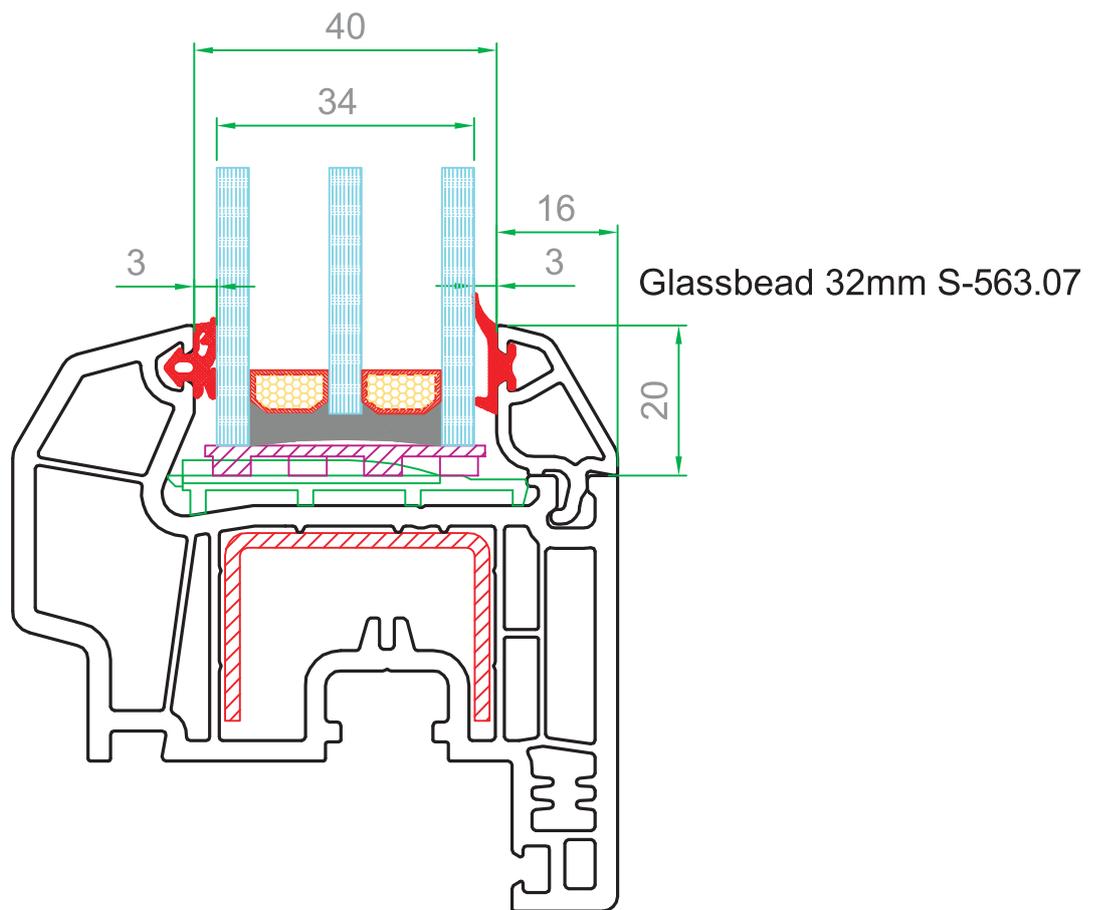
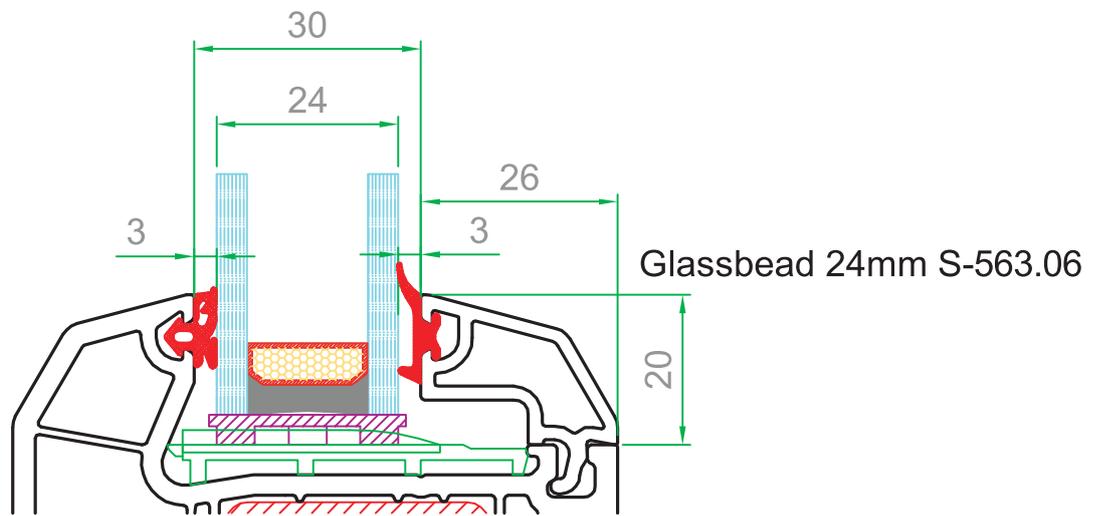


Sectional Drawing

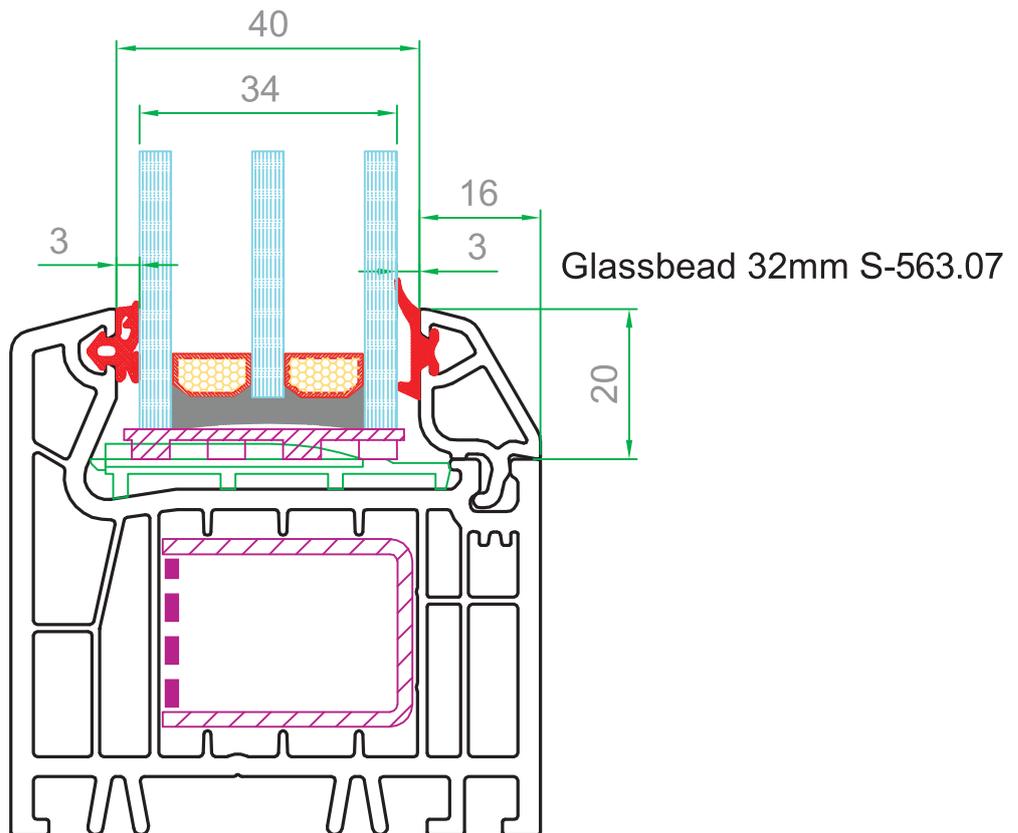
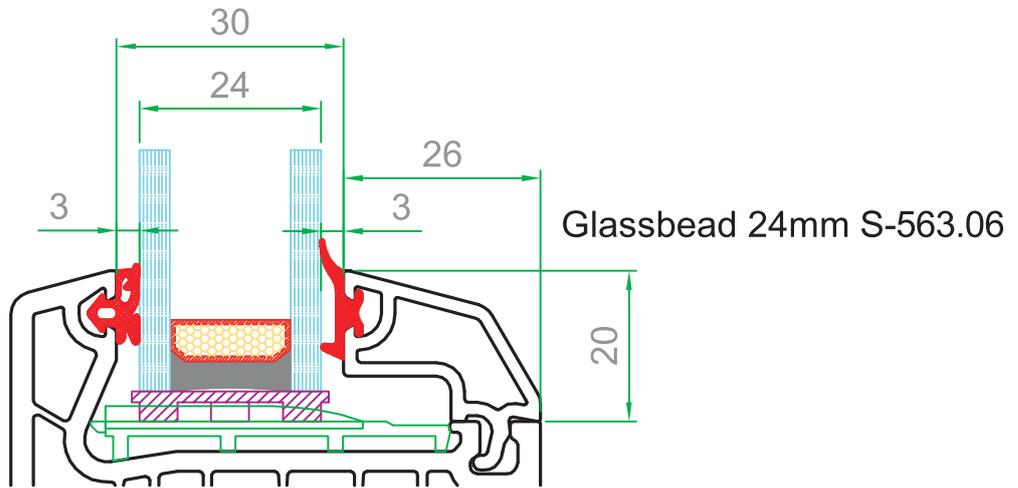
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Sectional Drawing



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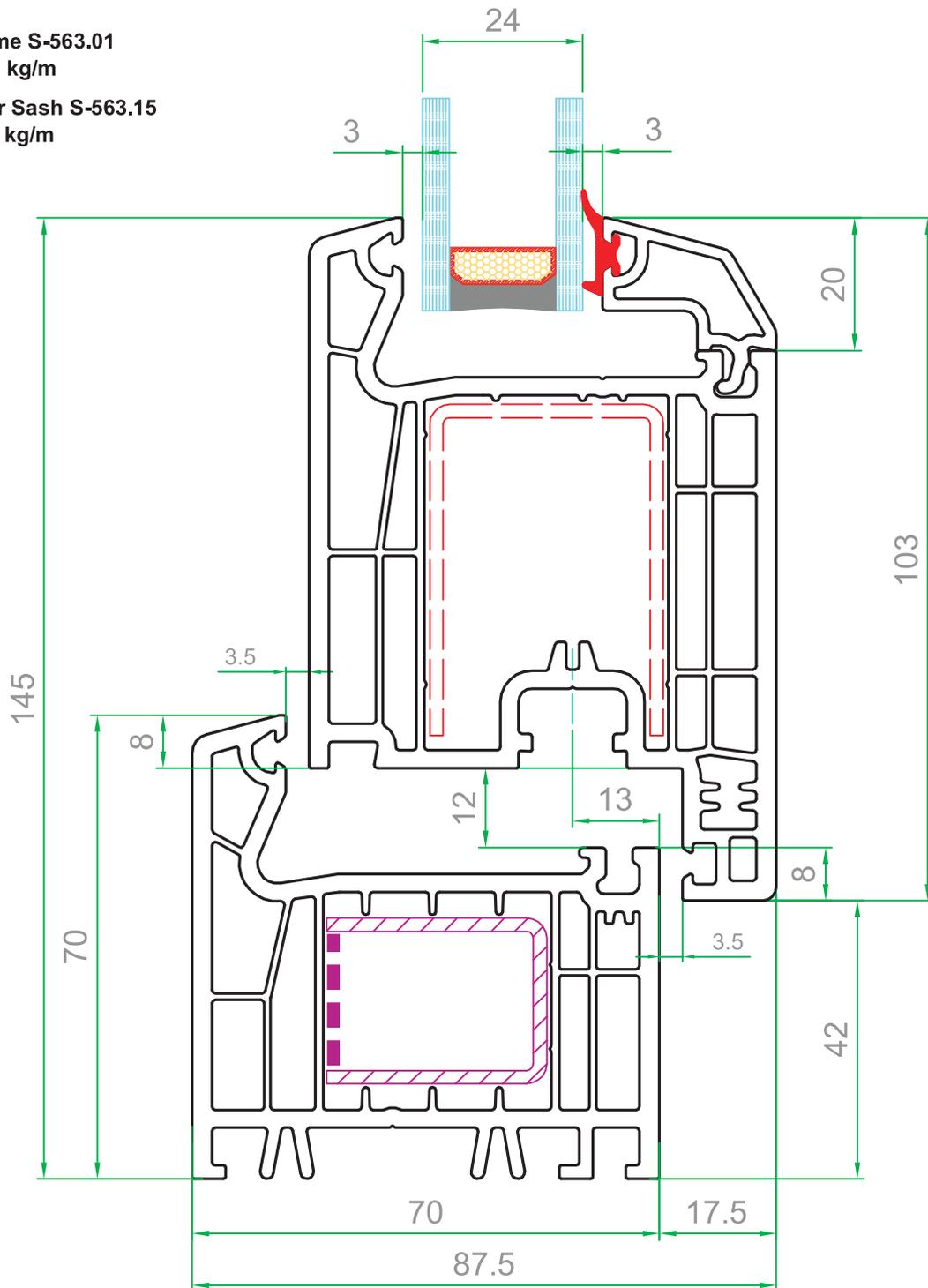
UPVC Profile Producer

Frame S-563.01

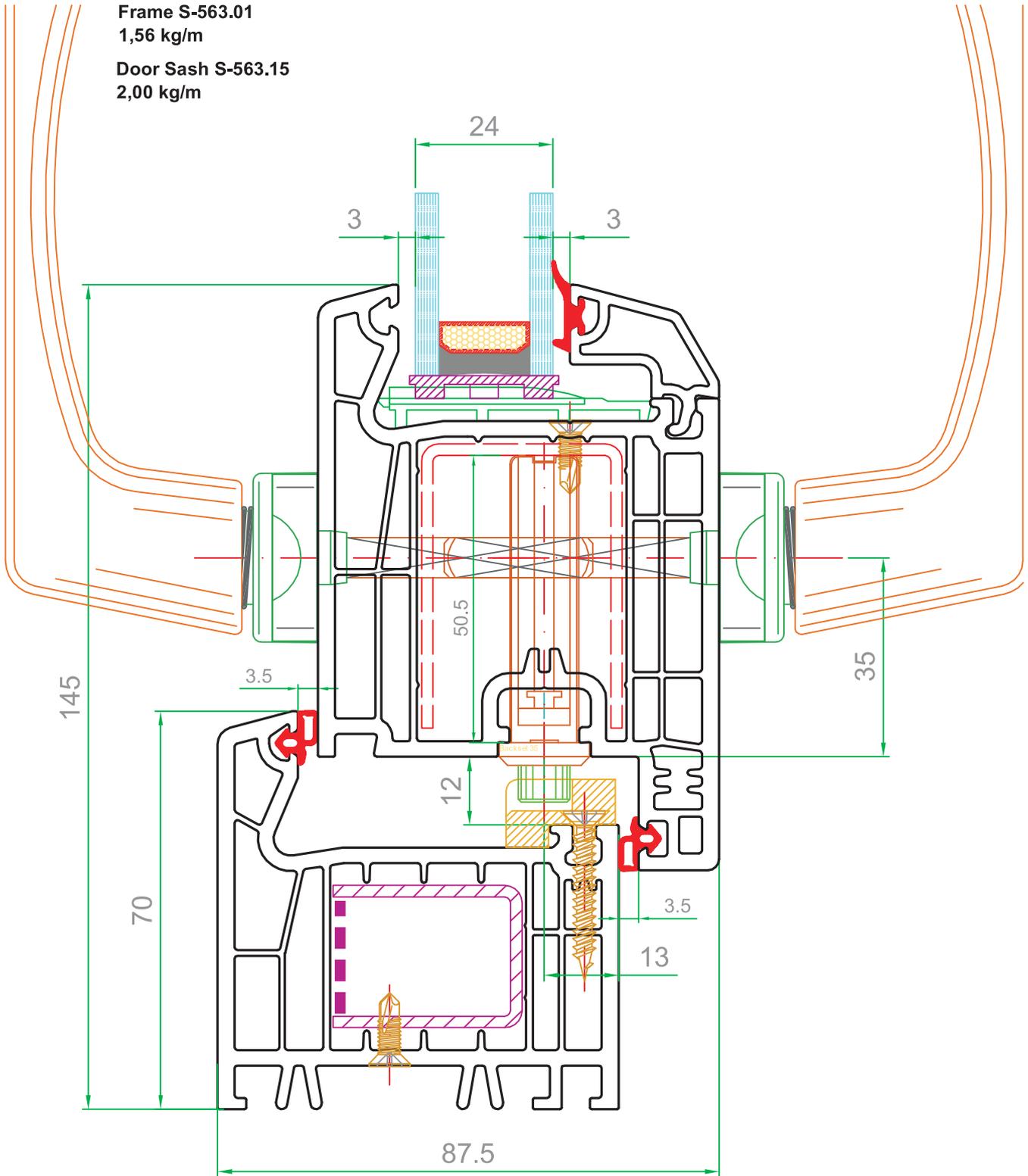
1,56 kg/m

Door Sash S-563.15

2,00 kg/m



Sectional Drawing



Sectional Drawing

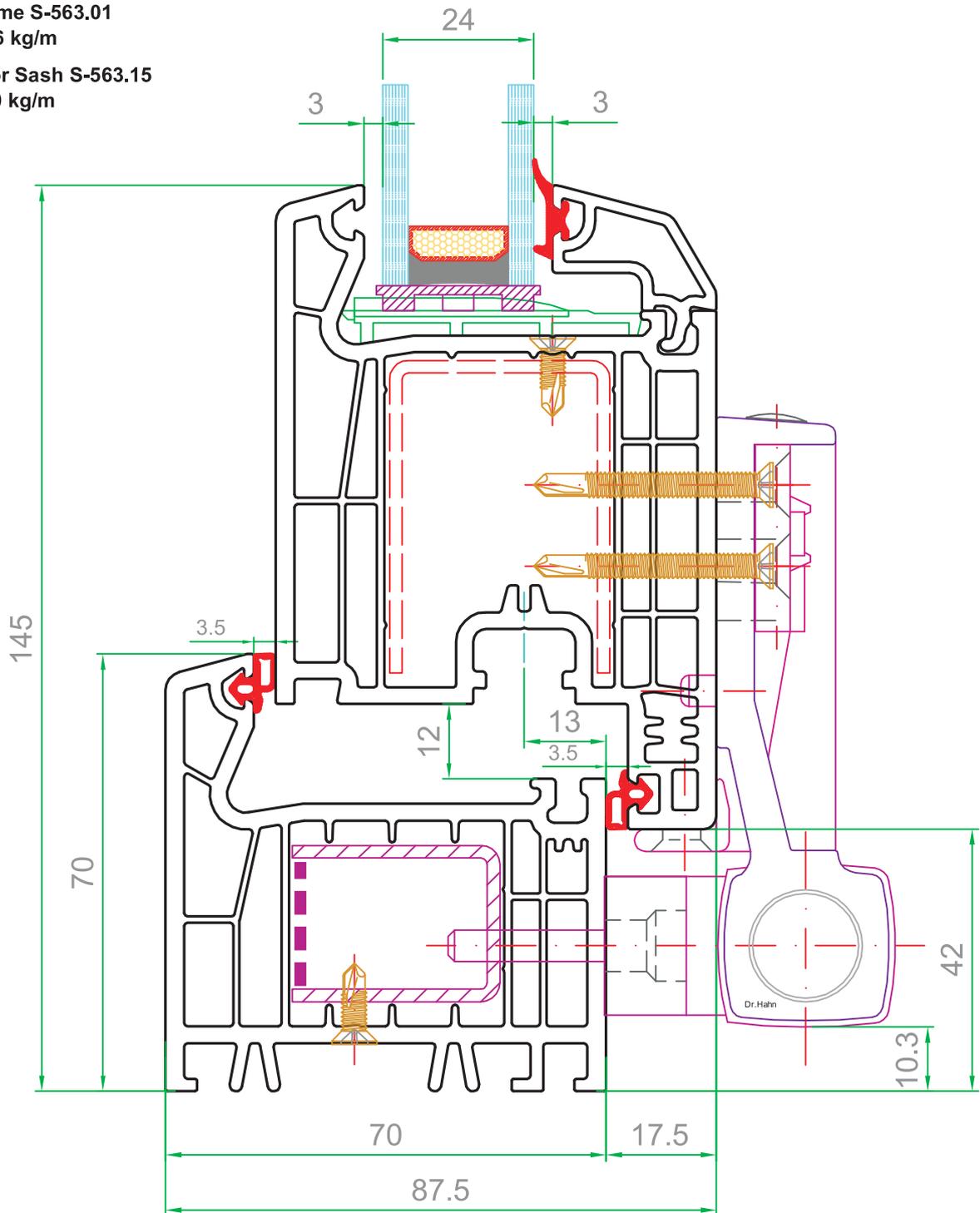
VISTA BEST®

Best of the Best

UPVC Profile Producer

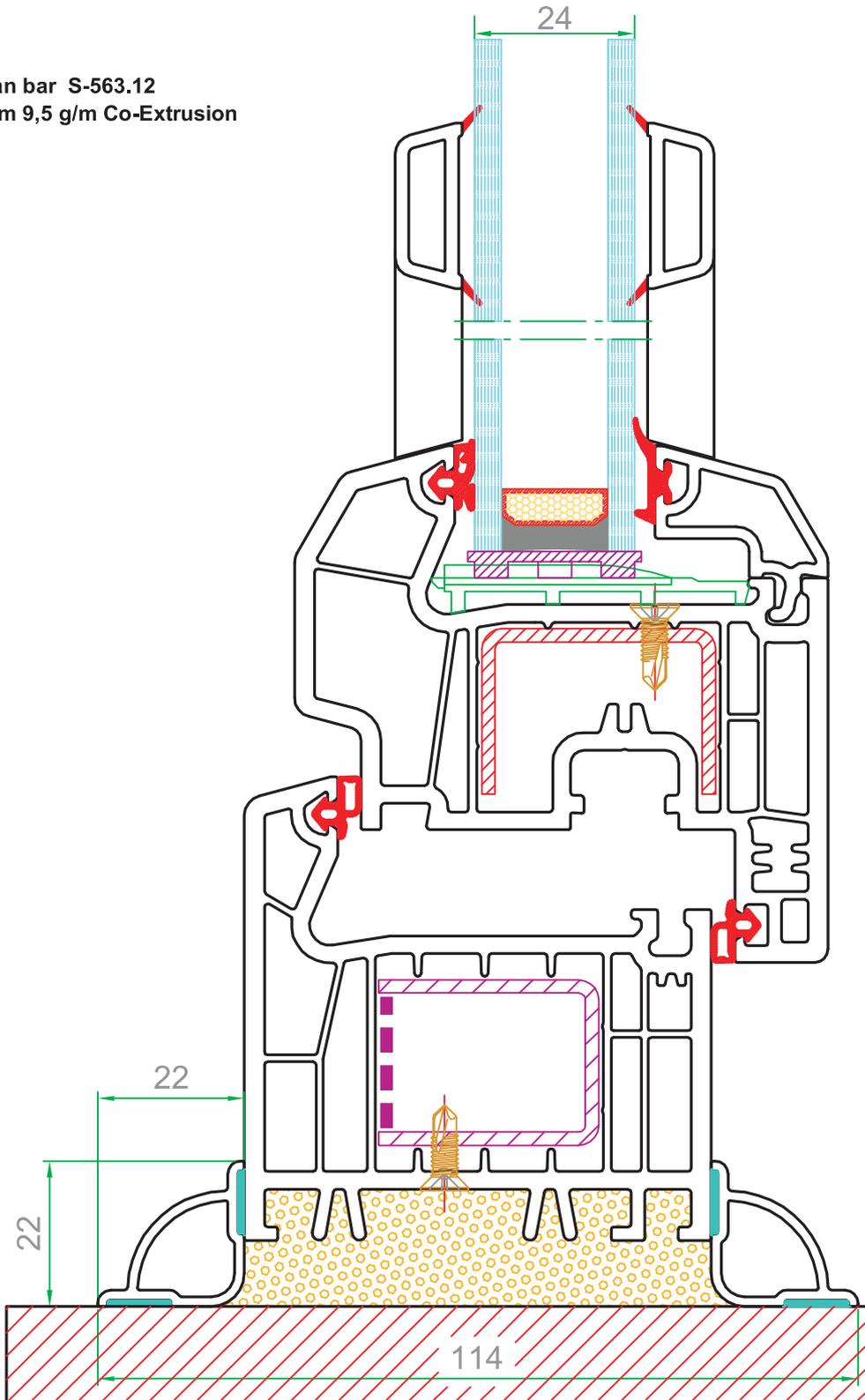
Frame S-563.01
1,56 kg/m

Door Sash S-563.15
2,00 kg/m

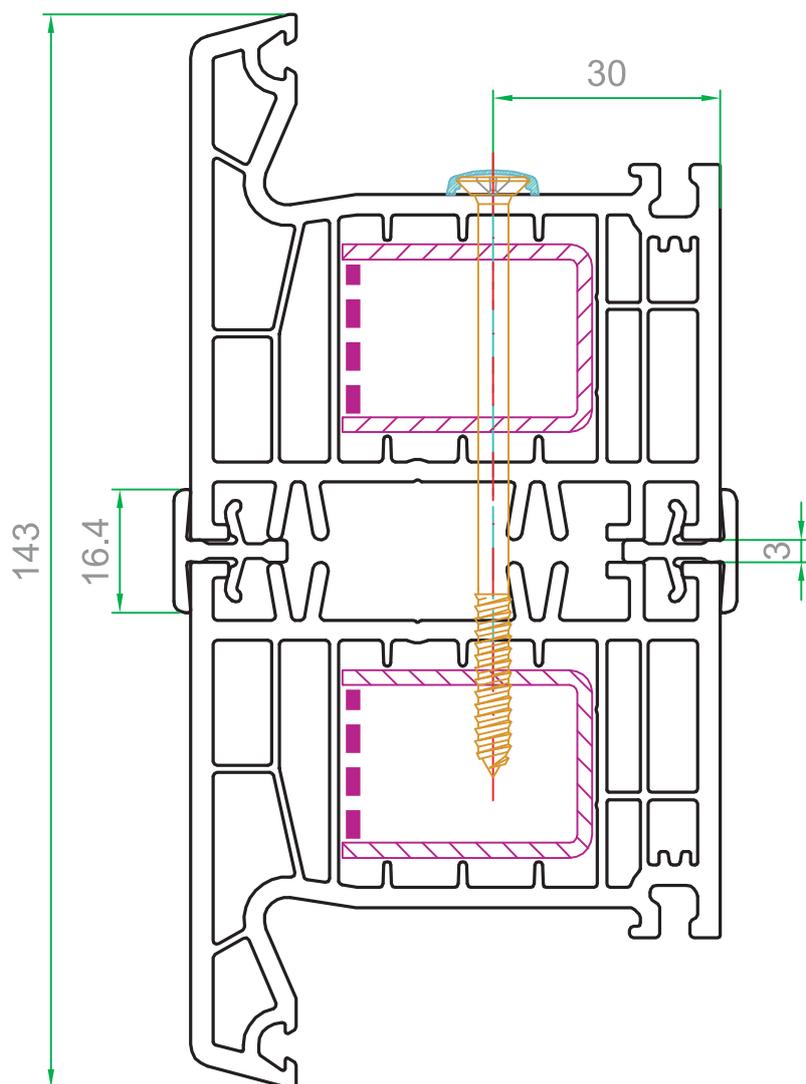


Sectional Drawing

Georgian bar S-563.12
0,16kg/m 9,5 g/m Co-Extrusion



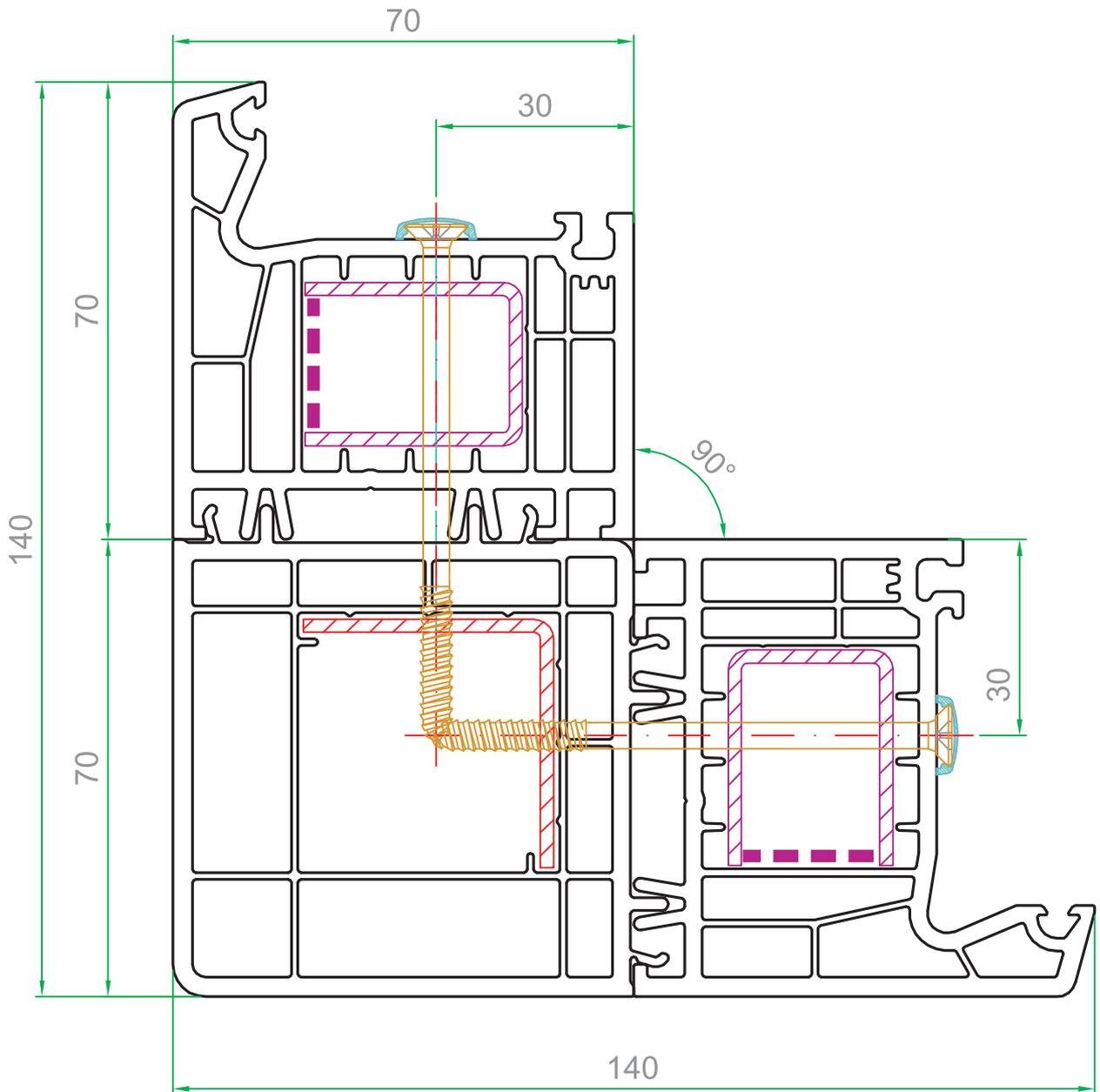
Coupling S-563.11
0,11 kg/m



ویستا بست (سهامی خاص)

تولیدکننده پروفیل یو پی وی سی

90° pole S-563.10
1,60 kg/m



Sectional Drawing

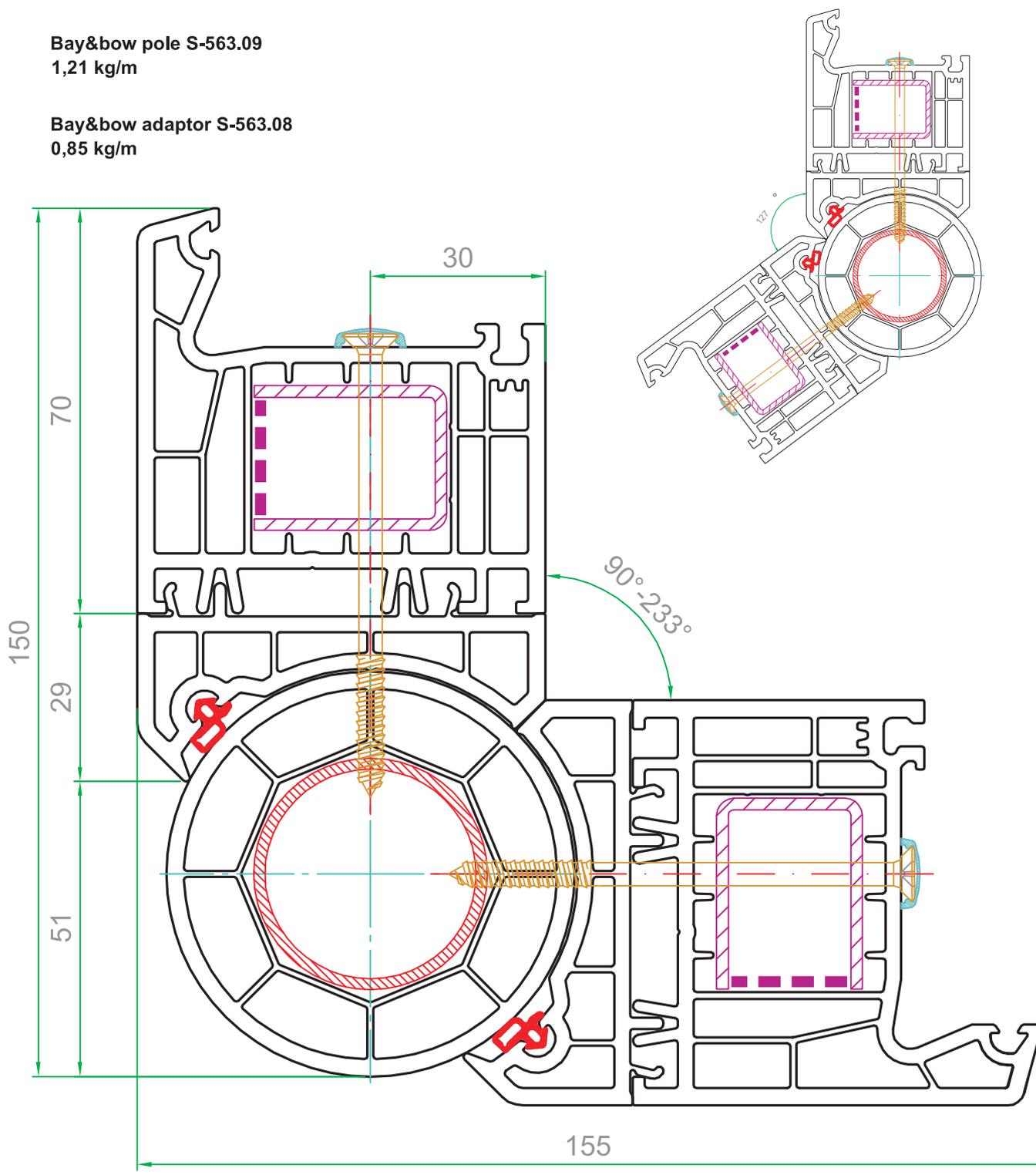
Bay&bow pole S-563.09

1,21 kg/m

Bay&bow adaptor S-563.08

0,85 kg/m

Sectional Drawing



Dimension Limits

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

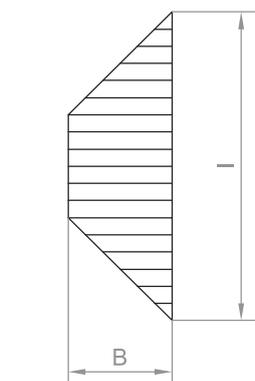
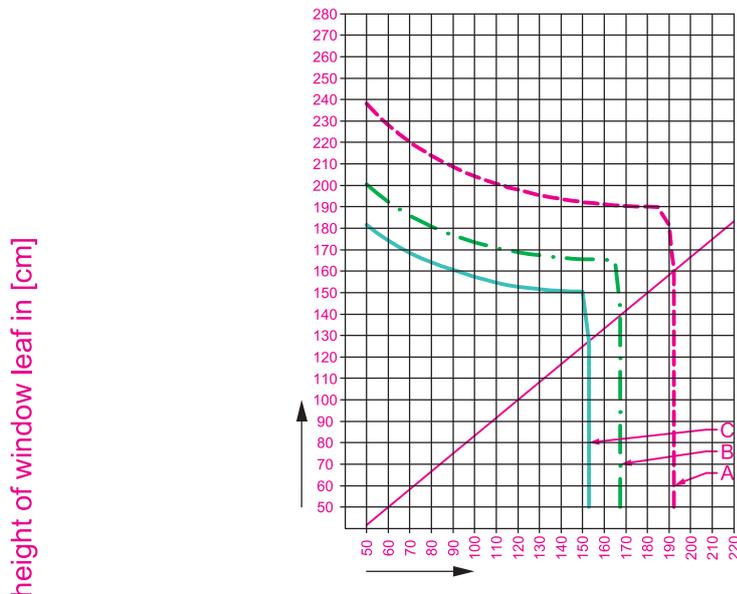
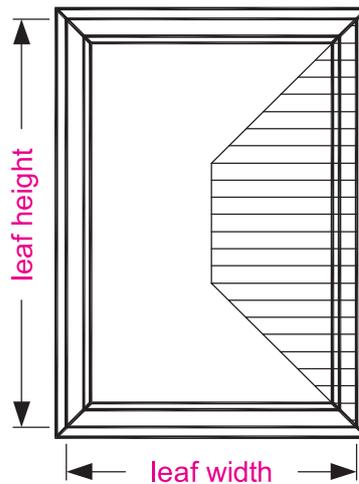
Profile label :

Sash S-563.02, S-563.16

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - . - . - . windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-563TRE01 - 1,5 mm
 moment of inertia Ix 0.78 [cm⁴]
 moment of inertia Iy 2.45 [cm⁴]
 thickness of reinforcement 1.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



B = load width
 l = supportwidth
 (lookup in index)

width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

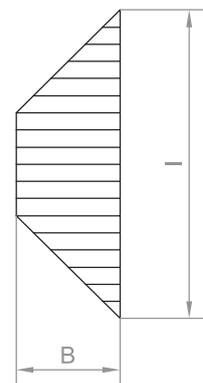
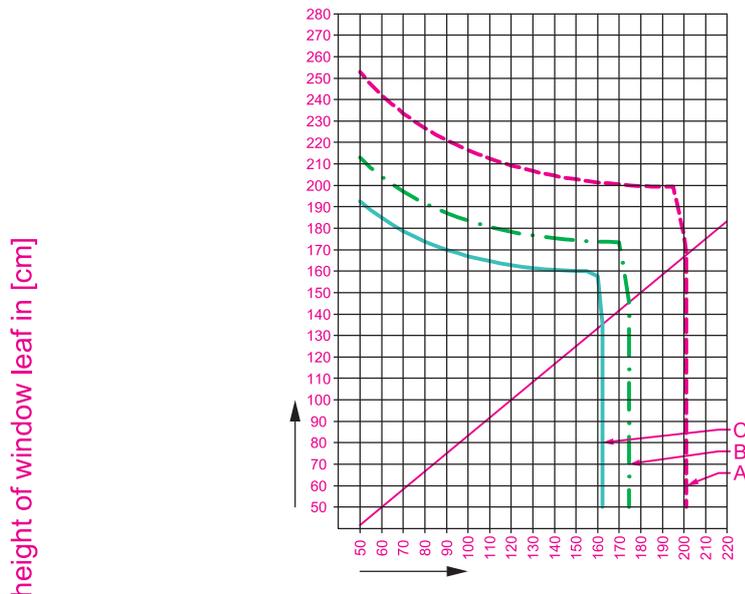
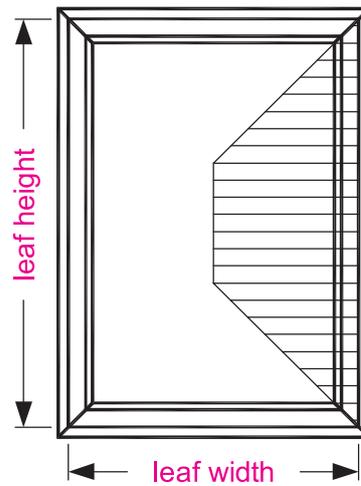
Profile label :

Sash S-563.02, S-563.16

Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	- . - . - .	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-563TRE01 - 2,0 mm
moment of inertia Ix	1.01 [cm ⁴]
moment of inertia Iy	3.12 [cm ⁴]
thickness of reinforcement	2 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



B = load width
l = supportwidth
(lookup in index)

width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

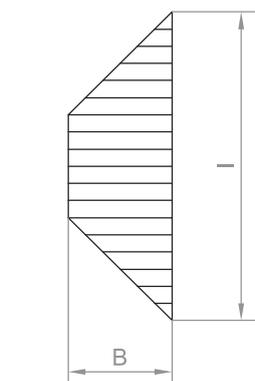
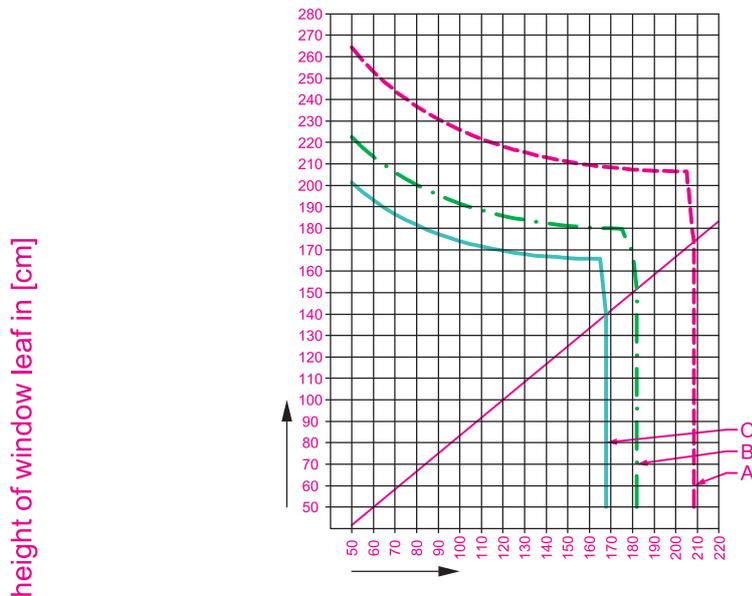
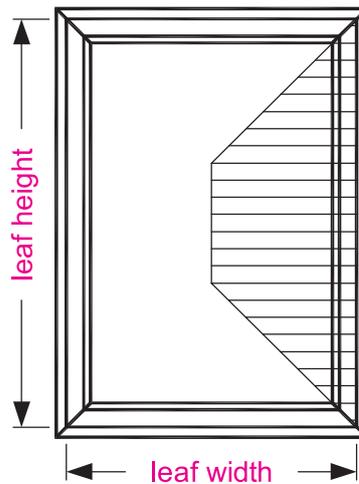
Profile label :

Sash S-563.02, S-563.16

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - . - . - . windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-563TRE01 - 2,5 mm
 moment of inertia Ix 1.22 [cm⁴]
 moment of inertia Iy 3.73 [cm⁴]
 thickness of reinforcement 2.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



B = load width
 l = supportwidth
 (lookup in index)

width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

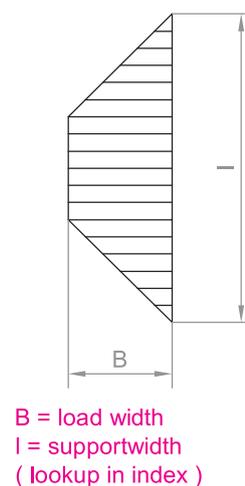
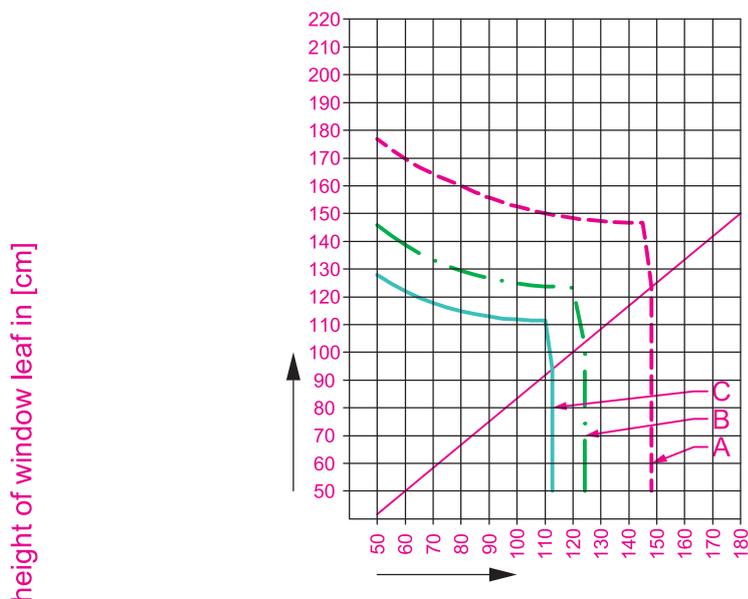
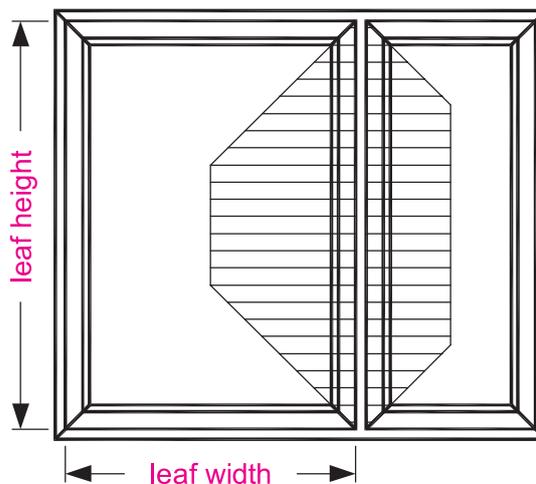
Profile label :

Mullion S-563.03

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - . - . - . windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-563TRE02 - 1,5 mm
 moment of inertia Ix 1.46 [cm⁴]
 moment of inertia Iy 1.47 [cm⁴]
 thickness of reinforcement 1.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

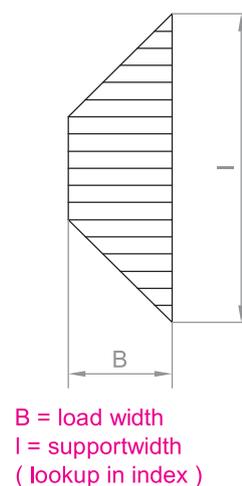
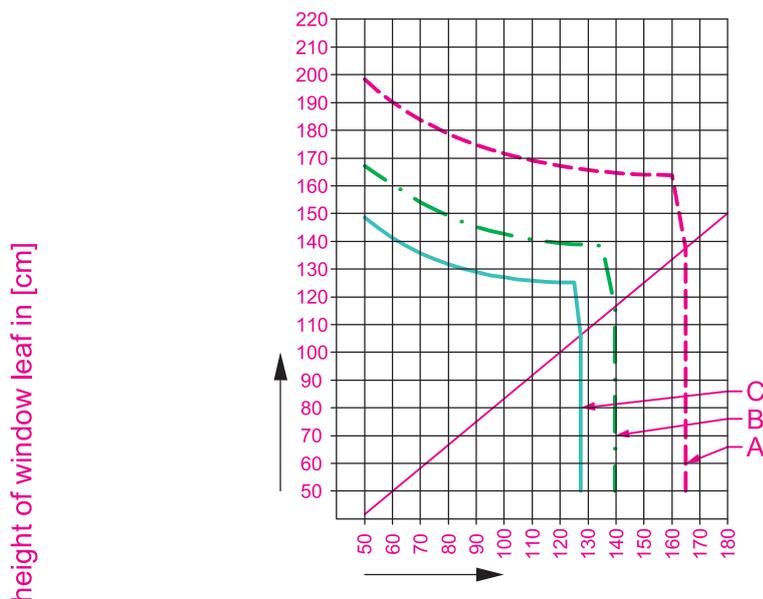
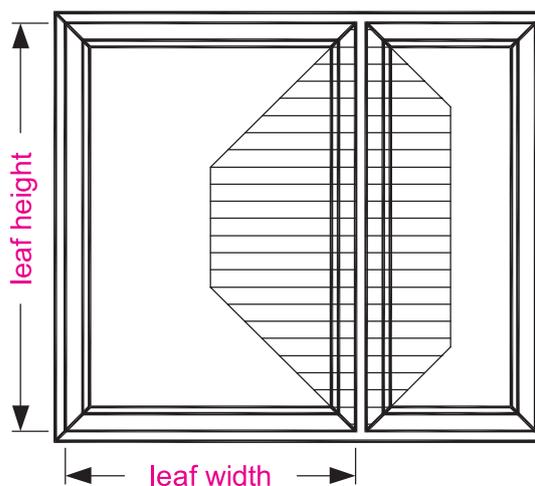
Profile label :

Mullion S-563.03

Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-563TRE02 - 2,5 mm
moment of inertia Ix	2.21 [cm ⁴]
moment of inertia Iy	2.34 [cm ⁴]
thickness of reinforcement	2.5 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

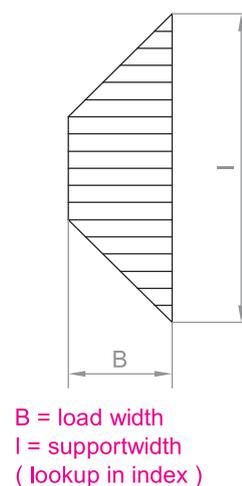
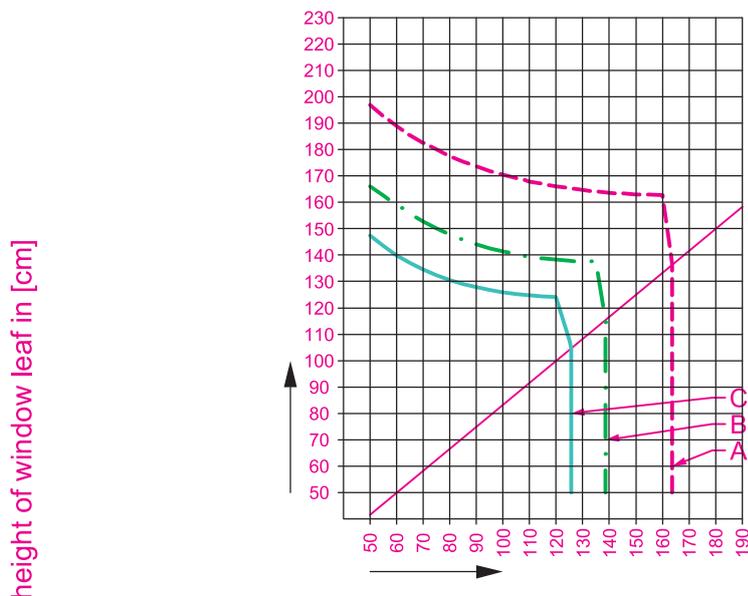
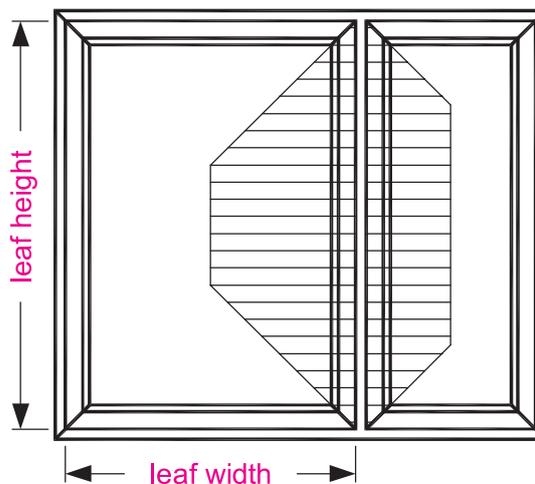
Profile label :

Mullion S-563.03

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - . - . - . windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-563TRE03 - 1,5 mm
 moment of inertia I_x 1.55 [cm⁴]
 moment of inertia I_y 2.27 [cm⁴]
 thickness of reinforcement 1.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



width of window leaf in [cm]

Caution! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

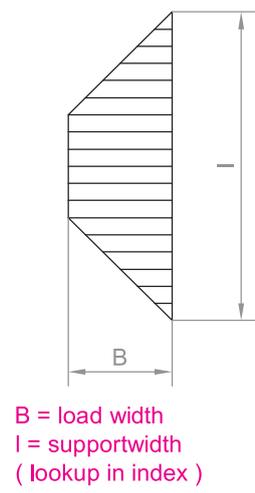
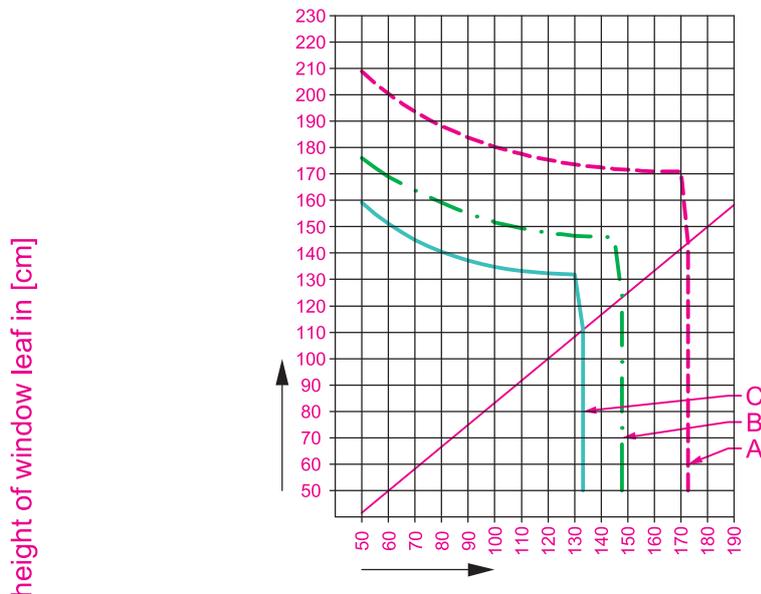
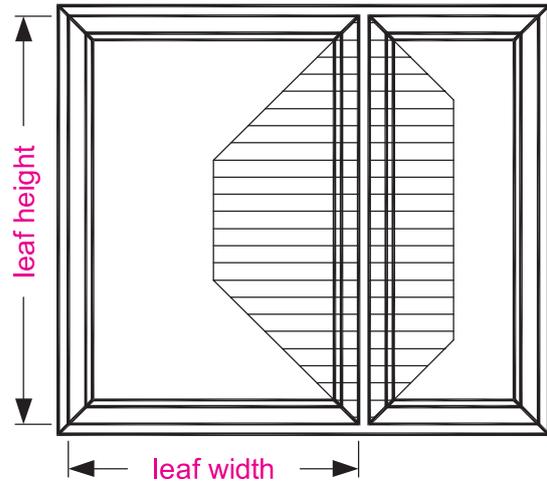
Profile label :

Mullion S-563.03

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - . - . - . windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-563TRE03 - 2,0 mm
 moment of inertia I_x 1.96 [cm⁴]
 moment of inertia I_y 2.89 [cm⁴]
 thickness of reinforcement 2 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

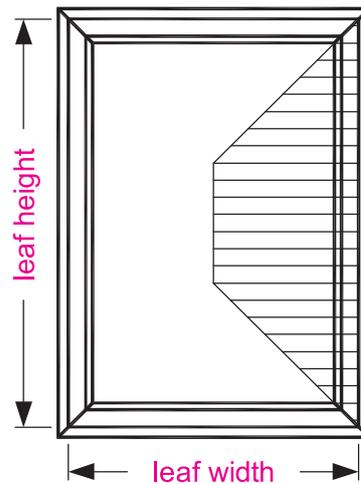
Profile label :

Door sash S-563.15

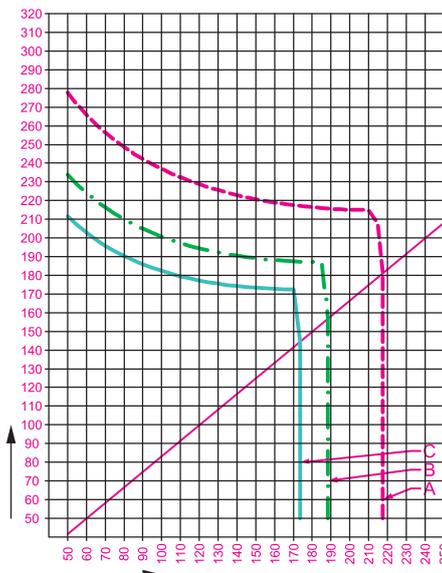
Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - . - . - . windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

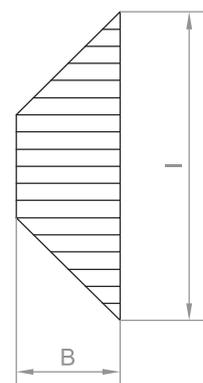
reinforce profile S-563TRE04 - 1,5 mm
 moment of inertia Ix 5.18 [cm⁴]
 moment of inertia Iy 4.55 [cm⁴]
 thickness of reinforcement 1.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
 l = supportwidth
 (lookup in index)

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

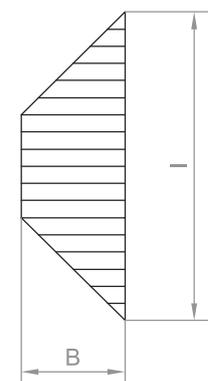
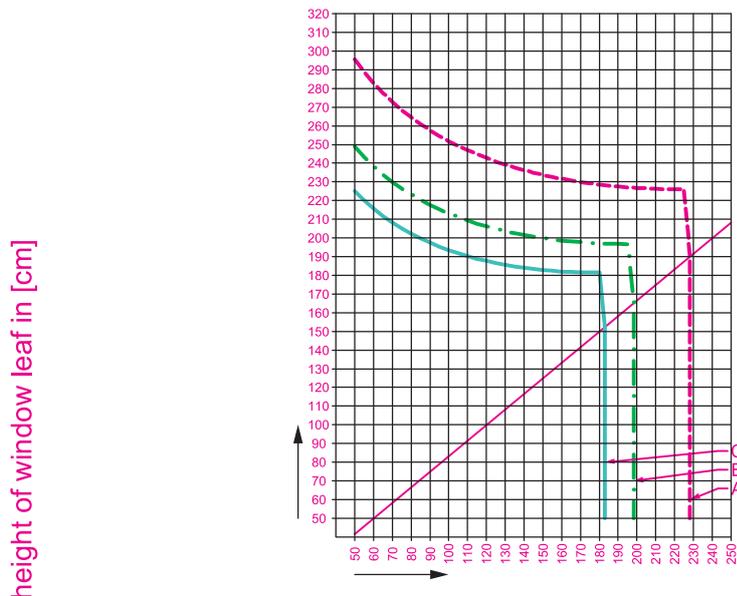
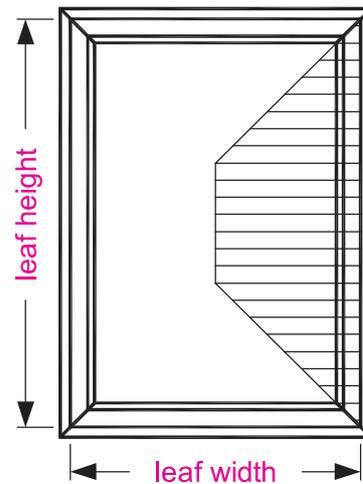
Profile label :

Door sash S-563.15

Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-563TRE04 - 2,0 mm
moment of inertia Ix	6.77 [cm ⁴]
moment of inertia Iy	5.85 [cm ⁴]
thickness of reinforcement	2 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]



B = load width
l = supportwidth
(lookup in index)

width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-563 5-chamber T&T

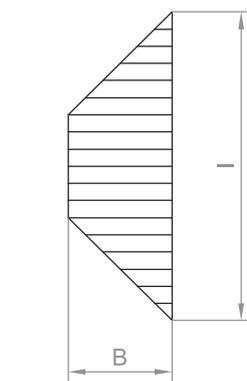
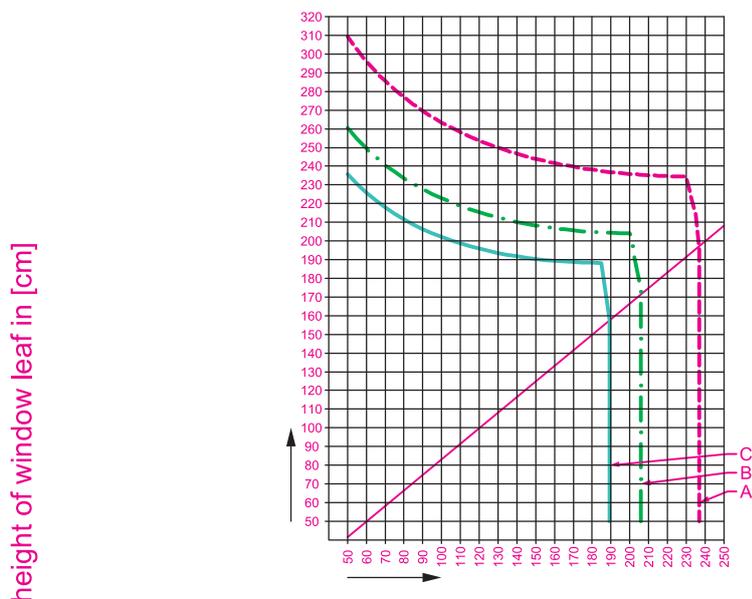
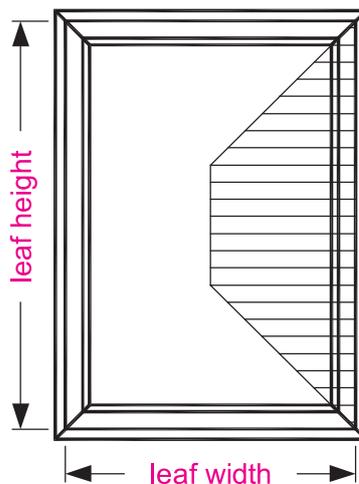
Profile label :

Door sash S-563.15

Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - . - . - . windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-563TRE04 - 2,5 mm
 moment of inertia Ix 8.29 [cm⁴]
 moment of inertia Iy 7.04 [cm⁴]
 thickness of reinforcement 2.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



B = load width
 l = supportwidth
 (lookup in index)

width of window leaf in [cm]

Caution ! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

CLASSIFICATION OF WIND LOAD (DIN EN 12210) :

Class	P1 [Pa]	P2 [Pa] ^{a)} = 0,5xP1	P3 [Pa] = 1,5xP1
0	NOT TESTED		
1	400	200	600
2	800	400	1200
3	1200	600	1800
4	1600	800	2400
5	2000	1000	3000
E xxx ^{b)}	xxx		

This pressure having been repeated 50 times

Specimen tested with wind loading above class 5, classified Exxx - where xxx is the actual test pressure P1 (e.g. 2350 etc.)

(Table 1)

Classification shall be according to the results of wind resistance tests to positive and negative test pressures.

This classification can be used with other relevant standards or codes of practice and can thus be used to provide correlation with actual exposure requirements.

CLASSIFICATION OF RELATIVE FRONTAL DEFLECTION (DIN EN 12210):

Class	Relative frontal deflection
A	< 1/150
B	< 1/200
C	< 1/300

(Table 2)

The relative frontal deflection of the most deforming framing member of the specimen measured at test pressure P1 shall be classified as in table 2.

CLASSIFICATION FOR RESISTANCE TO WIND LOAD (DIN EN 12210):

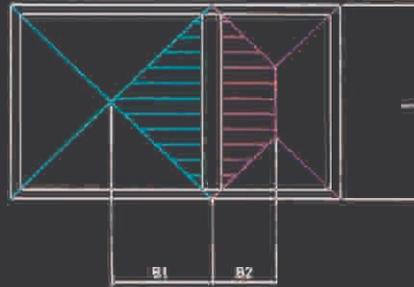
Wind loads and relative frontal deflection shall be combined into one overall classification as indicated in table 3.

Wind load class	Relative frontal deflection		
	A	B	C
1	A1	B1	C1
2	A2	B2	C2
3	A3	B3	C3
4	A4	B4	C4
5	A5	B5	C5
E xxx	AE xxx	BE xxx	CE xxx

NOTE: In the resistance to wind load classification the number refers to the wind load class, see table 1 and the letter to the relative frontal deflection, see table 2.

(Table 3)

WIND LOAD FORMULA



Calculation of the essential moment of inertia I_{eff} :

To calculate the load width B of the triangle- or trapezium load, the shorter side of the element field has to be halved.

In case of mullions and element connections you have to see to it that each of them get a load share of both of the adjoining element fields.

$$I_{\text{eff}} = \frac{W I^4 B}{1920 E f} \left[25 - 40 \left(\frac{B}{I} \right)^2 + 16 \left(\frac{B}{I} \right)^4 \right] \text{cm}^4$$

W	=	Wind load
I	=	Support width (Profile length)
B	=	Load width
E	=	elastic modulus (for steel = 210.000 N/mm ²)
f	=	max. deflection
		$f = l/200$; max. 8 mm, double glazing
		$f = l/175$; single glazing
		dependent at glass producer / single- or double glass

E-Modules of elasticity:

Material	Elastic module [N/mm ²]
PVC-U	ca. 2.700
Timber	ca. 10.000
Aluminium	ca. 70.000
Steel	ca. 210.000

WIND SPEED

The pressure exerted by the wind on a wall component is assumed to be uniformly distributed across the surface of the product.

Its magnitude is dependent on such factors as the geographical location, shape and surrounding of the building as well as the height of the product above grade and its location within the wall.

The jurisdiction where the windows or doors will be installed should be contacted to determine the wind load requirements that have been adopted and are enforced.

W = Wind load

L = Linear force at long pane edge

f_{max} = safe deflection $f_{max} = \frac{L}{175}$ or $\frac{L}{200}$

dependent at glass producer / single- or double glass

p = density of air (1,25 kg/m³)

v = wind speed

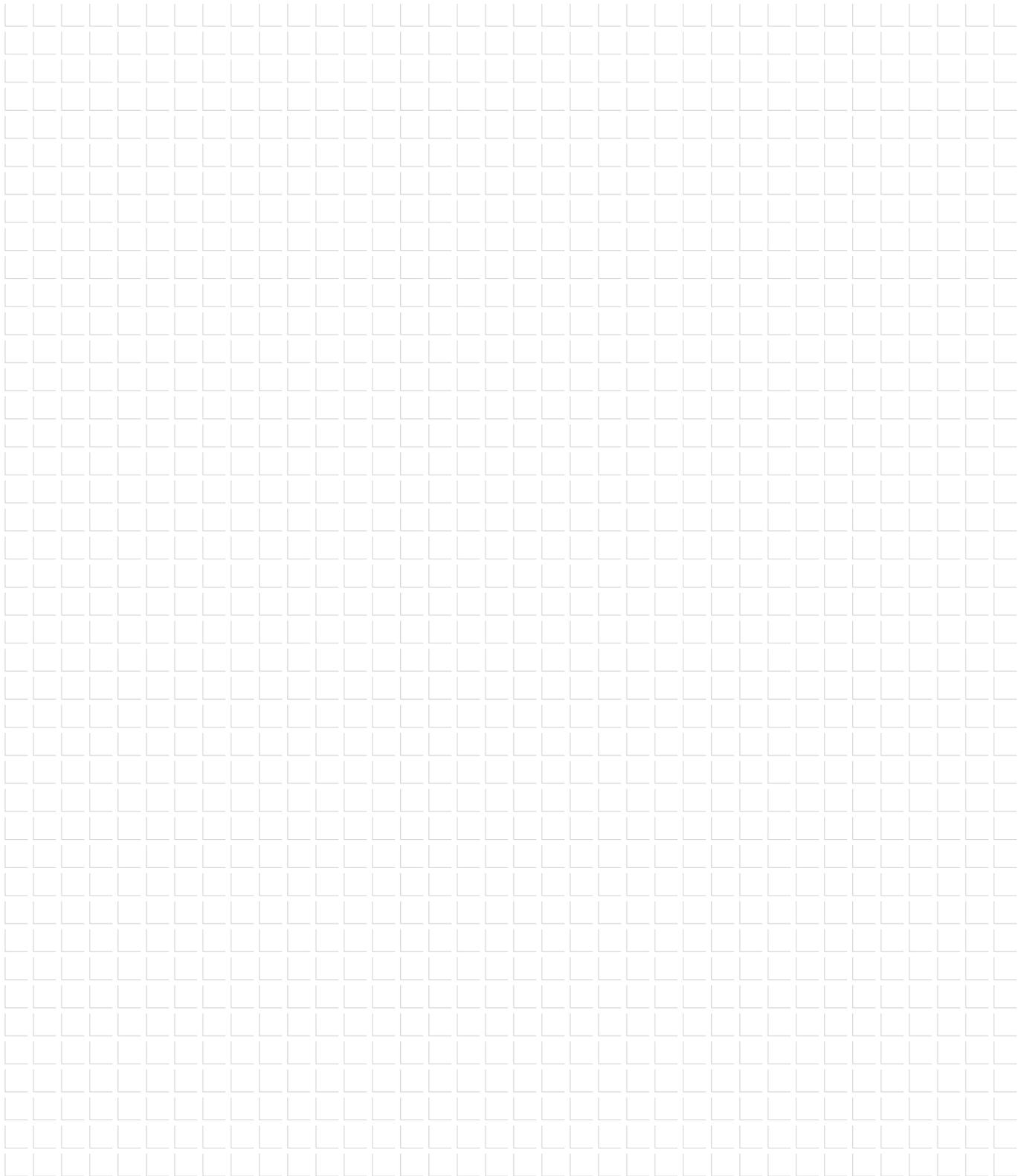
$$v = \sqrt{\frac{2 \times W}{p}} = \text{m / sec} \cong (\times 3,6) \approx \text{km / h}$$

Wind load W [Pa]	wind speed [m/s]	wind speed [km/h]
400	25,3	91
550	29,7	107
600	31	112
750	34,6	125
800	35,8	129
1000	40	144
1200	43,8	158
1500	49	176
1600	50,6	182
1800	53,6	193
2000	56,6	203
2400	62	223
2500	63,2	228
3000	69,3	249
3500	74,8	269

VISTA BEST®

Best of the Best

UPVC Profile Producer



Chemical & Mechanical

Chemical Properties

Substance	Concentration %	Temperature °C	Resistance of PVC-U
Formic acid	100	20	+
Ammonia, liquid	100	20	0
Ammonia, gaseous	100	60	+
Aniline, pure	100	20	-
Exhaust gas			
carbon monoxide containing	any	60	+
carbon dioxide containing	any	60	+
hydrochloric acid containing	any	60	+
sulphur trioxide containing	any	20	0
Aluminium salt, aqueous	any	60	+
Benzine (aliphatic Carbon hydride)	100	60	+
Benzene	100	20	-
Beer	any	60	+
Butanol (Butyl alcohol)	100	40	+
Benzine-Benzene-mixture	80/20	20	-
Brandy	any	20	+
1,3-Butadiene, gaseous	100	60	+
Barium salt, aqueous	any	60	+
Chromic acid (Chromium-(V)-oxide), aqueous	50	20	+
Cyclohexane	100	20	+
Chlorobenzene	100	60	-
Chromic acid /Water/ Sulphuric acid (Chromic-sulphuric acid)	50/35/15	40	+
Hydrogen chloride	any	20	+
Chromium alum Chromium(III)-potassium sulfat	any	60	+
Dekalin	100	60	+
Manuring salts, aqueous	10	60	+
Diesel fuel	-	20	+
Acetic acid	95	20	+
Fatty acid soap (from C ₄)	100	60	+
Fruit juice	ready-to-use	60	+
Glycol, aqueous	ready-to-use	60	+
Haptane	100	60	+
Hexane	100	60	+
Isooctane	100	60	+

Chemical Properties

Substance	Concentration %	Temperature °C	Resistance of PVC-U
Nitrohydrochloric acid (HCL/HNO3)	75/25	20	o
Caustic potash solution	60	60	+
Potassium permanganate	6	60	+
Potassium peroxodisulfide	aqueous	40	+
Common salt	saturated	60	+
Carbon monoxide, gaseous	100	60	+
Linseed oil	100	40	+
Liqueur	ready-to-use	20	+
Mineral oils, free from aromatics	-	60	+
Methanol	100	40	+
Caustic soda solution, aqueous	60	60	+
Nitroglycerine	diluted	20	o
Sodium chlorate	10	60	+
Oils and greases animal and vegetable	-	60	+
Oxalic acid, aqueous	saturated	60	+
Phosphoric acid, aqueous	85	60	+
Hydrochloric acid	up to 37	60	+
Sulphuric acid	80	60	+
Seawater	-	40	+
Toluene	100	20	-
Trilone	commercial	60	o
Hydrogen	100	60	+
Wine	-	60	+
Xylene	100	20	-
Citric acid	10	40	+

Legend:

- +
-
- o

resistant
limited resistant
not resistant

Mechanical Properties

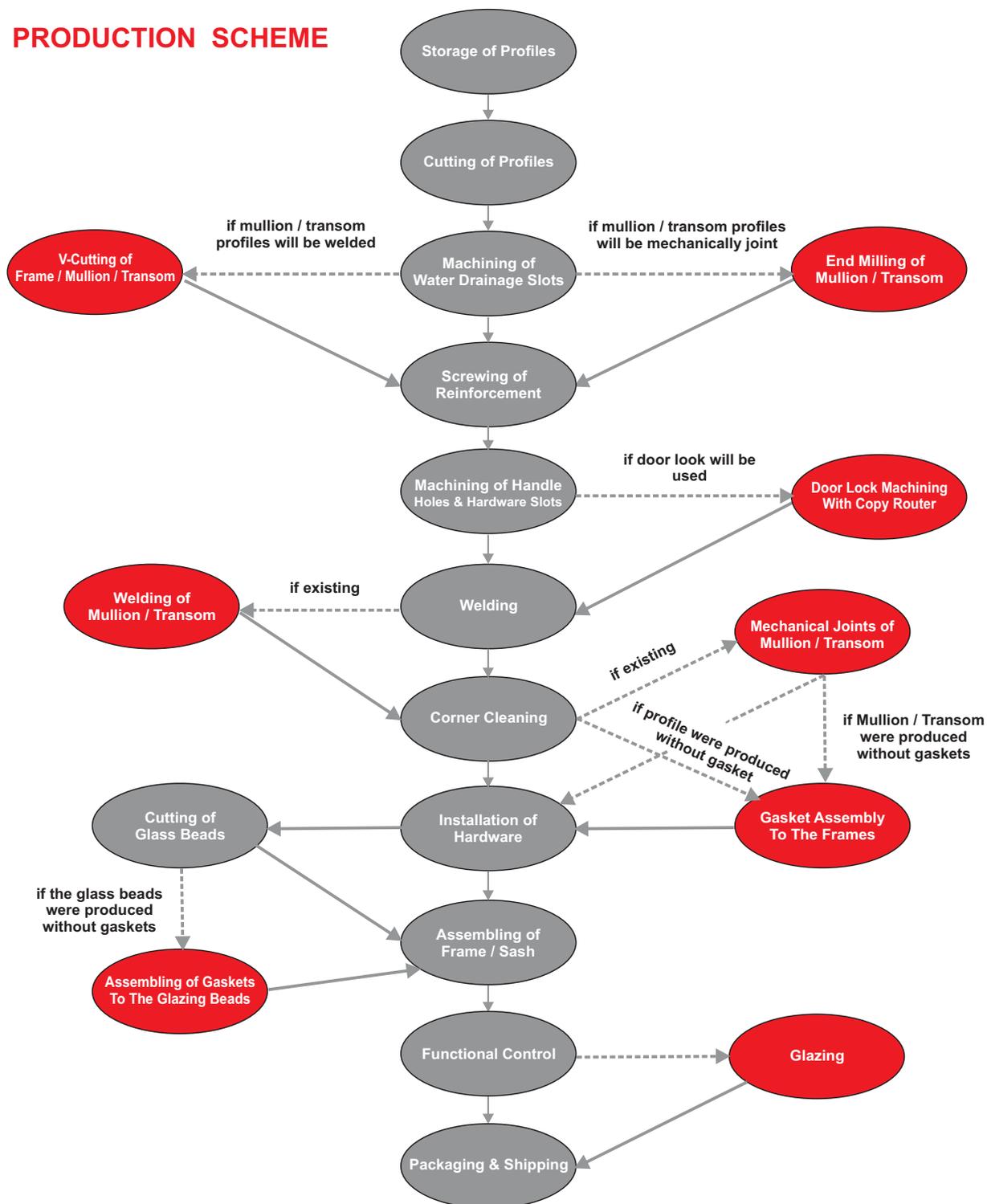
Property	Test method	Unit	PVC-U
Elastic modulus E	DIN 53 457	N/mm ² (kg/cm ²)	2 500 (25 000)
Notched impact test ak at 23°C at 0°C	DIN 53 453	KJ/m ² (kpcm/cm ²)	35 8
Impact strength an at 23°C at 0°C at -20°C at -40°C	DIN 53 453	KJ/m ² (kpcm/cm ²)	without breakage without breakage without breakage without breakage
Ball indentation hardness H 358/30	DIN 53 456	N/mm ² (kp/cm ²)	74 (740)
Tensile strength ss (yield stress**)	DIN 53 455	N/mm ² (kp/cm ²)	44 (440)
Tensile impact strength azn at 23°C at 0°C	DIN 53 488	KJ/m ² (kpcm/cm ²)	700 400
Flexural strength sbB (6 mm deflection)	DIN 53 452 Standard test piece	N/mm ² (kp/cm ²)	70 700
Heat resistance according Vicat VST/B50 according ISO 75 FISO/A	DIN 53 460 DIN 53 461	°C °C	82 72
Coefficient of linear expansion a (-30°C, +30°C)	IN 53 752	1/k (1/grad)	7,0 · 10 ⁻⁵
Thermal conductivity l	DIN 52 612 Sheet 1	W/(m · k) [kcal/(m · h · grad)]	0,20 (0,17)
Density r	DIN 53 479	g/cm ³	1,44
Water absorption WA	DIN 53 495	%	0,04

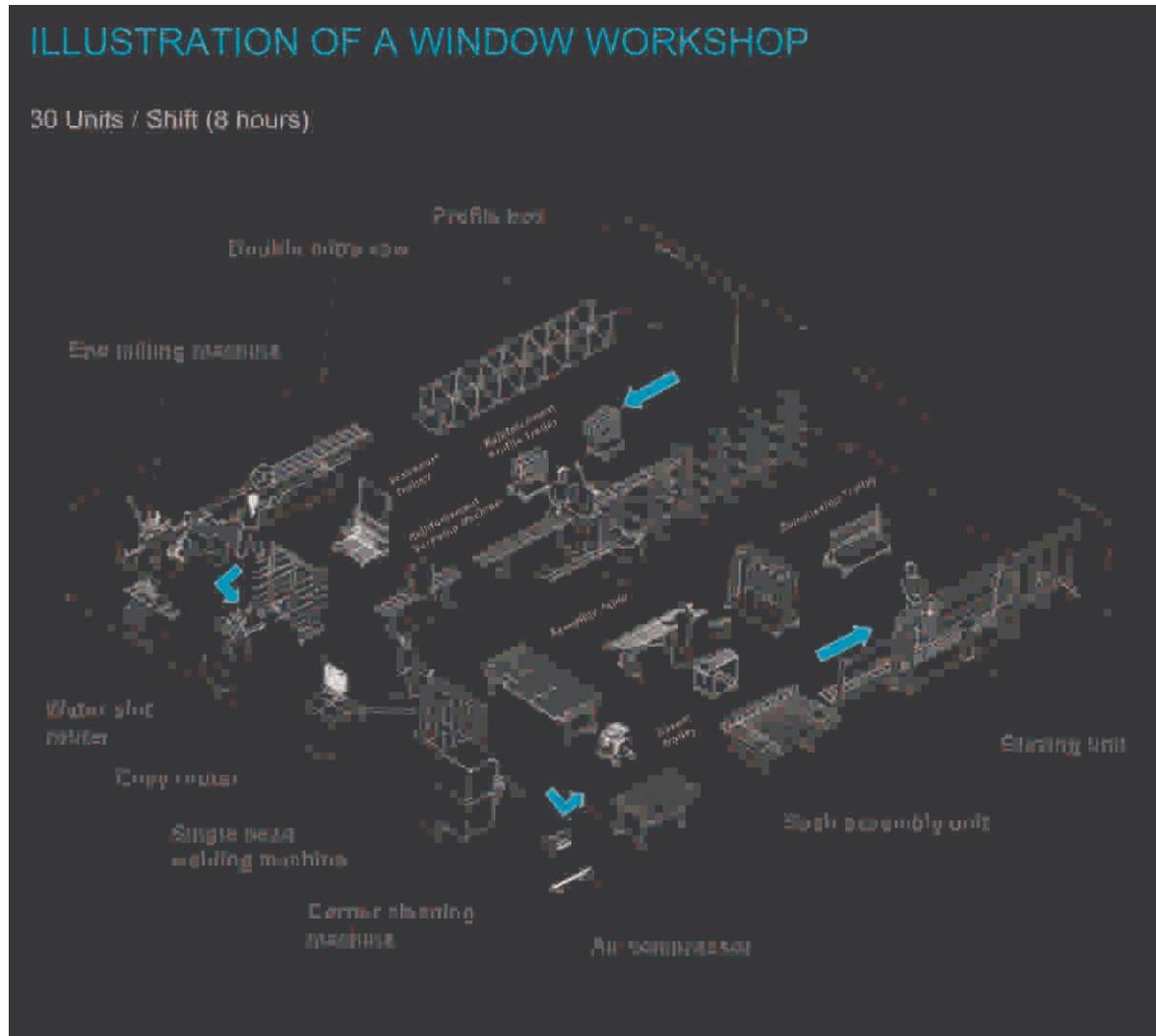
* The properties were determined at press plates according DIN 77 48 part 2 (June 1979)

** In case of U-PVC tensile force and yield stress are identical

Installation

PRODUCTION SCHEME





STEP BY STEP WINDOW MANUFACTURING

Storage of profiles

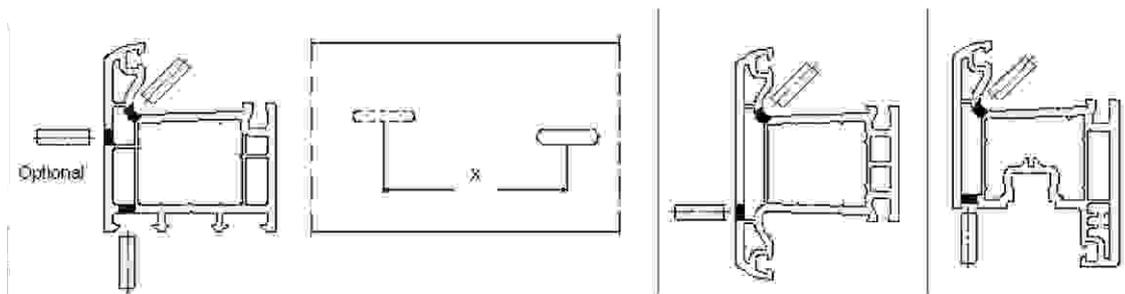
This must be located in an enlightened part of the workshop, readily accessible, and maintained at the same temperature ($>15^{\circ}\text{C}$) as the work stations. Lower temperatures may cause some problems in welding.

Cutting of profiles

This is a high-precision operation; the quality of the welding, consequently the end product, largely depends on the accuracy of the cutting. Cutting precision and optimization can be controlled by computer.

Machining of water drainage slots

Water drainage slots are machined to the horizontal profiles located at the bottom side of the window partitions. Preset milling machines are used for this purpose. Pictures below show the placement of slots for different profiles.

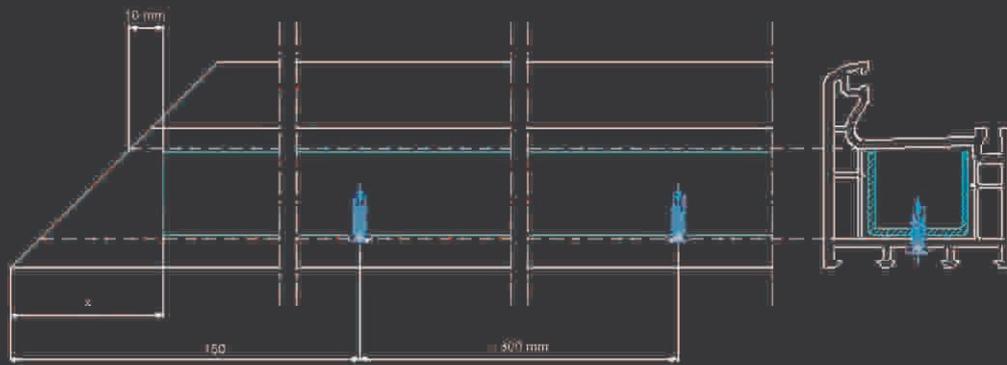


As can be seen from the pictures, there must be a certain distance (x) between the slots opened on the front side and the inner side. This distance should not be less than 50 mm.

Drainage slots for the door profile are machined like the sash profile. There shouldn't be any drainage slots in case of outward opening door sash.

Drainage from bottom is optional for the frame profiles. Widely used slot thickness is 5mm and slot length 20-25 mm.

Screwing on reinforcement profiles



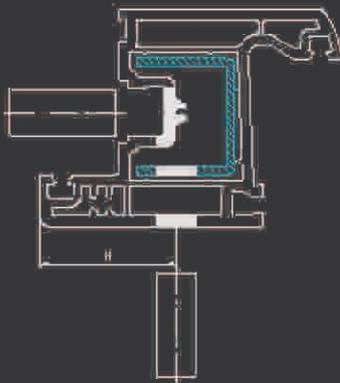
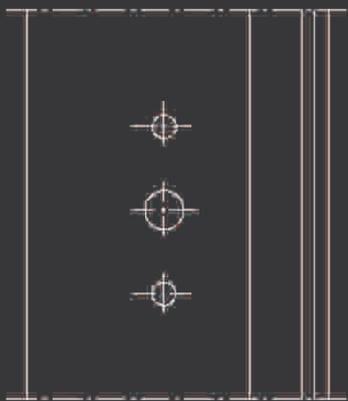
Reinforcement profiles are screwed on to the PVC profiles by self-tapping screws. Reinforcement profile cutting dimension is equal to (profile length - 2x). Determining the "x" dimension is quite important. After 45 ° cutting of the profile, a safety distance of 10mm can be measured from the wall which will be welded in the closest position to the reinforcement profile. The distance of this point to the profile edge will be the "x". This dimension should be determined for all the profiles, by this way, which will be welded while having reinforcement inside.

The distance of the first screw from the profile edge may be 150mm. The distance for the following screws should not be more than 300mm. For very short profile lengths, at least 3 screws should be used.

Machining of the hardware slots and handle holes

These two operations are held at the same machine. For the widely used hardware and handles, the placement of the slot and holes on the sash profile are shown on the following picture

The same process is valid also for the door profiles. In case of usage of locked espagnolettes or door locks, machining for the barrel is made by a copy router. Copy routers can also be used for all types of non-standard machining work on the profiles.

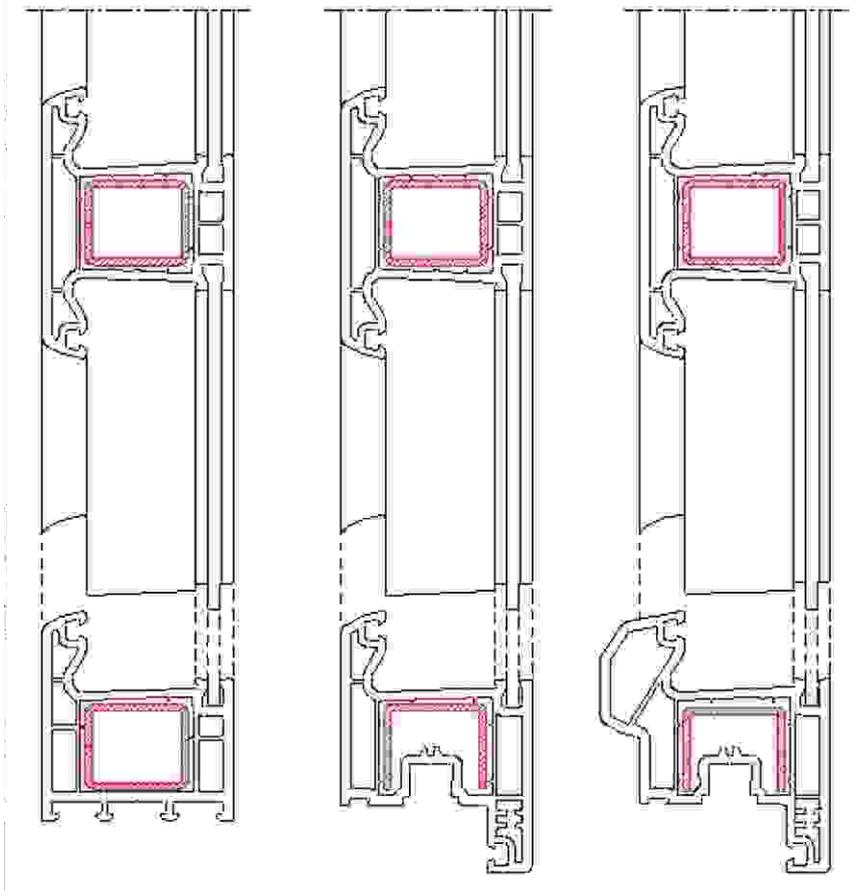


For the standard handles, the axis distance between the handle holes is 43 mm. The handle axis distance (a) and euro-groove machining width (b) depend on the hardware producer. After determination of the hardware, all these dimensions should be provided by the manufacturer.

Preparation of the mullion / transoms

Mullions and transoms are connected to the window frames by means of mechanical (mostly with metal or plastic injected parts) or welded joints. The widely used application is mechanical joint.

The mechanical connection calls for the mullion / transom profile to be end-milled. A special machine with specially designed rotating blades, according to the connection contour, is used for this purpose (see the following picture).

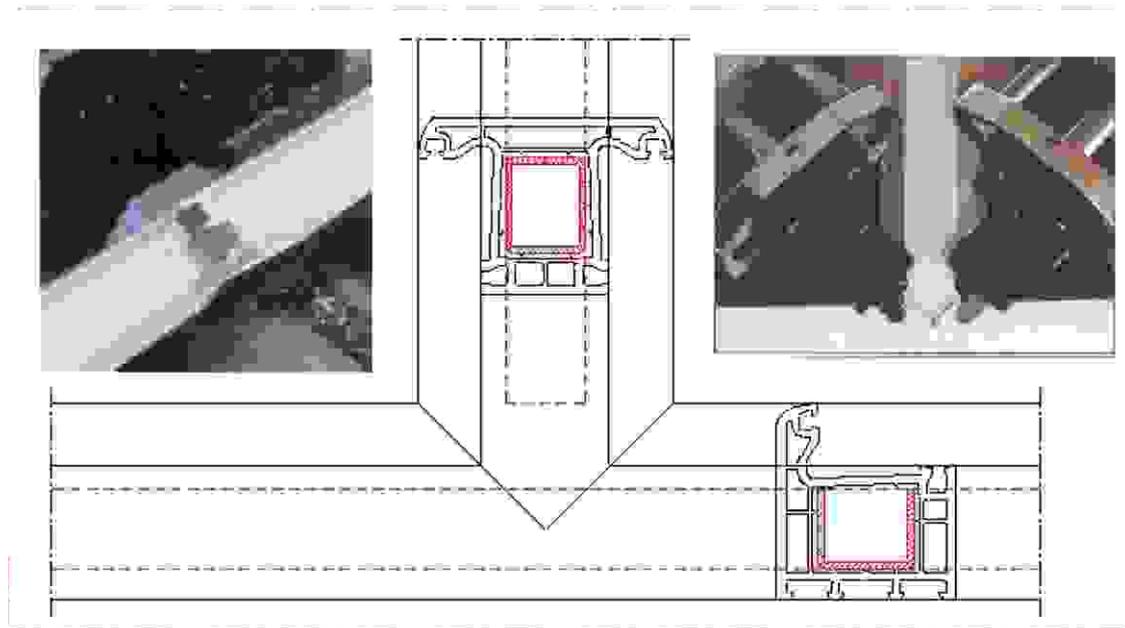


The end-machined profile mullion is assembled to the frame by means of injection parts which are mostly screwed to the reinforcement profile in the frame.

Regardless of the type of the frame (frame, sash, mullion, door etc.) which mullion / transom will be assembled, it would be very practical to have only one type of machining. In order to achieve this, the profile designer should check the connection of the mullion profile with the other profiles during the design stage (especially with the step sash and step door sash profiles).

Another concern is the screwing detail of the connection parts. To be able to screw the injection parts to the metal, the usage of the box reinforcement profile is important in the frame. The system should allow this application as can be seen on the picture above.

The welded connection of mullion / transom (T- and X-connections) necessitates 45° V-cuts in the mullion profile and 45° V-notched cuts on the framing profile. For these purposes, a special cutting machine is fitted with two blades working alternately. The accuracy of this V-cut is critical to the quality of the end product.



Welding of the profiles

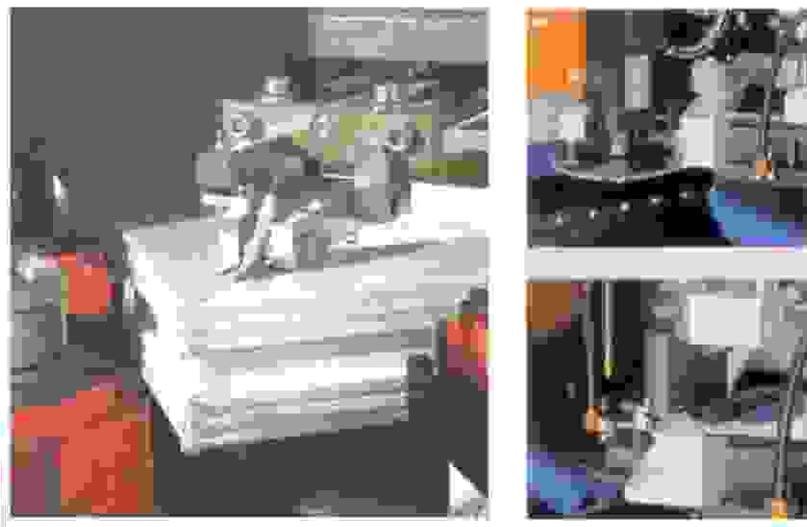
This is a very important operation in PVC window construction, which makes it completely watertight.



There is a wide range of welding machines, varying from the single-head welder to the multi-head welders which simultaneously weld the mullions / transoms, crosses, corner butt welds, and angles.

Corner cleaning

After the welding operation, weld sprue is formed on the welded corners. These sprues can be cleaned with several hand tools, corner cleaning machines or fully-automatic corner cleaning units as well.



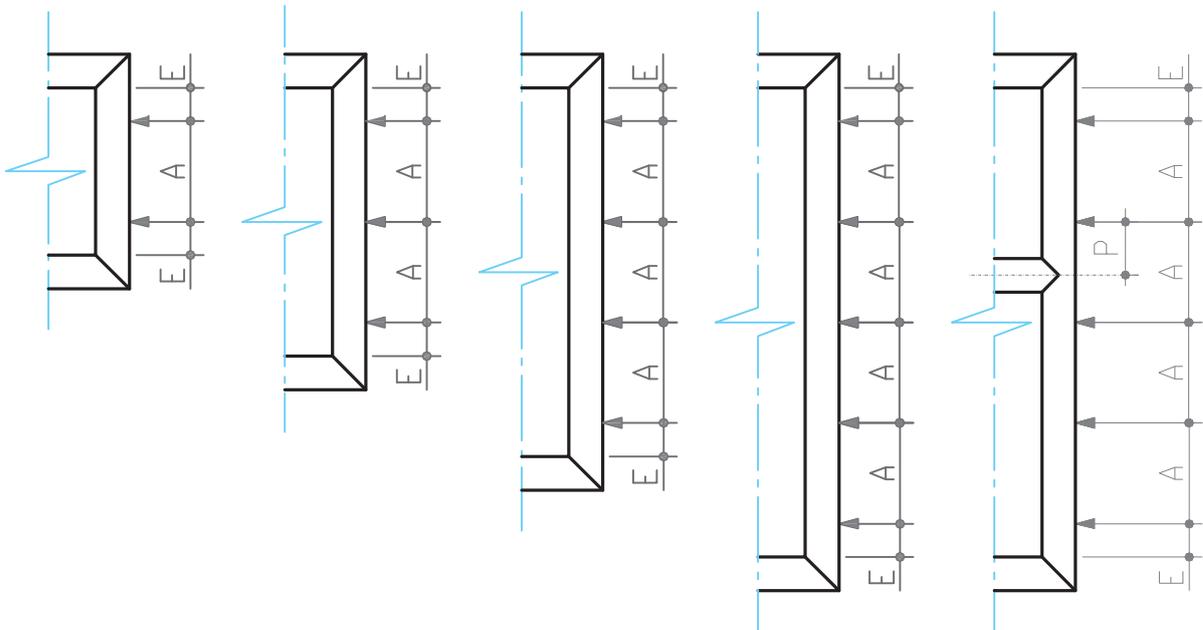
Hardware assembly

In window and door systems, all the accessories used for opening, closing and locking of the window sashes (espagnolettes, locks, locking bolts, hinges etc.) are called hardware.



Especially in the assembly of the tilt and turn opening systems, special jigs are used, mostly provided by the hardware manufacturer. Necessary holes on the frame and sash are opened by means of these jigs before the assembly of hardware.

Structural installation

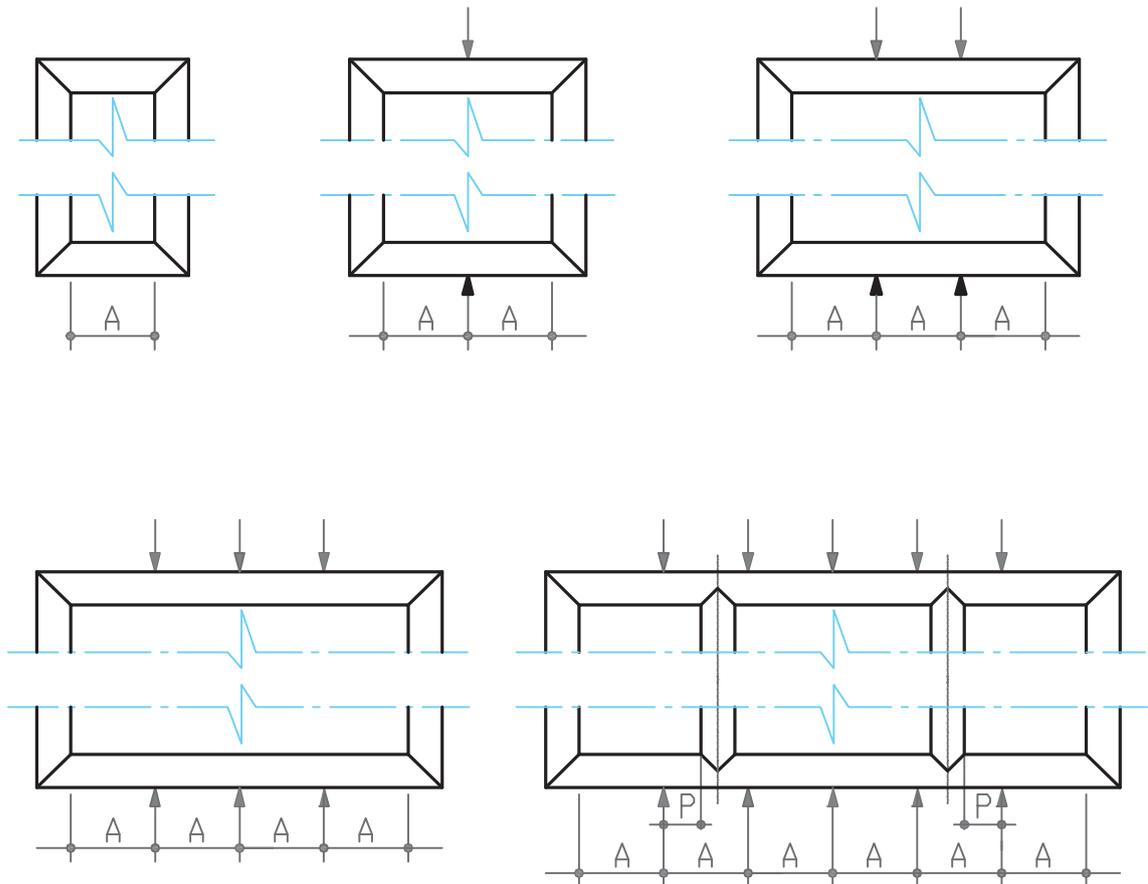


Anchorage distance of the vertical parts of the frame:

A = distance betw. fixing points
E = distance to corner
P = distance to mullion

	for white profiles	for coloured profiles
	max. 700 mm	max. 700 mm
	ca. 150 mm	ca. 250 mm
	ca. 150 mm	ca. 250 mm

Structural installation

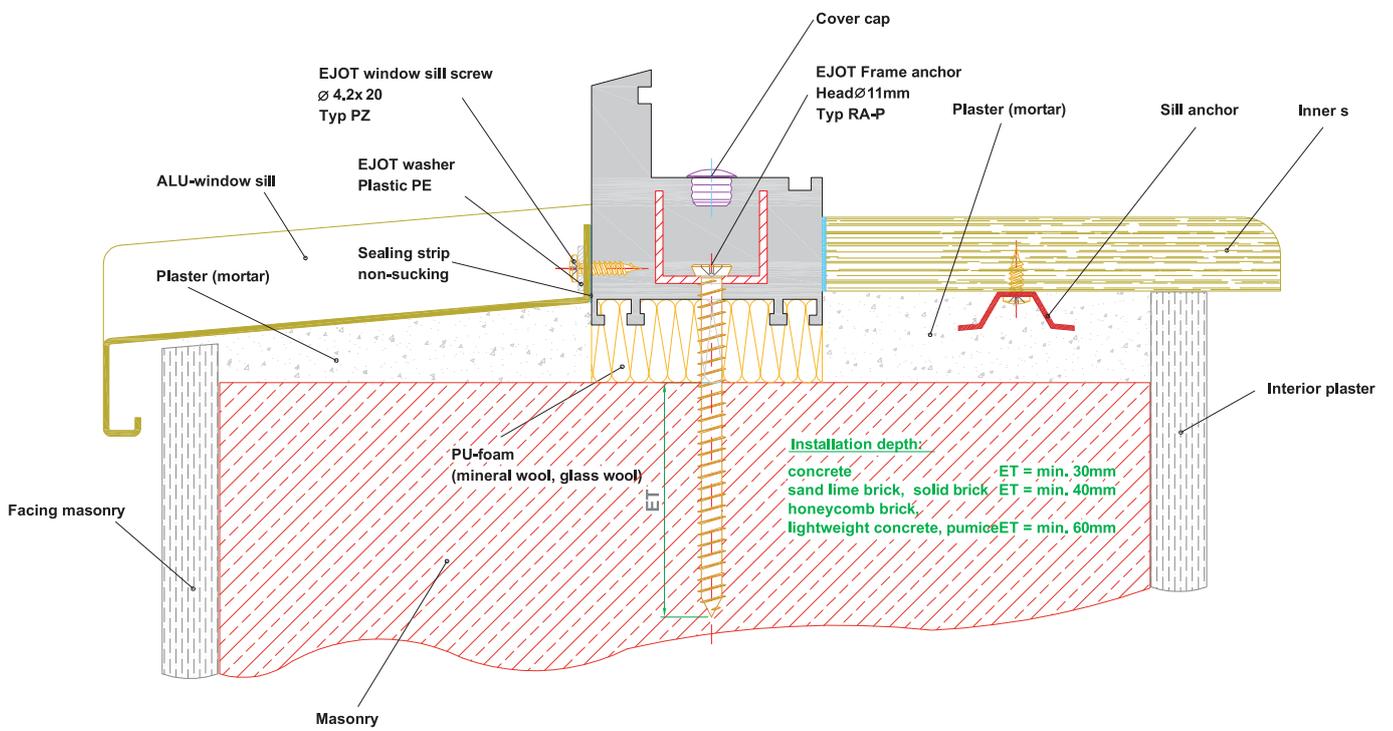


Anchorage distance of the horizontal parts of the frame:

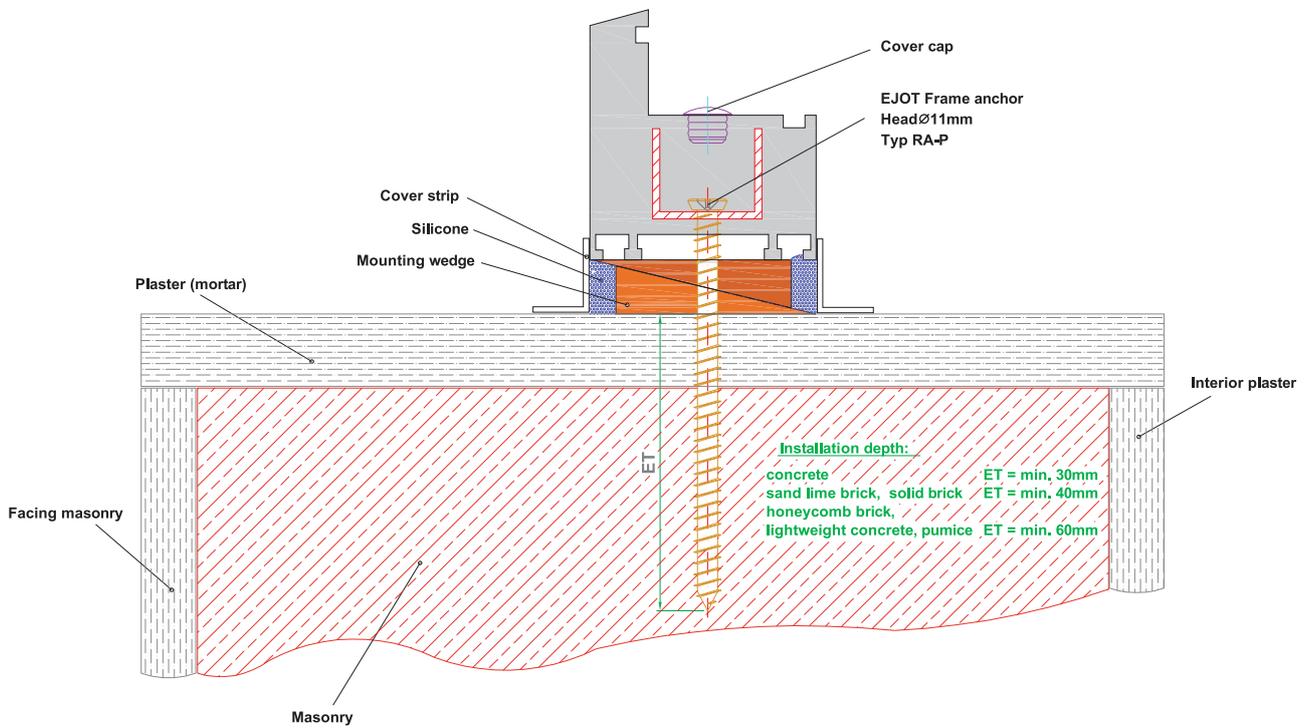
A = distance betw. fixing points
P = distance to mullion

for white profiles	for coloured profiles
max. 700 mm	max. 700 mm
ca. 150 mm	ca. 250 mm

Structure connection, at the bottom



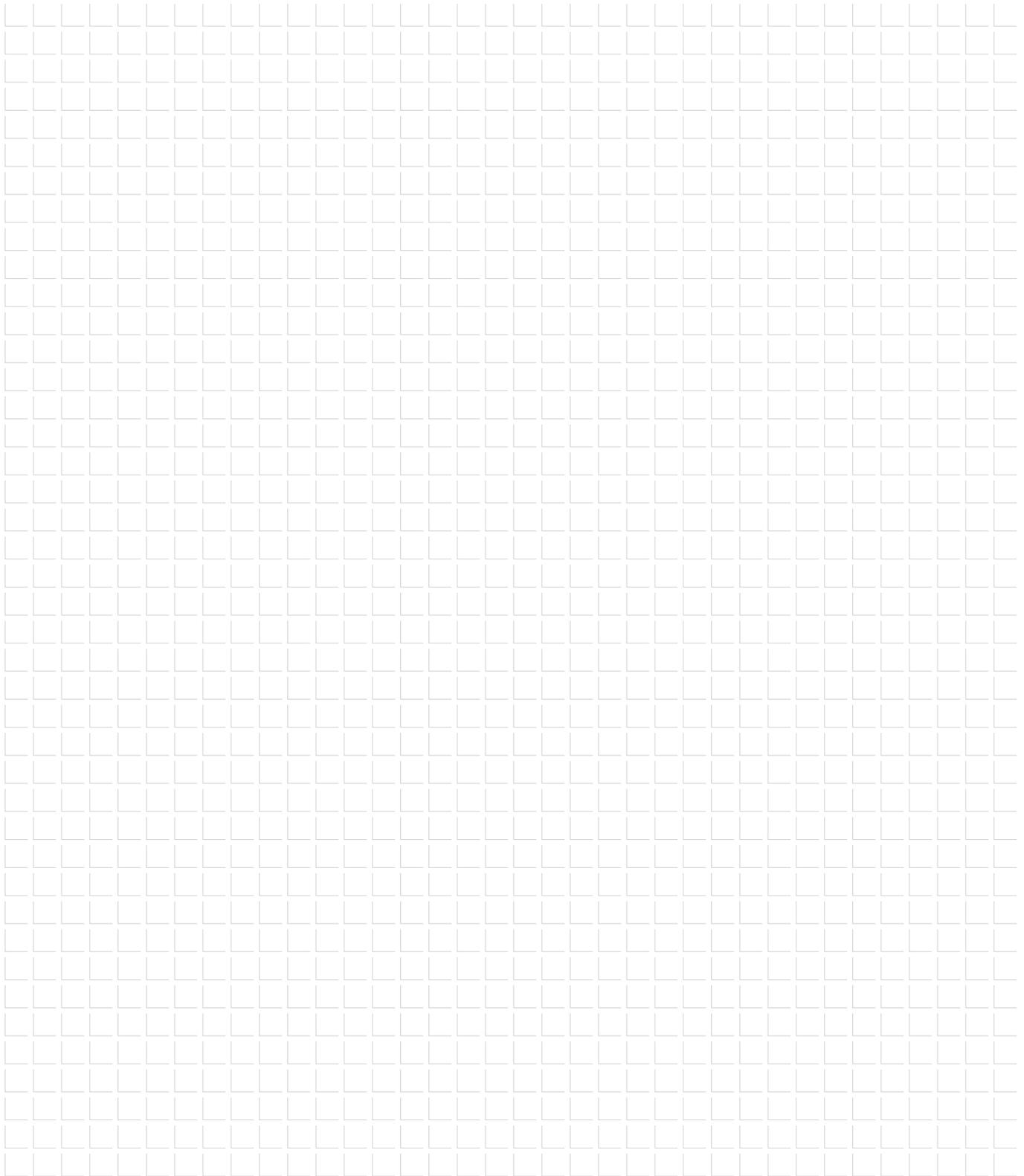
Structure connection, laterally and on the top

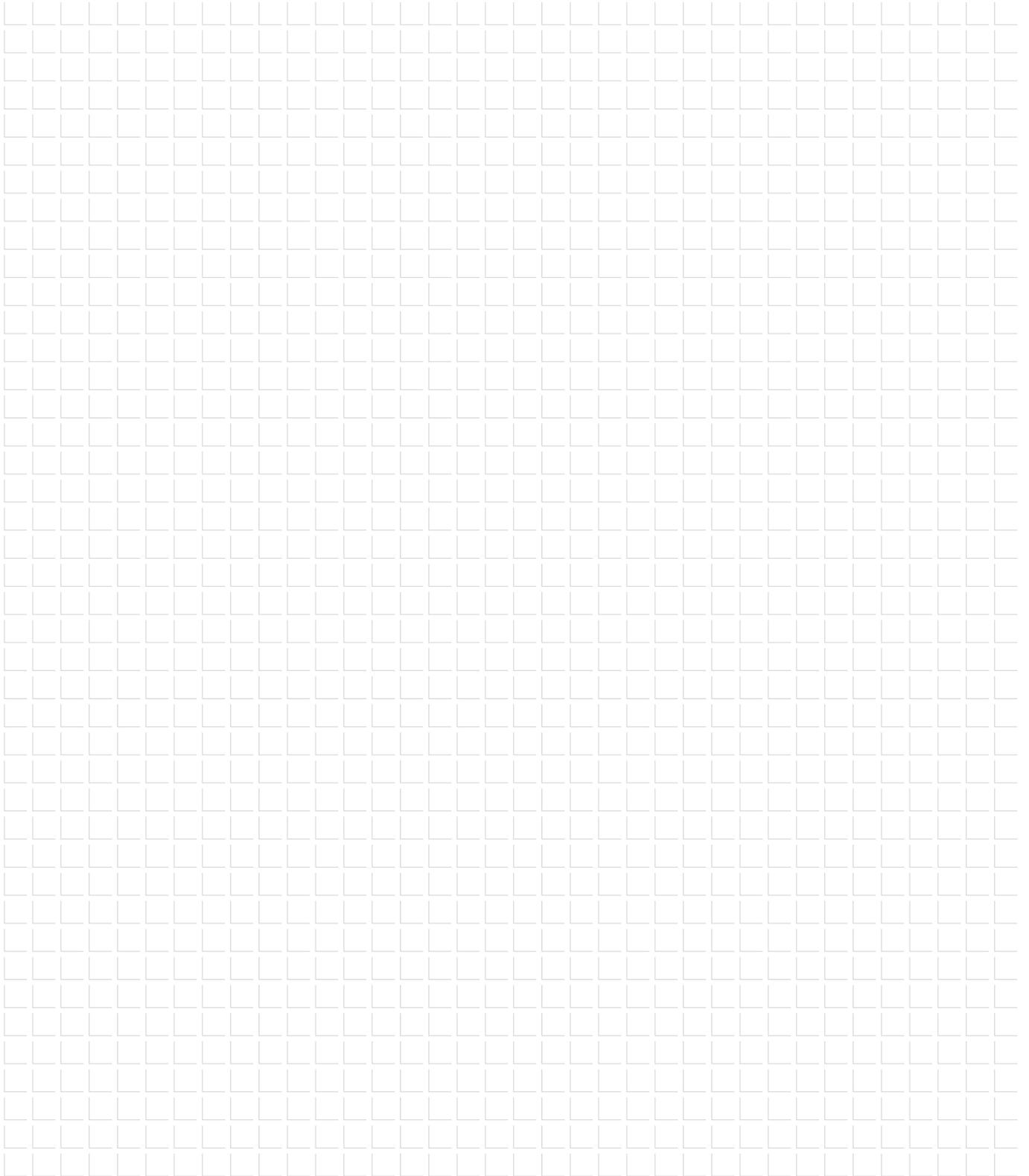


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«ویستابست» با بهره‌گیری از تجارب خود و نقطه نظرات مفید و سازنده همکارانی که در این صنعت فعالیت دارند، با تمامی توان در جهت تقویت و تداوم کیفیت و نوآوری کوشش نموده و بزودی محصولات جدید دیگری را معرفی خواهد نمود.

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دفتر مرکزی : تهران، بلوار آفریقا، خیابان شهید طاهری، پلاک ۱۲
تلفن واحد فروش : ۲۳۰۰۰ ۲۱۰۰۰ (۰۲۱)
فکس : ۲۲۰۴۳ ۷۵۴ (۰۲۱)
ایمیل : info@vistabest.com

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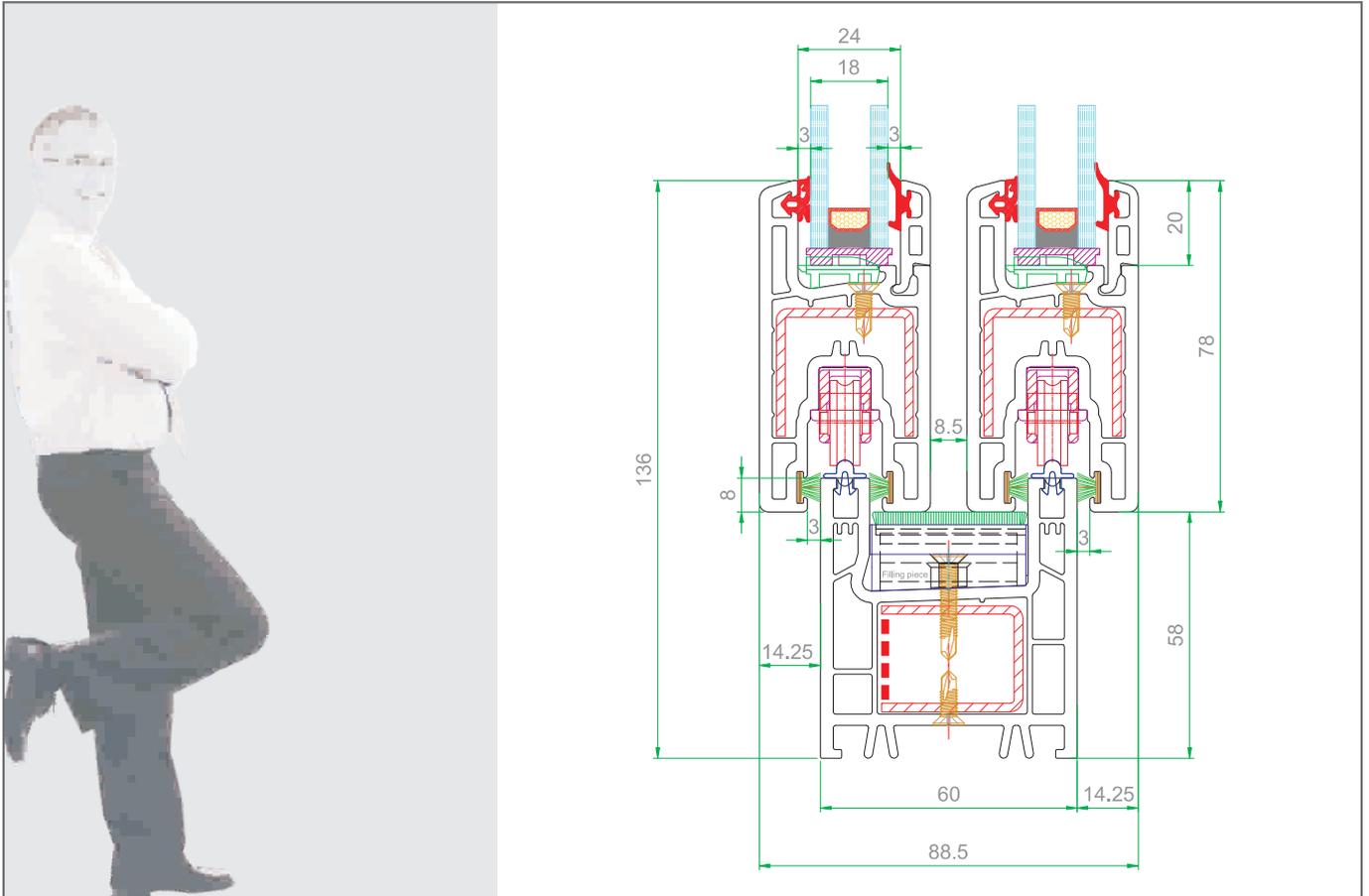
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VISTA BEST is a young team supported by a long line of production experience. Our products are produced on the basis of high quality, innovation and durability.

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High market share in a short period and at a time of overwhelming foreign import has proven our ability to reach our goals. The use of our products by experienced UPVC window fabricators enforces us to continue and exceed all that we have achieved so far.

By complying with all the technical and production standards of high quality manufacturing we hope to boost our customers' confidence in Iranian quality.

ما گوهری در اختیار شما می‌گذاریم تا از آن جواهری بر سینه ساختمان‌ها بسازید.

«ویستا بست» برندی است که خود را در اعماق اذهان حک می‌کند.

«ویستا بست» متشکل از گروهی متخصص با تکیه بر تجربیات تولیدی طولانی بوده و محصولات خود را بر اصل مهم کیفیت، نوآوری و استمرار بنا نهاده است.

«ویستا بست» با بکار بردن طراحی مدرن روز، ماشین‌آلات و تکنولوژی پیشرفته کشورهای آلمان و اتریش، همراه با پرسنل متخصص و مواد اولیه برتر اروپایی توانسته است محصولاتی را تولید نماید که کیفیت آن‌ها توسط مراکز تحقیقاتی مرجع ایرانی و اروپایی به تایید رسیده است.

بدست آوردن سهم قابل توجهی از بازار در زمانی کوتاه در مقابله با سیل عظیم محصولات وارداتی؛ سندی بر تحقق اهداف «ویستا بست» بوده و بکار گرفتن این محصولات توسط سازندگان توانمند در ب و پنجره‌های یو پی وی سی باعث تقویت انگیزه‌های «ویستا بست» برای استمرار و ارائه محصولات جدید می‌باشد.

امید است با رعایت نکات فنی و اصول ساخت، اعتماد مصرف‌کنندگان به محصولات با کیفیت ایرانی را افزون نماییم.

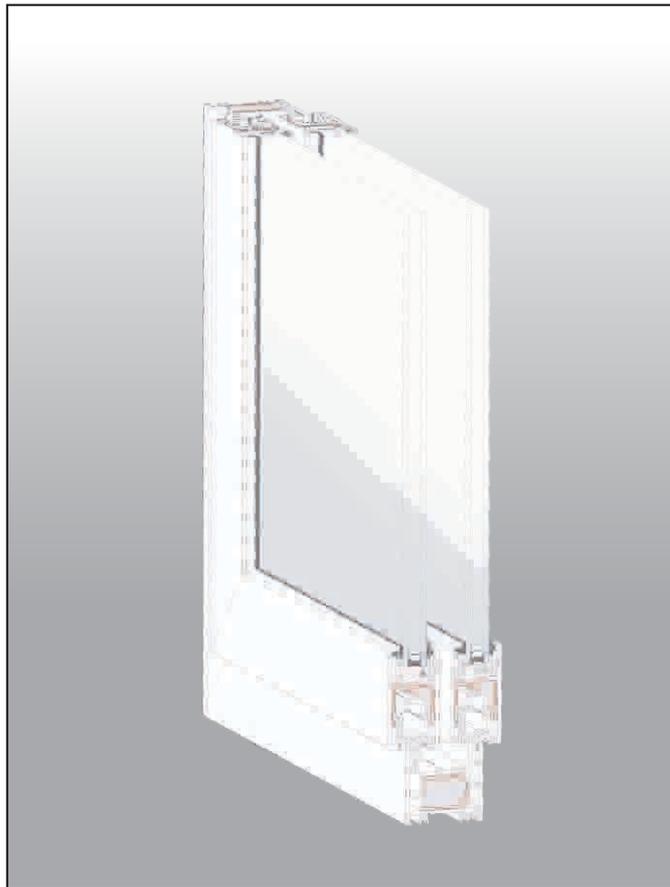
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System Profiles And Auxiliary Products	5
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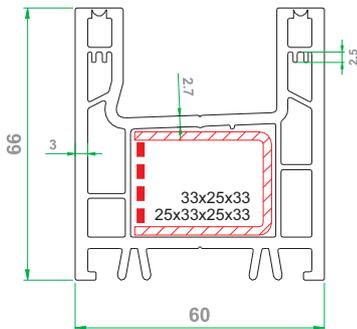
System Profiles And Auxiliary Products

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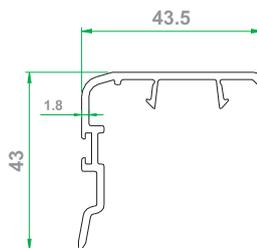
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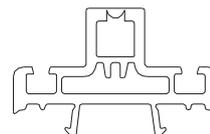
SI.Frame S-586.01
1,46 kg/m



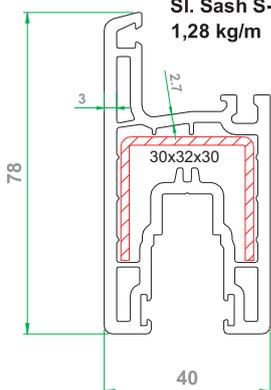
Interlock S-586.03
0,27 kg/m



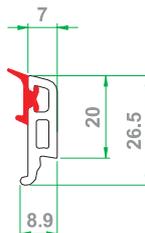
Interseal (AI)



SI. Sash S-586.02
1,28 kg/m

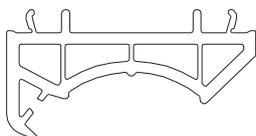


Glassbead S-586.04
0,15 kg/m
PCE: 38 g/m



Existing Profiles that can be used:

Bay & bow adaptor S-507.10 pole S-563.10
0.71 kg/m 1.60 kg/m



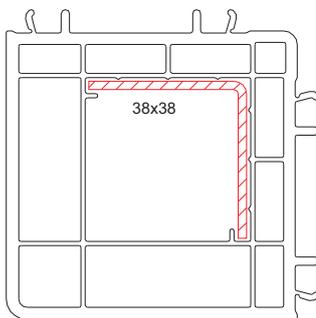
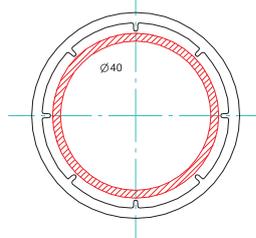
Glassbead 22 mm S-507.06 Glassbead 24 mm S-563.07
0.19 kg/m; Soft PVC 12.8 g/m 0.17 kg/m; Soft PCE 38 g/m



Coupling S-563.11
0.11 kg/m



Bay & bow pole S-507.11
0.56 kg/m



Coupling S-507.13
0.29 kg/m

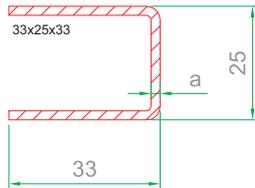


Cover S-507.14
0.14 kg/m

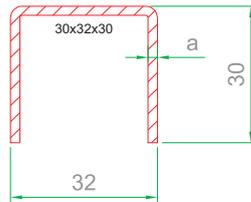


S-586TRE01

= S-563TRE02
= S-507TRE09

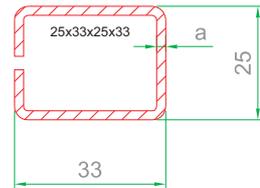


S-586TRE02

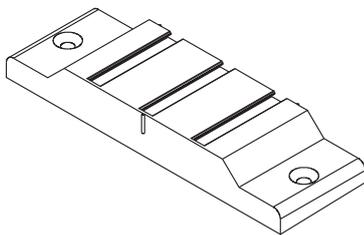


Option: S-586TRE03

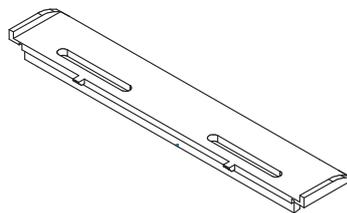
= S-563TRE03
= S-507TRE10



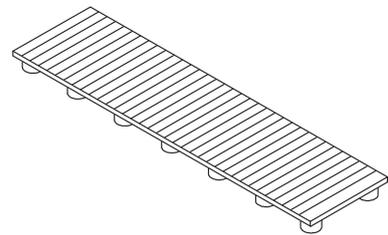
Filling Piece



Glazing Bridge



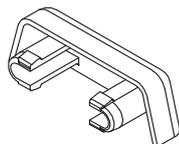
Glazing Block



Brush Gasket



Water Drainage Cover



Gasket 01



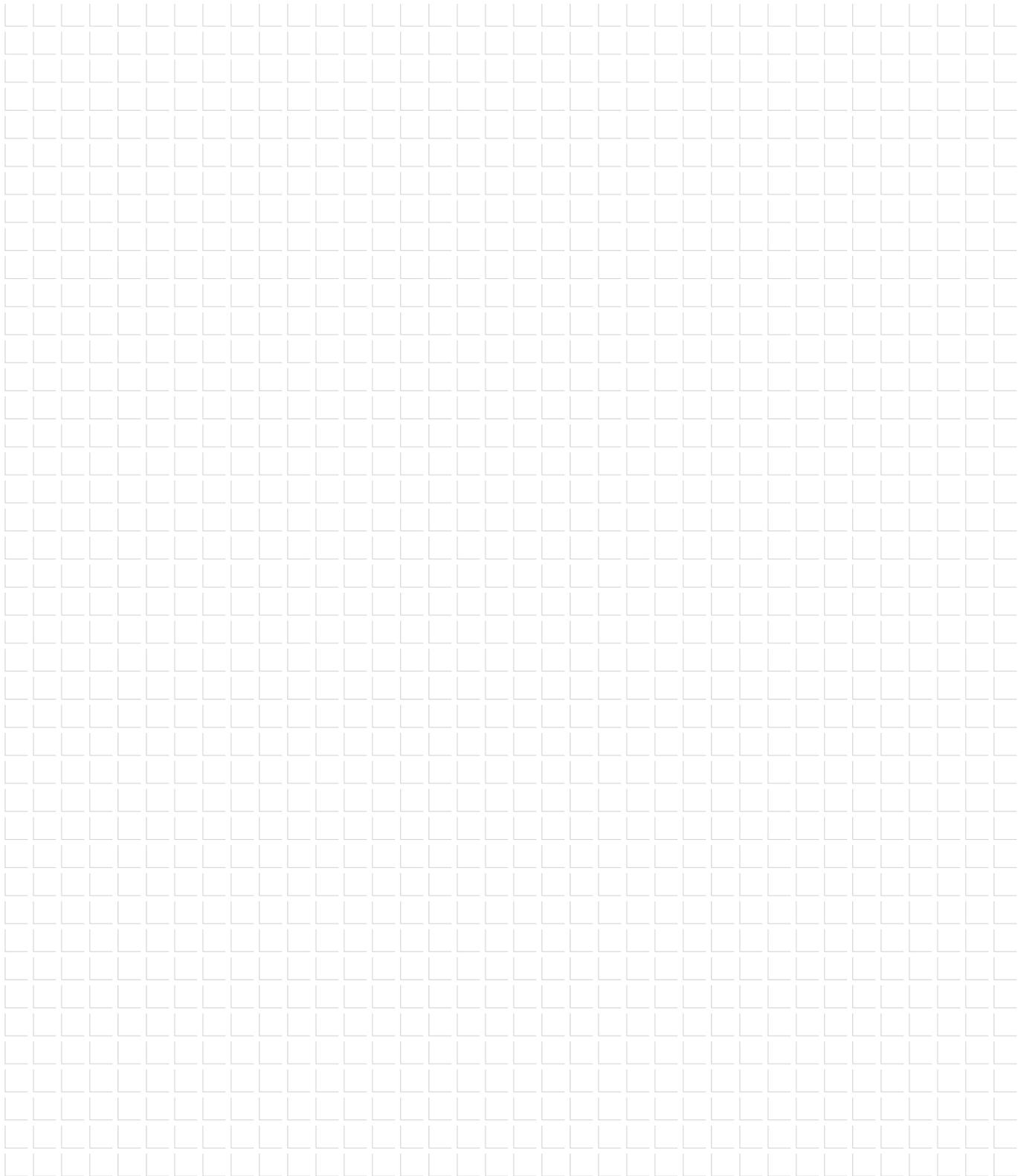
Gasket 02



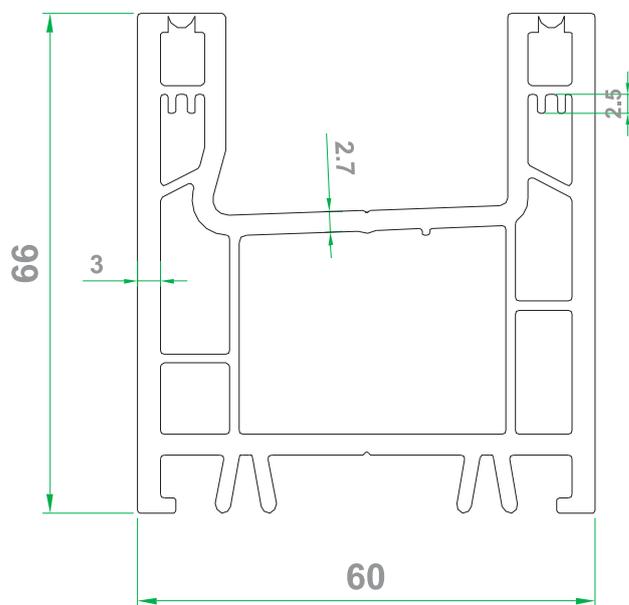
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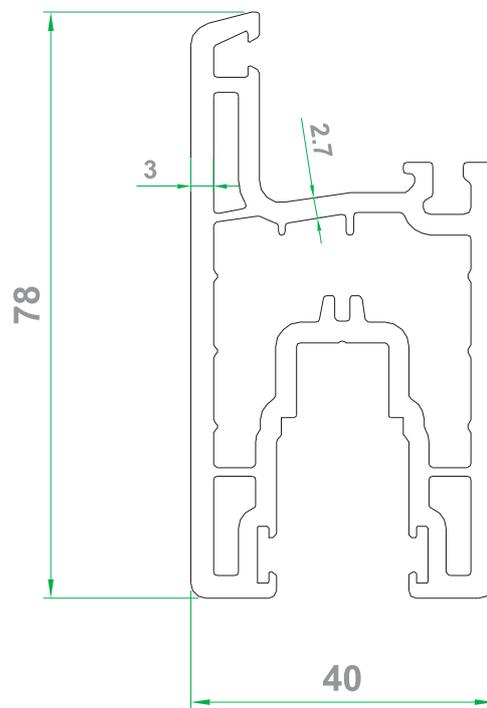
UPVC Profile Producer



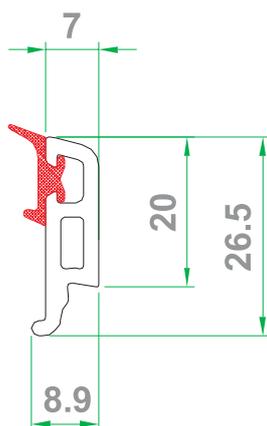
Profiles



SI.Frame S-586.01
1,46 kg/m



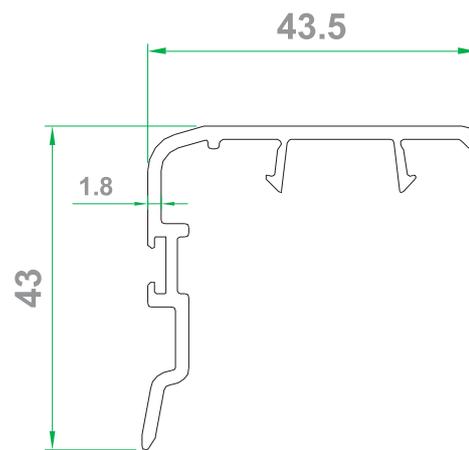
SI. Sash S-586.02
1,28 kg/m



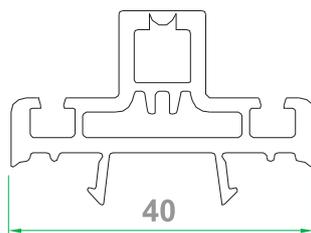
Glassbead S-586.04

0,15 kg/m

PCE: 38 g/m

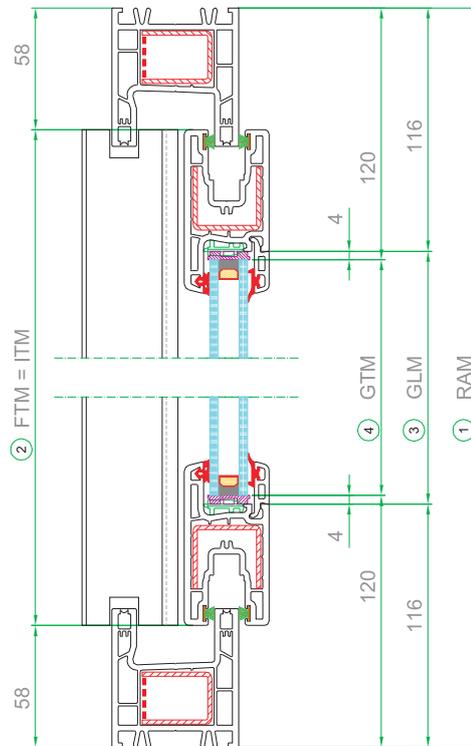
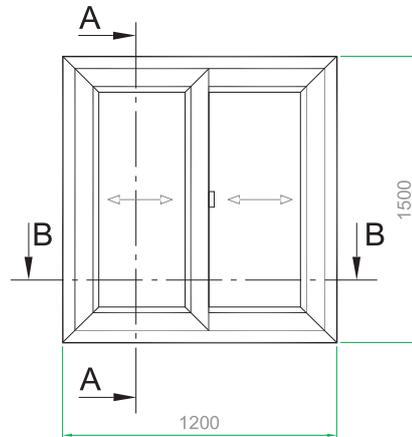


Interlock S-586.03
0,27 kg/m



Inters(41)

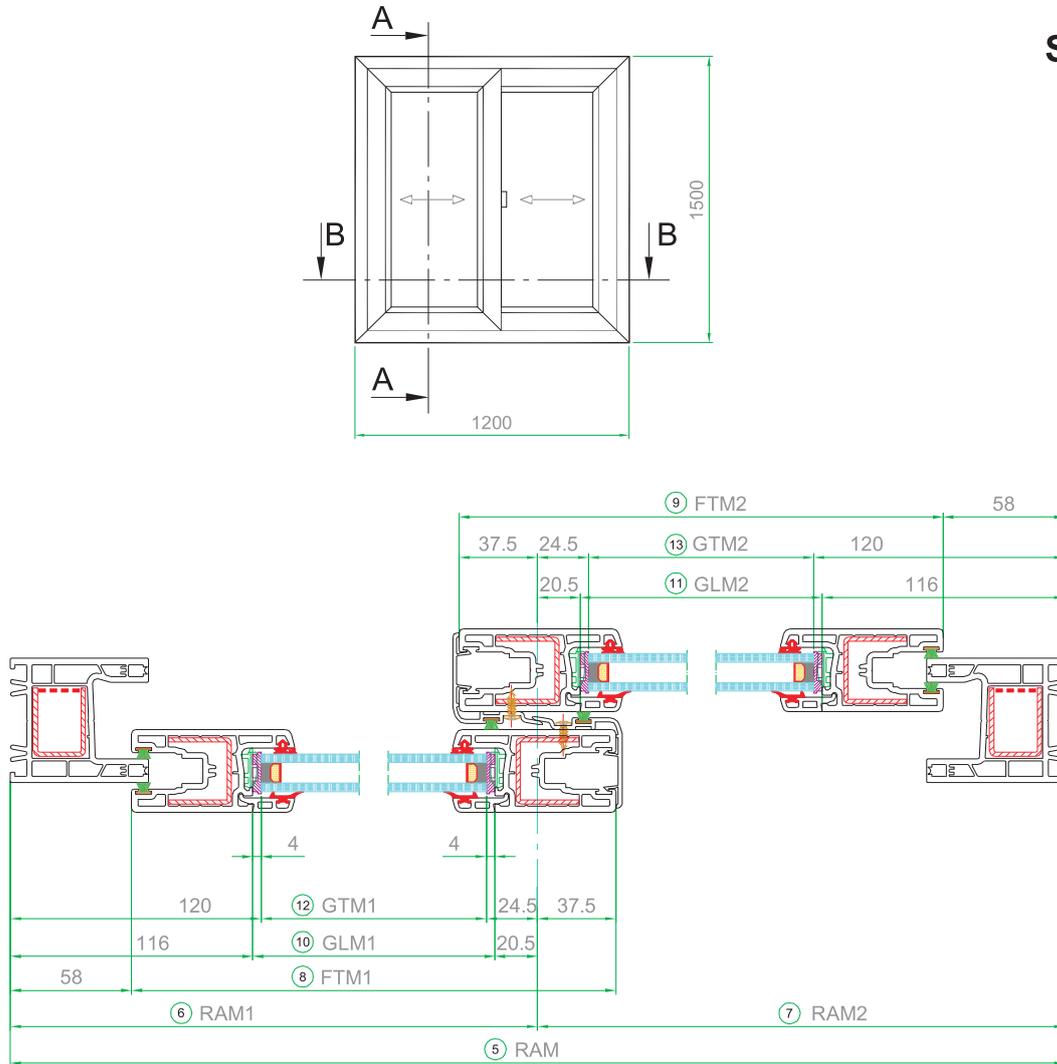
Section A-A



Fabrication

Cutting dimensions - Section A-A (for window height e.g. 1500 mm)			
Pos.	Description	Formula	size mm (e.g.)
1	RAM = Frame reference size		1500.0
2	FTM = Sash size	RAM - 116.0	1384.0
2	ITM = Interlock size	RAM - 116.0	1384.0
3	GLM = Glassbead size	RAM - 232.0	1268.0
4	GTM = Glass size	RAM - 240.0	1260.0

Section B-B

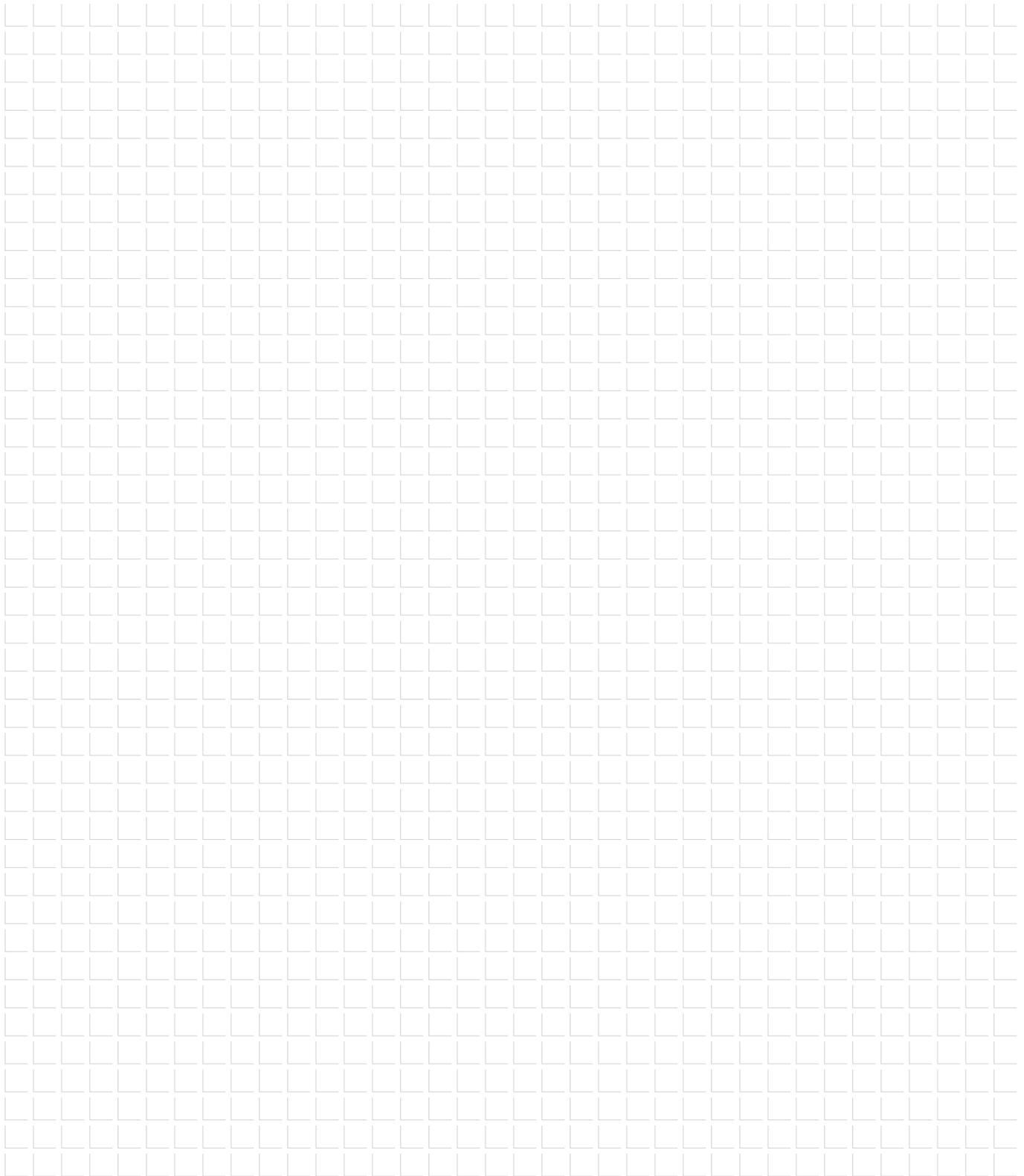


Cutting dimensions - Section B-B (for window width e.g. 1200 mm)			
Pos.	Description	Formula	size mm (e.g.)
5	RAM = Frame reference size		1200.0
6	RAM 1	$RAM / 2$	600.0
7	RAM 2	$RAM / 2$	600.0
8	FTM 1 = Sash size	$RAM 1 - 20.5$	579.5
9	FTM 2 = Sash size	$RAM 2 - 20.5$	579.5
10	GLM 1 = Glassbead size	$RAM 1 - 136.5$	463.5
11	GLM 2 = Glassbead size	$RAM 2 - 136.5$	463.5
12	GTM 1 = Glass size	$RAM 1 - 144.5$	455.5
13	GTM 2 = Glass size	$RAM 2 - 144.5$	455.5

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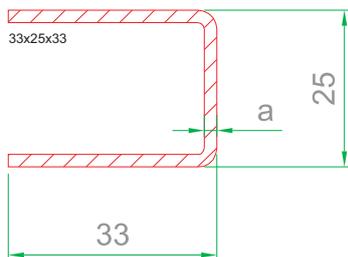
UPVC Profile Producer



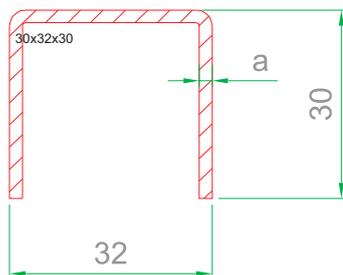
Reinforcement (Info & Cutting Dimensions)

S-586TRE01

= S-563TRE02
= S-507TRE09



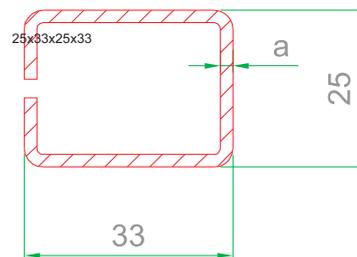
S-586TRE02



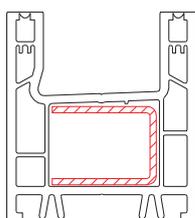
Option:

S-586TRE03

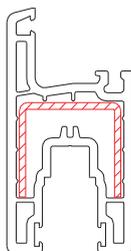
= S-563TRE03
= S-507TRE10



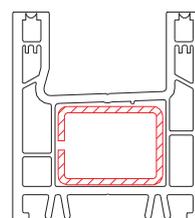
SI.Frame S-586.01



SI. Sash S-586.02



SI.Frame S-586.01



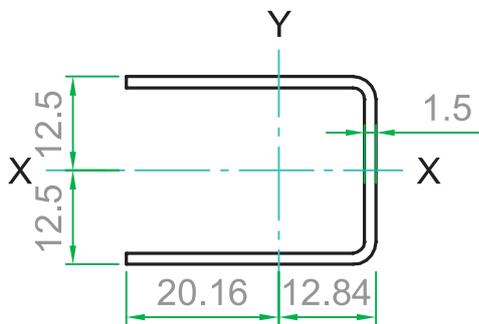
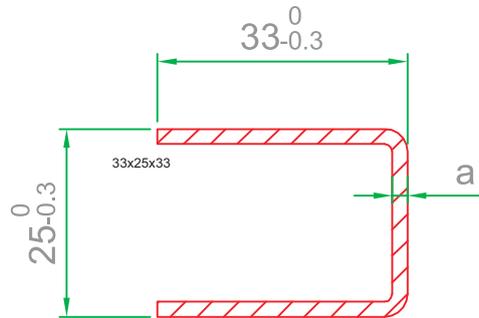
thickness a [mm]	weight [kg/m]
1,50	0,99
2,00	1,31
2,50	1,63
3,00	1,93

thickness a [mm]	weight [kg/m]
1,50	1,02
2,00	1,34
2,50	1,65
3,00	1,95

thickness a [mm]	weight [kg/m]
1,50	1,19
2,00	1,56
2,50	1,93
3,00	2,27

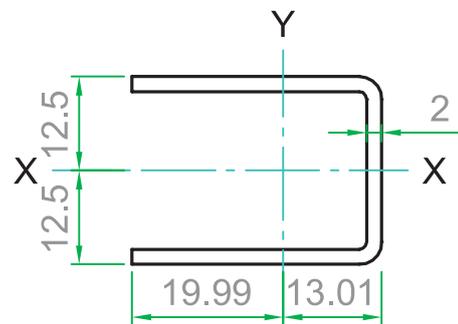
S-586TRE01

= S-563TRE02
= S-507TRE09



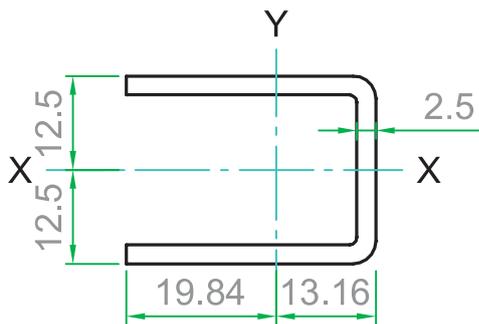
$$I_x = 1.46 \text{ [cm}^4\text{]}$$

$$I_y = 1.47 \text{ [cm}^4\text{]}$$



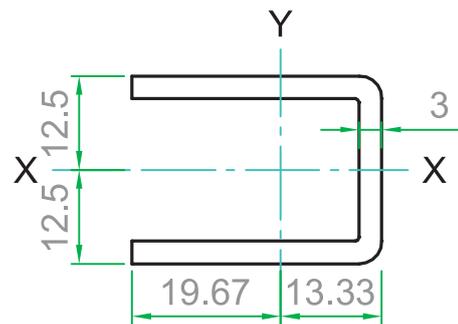
$$I_x = 1.85 \text{ [cm}^4\text{]}$$

$$I_y = 1.91 \text{ [cm}^4\text{]}$$



$$I_x = 2.21 \text{ [cm}^4\text{]}$$

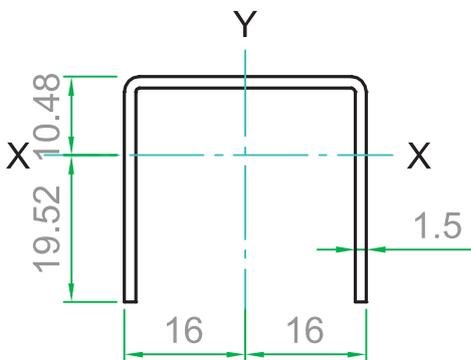
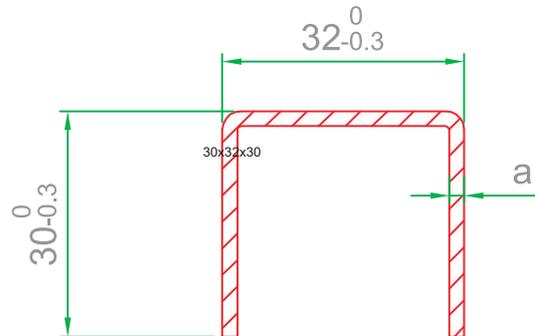
$$I_y = 2.34 \text{ [cm}^4\text{]}$$



$$I_x = 2.53 \text{ [cm}^4\text{]}$$

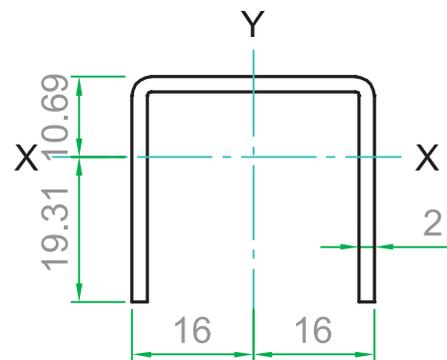
$$I_y = 2.74 \text{ [cm}^4\text{]}$$

S-586TRE02



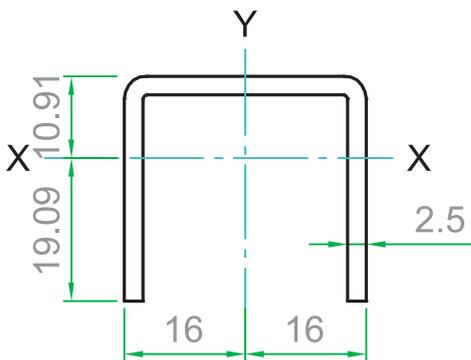
$$I_x = 1.26 \text{ [cm}^4\text{]}$$

$$I_y = 2.36 \text{ [cm}^4\text{]}$$



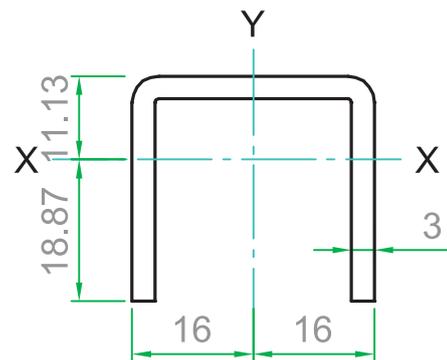
$$I_x = 1.62 \text{ [cm}^4\text{]}$$

$$I_y = 3.01 \text{ [cm}^4\text{]}$$



$$I_x = 1.97 \text{ [cm}^4\text{]}$$

$$I_y = 3.59 \text{ [cm}^4\text{]}$$

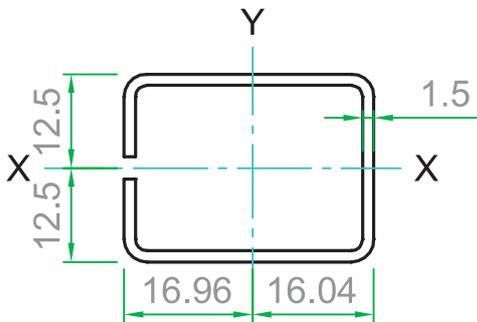
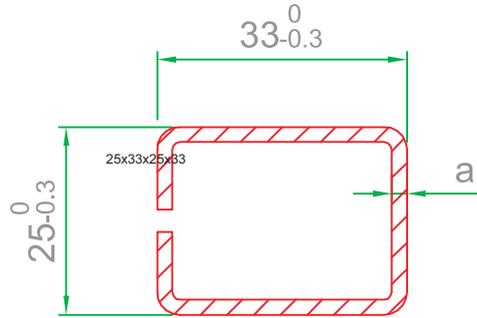


$$I_x = 2.29 \text{ [cm}^4\text{]}$$

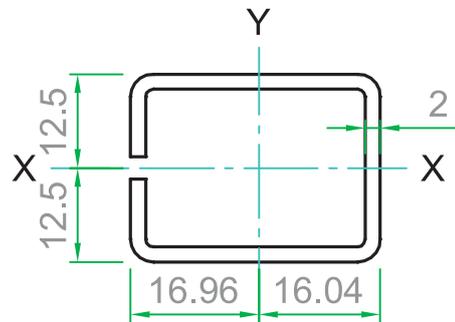
$$I_y = 4.12 \text{ [cm}^4\text{]}$$

Option: S-586TRE03

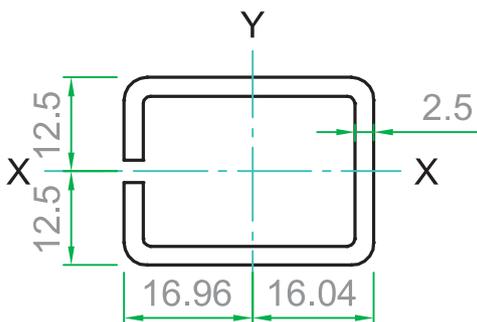
- = S-563TRE03
- = S-507TRE10



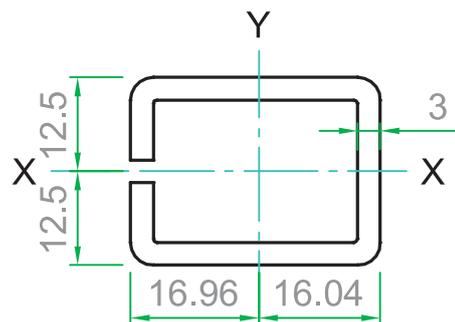
$I_x = 1.55 \text{ [cm}^4\text{]}$
 $I_y = 2.27 \text{ [cm}^4\text{]}$



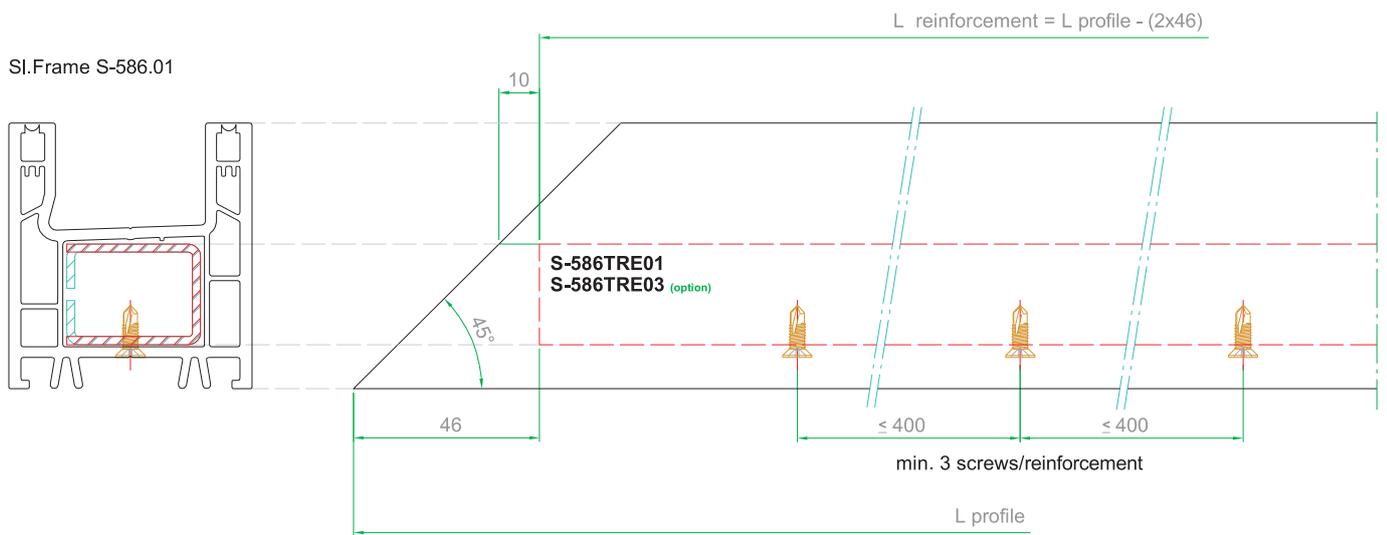
$I_x = 1.96 \text{ [cm}^4\text{]}$
 $I_y = 2.89 \text{ [cm}^4\text{]}$

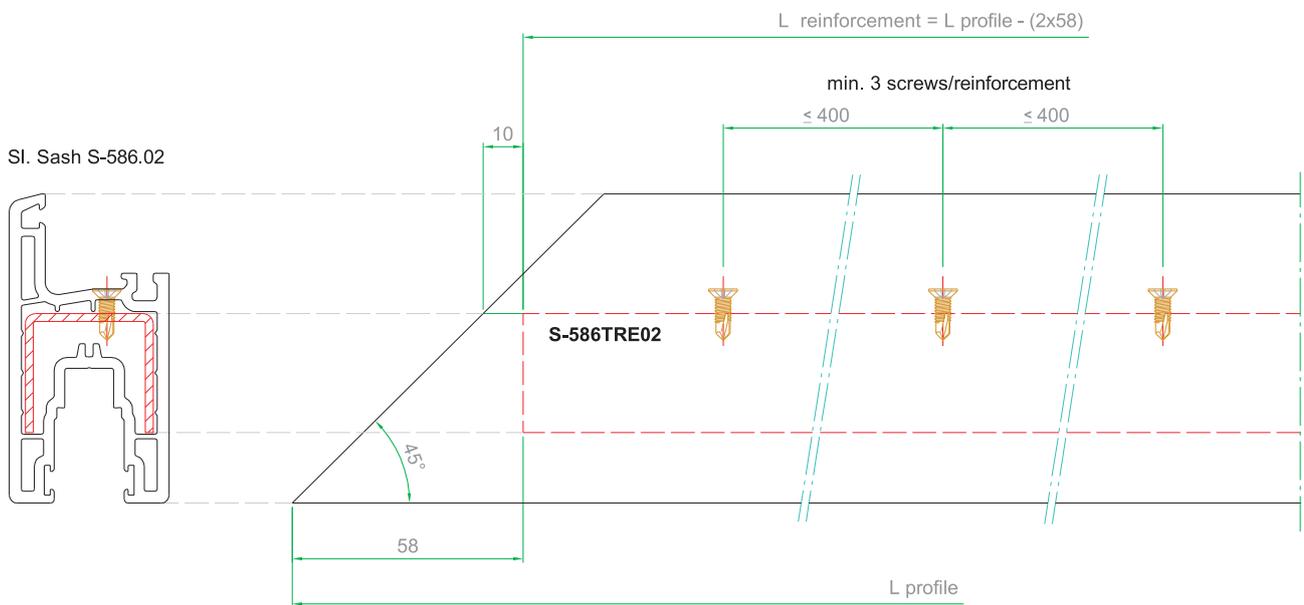


$I_x = 2.33 \text{ [cm}^4\text{]}$
 $I_y = 3.47 \text{ [cm}^4\text{]}$



$I_x = 2.65 \text{ [cm}^4\text{]}$
 $I_y = 3.97 \text{ [cm}^4\text{]}$

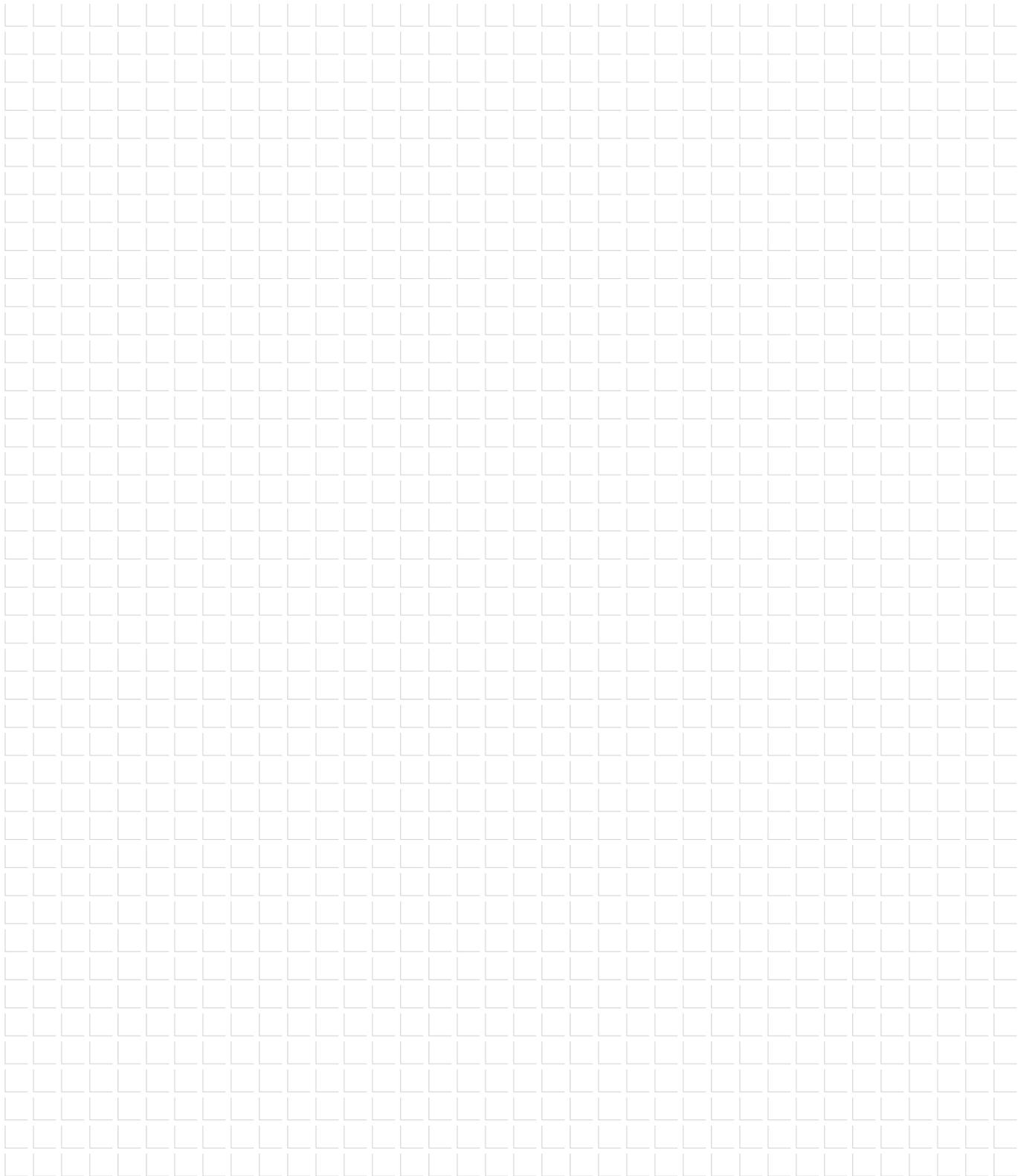




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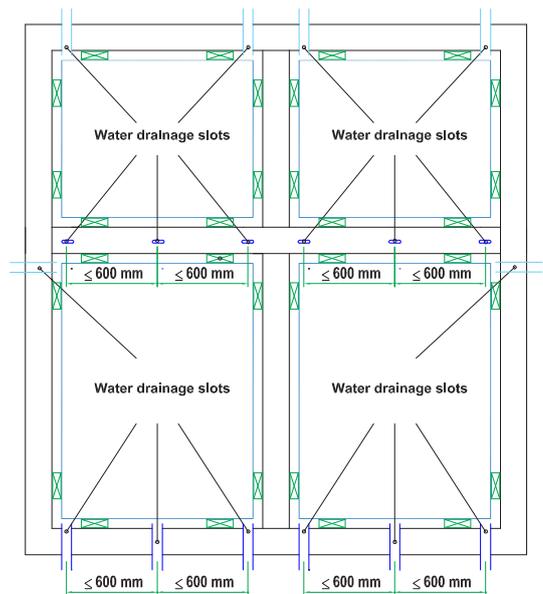
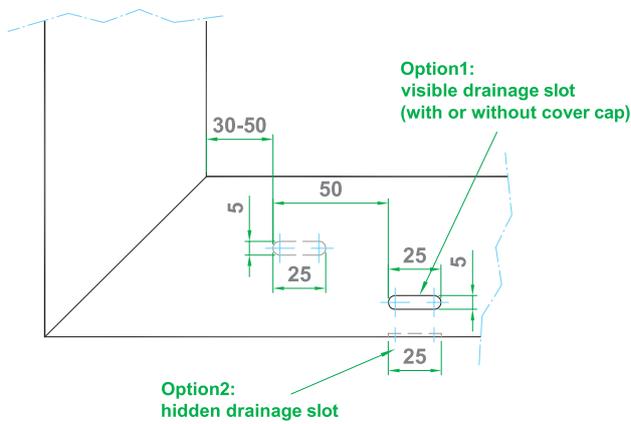
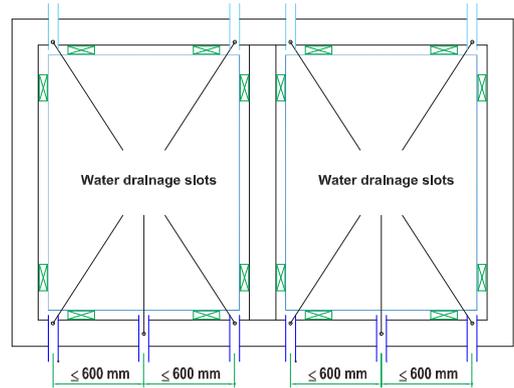
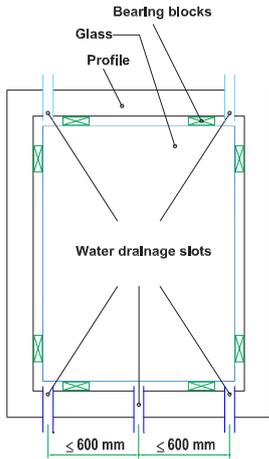


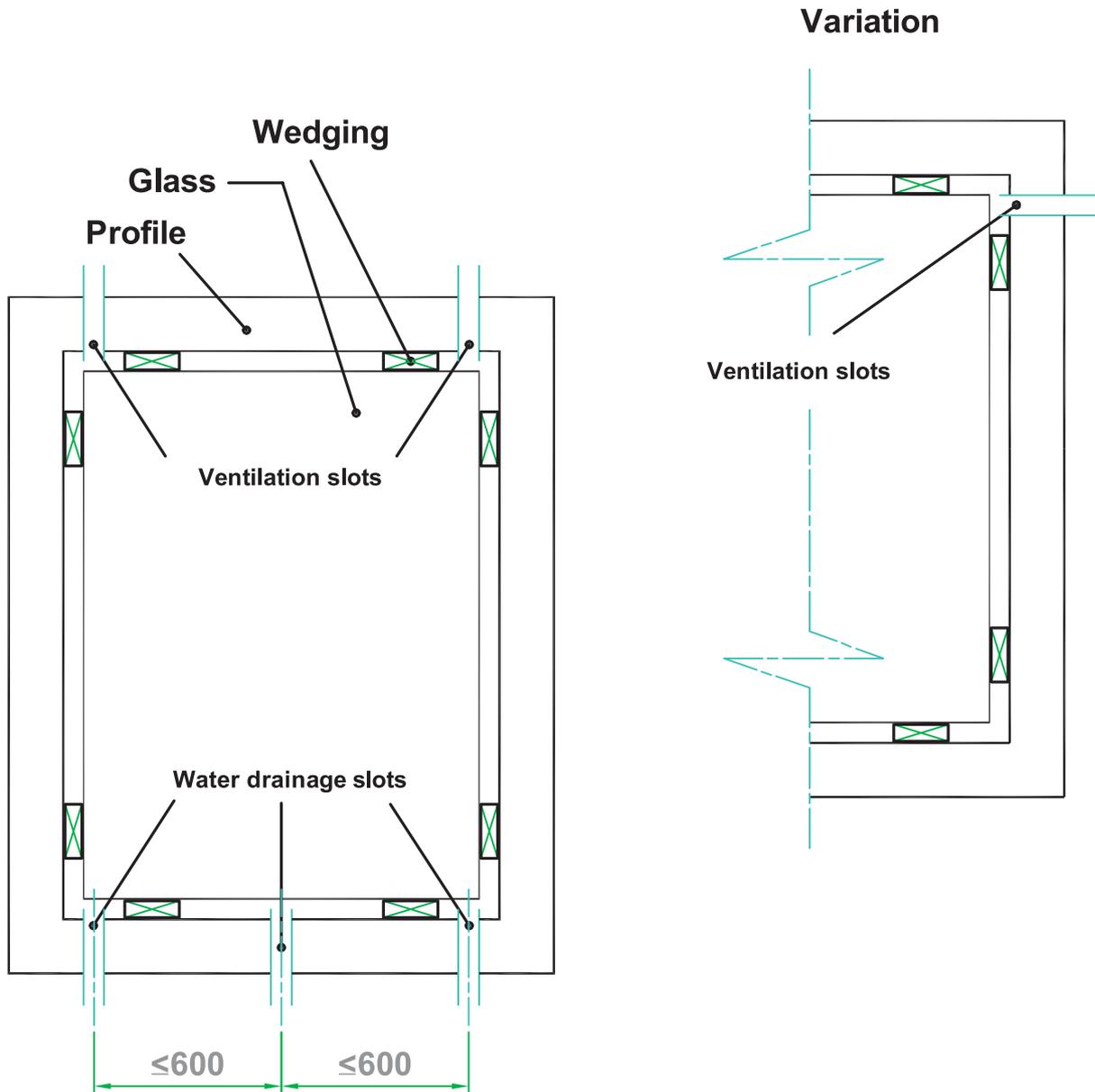
Drainage

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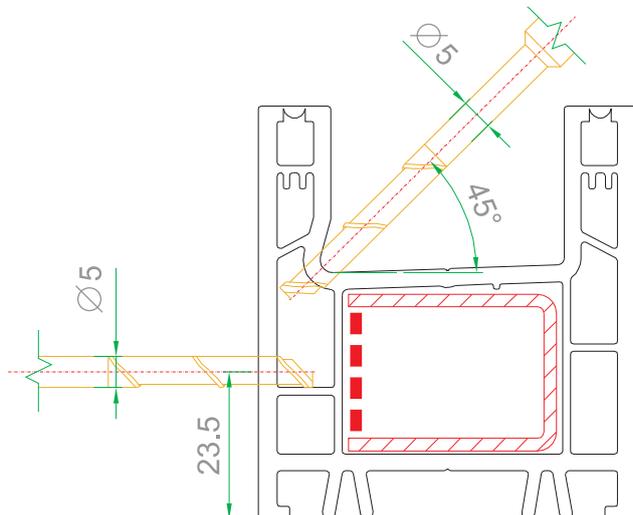
UPVC Profile Producer



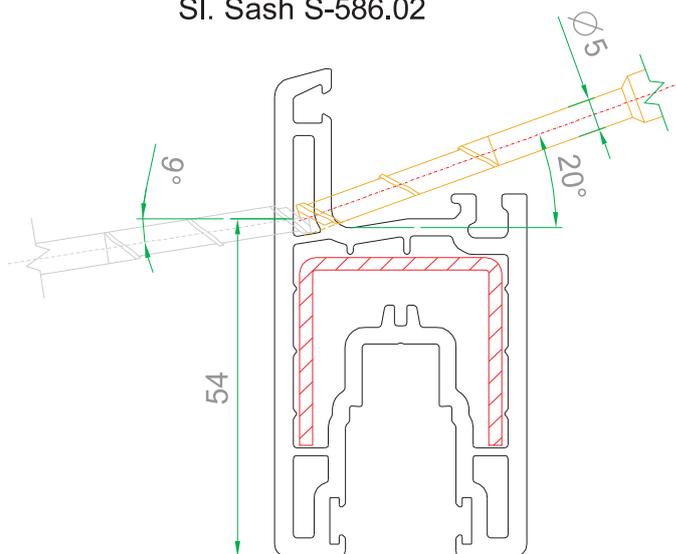


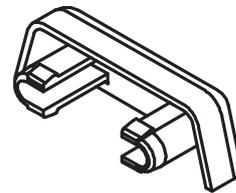
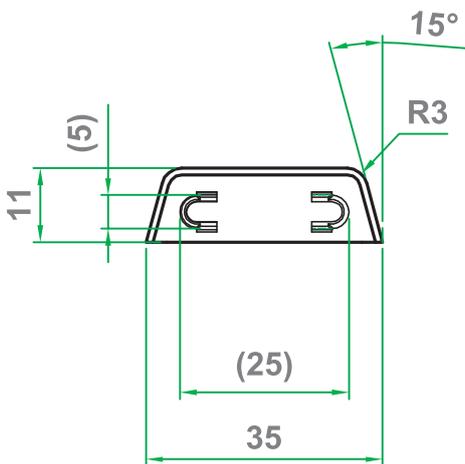
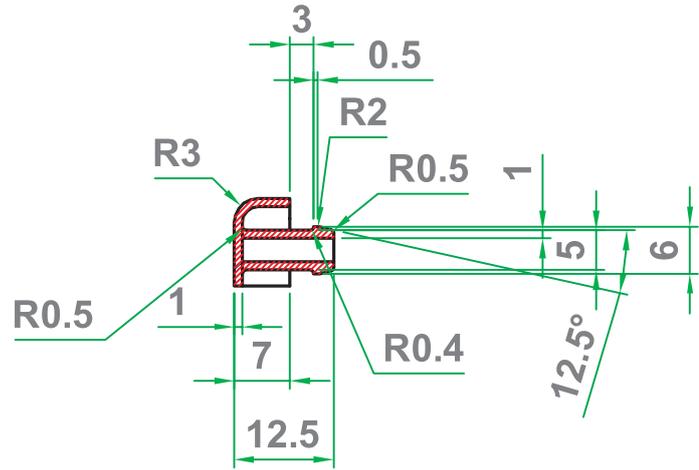
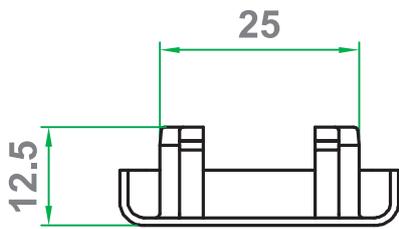
Minimum dimensions for water drainage slots/ventilation slots:
Slots: 5x25 mm or
Hole: $\varnothing 8$ mm ($\varnothing 5$ mm for ventilation slots)

SI.Frame S-586.01



SI. Sash S-586.02

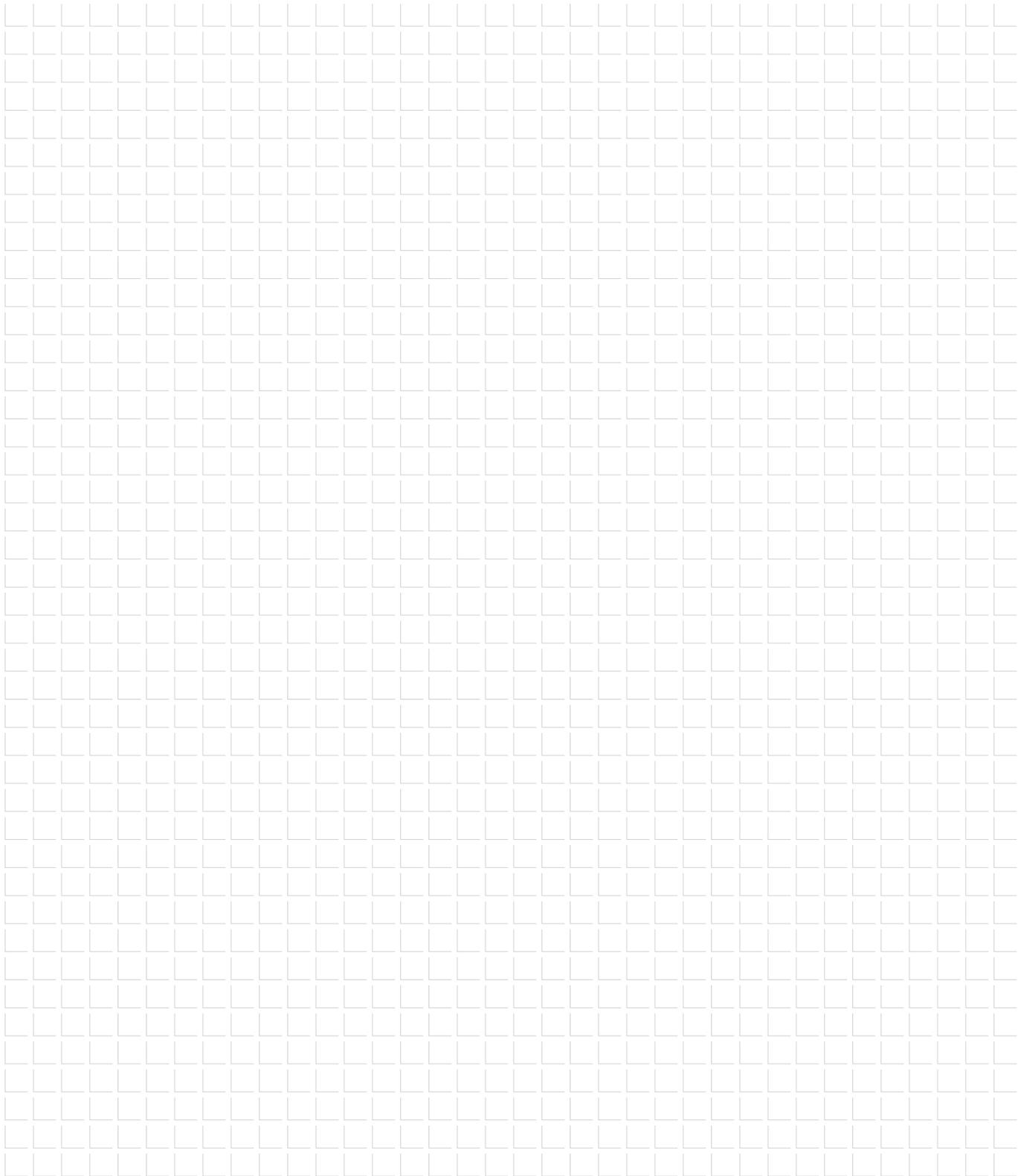


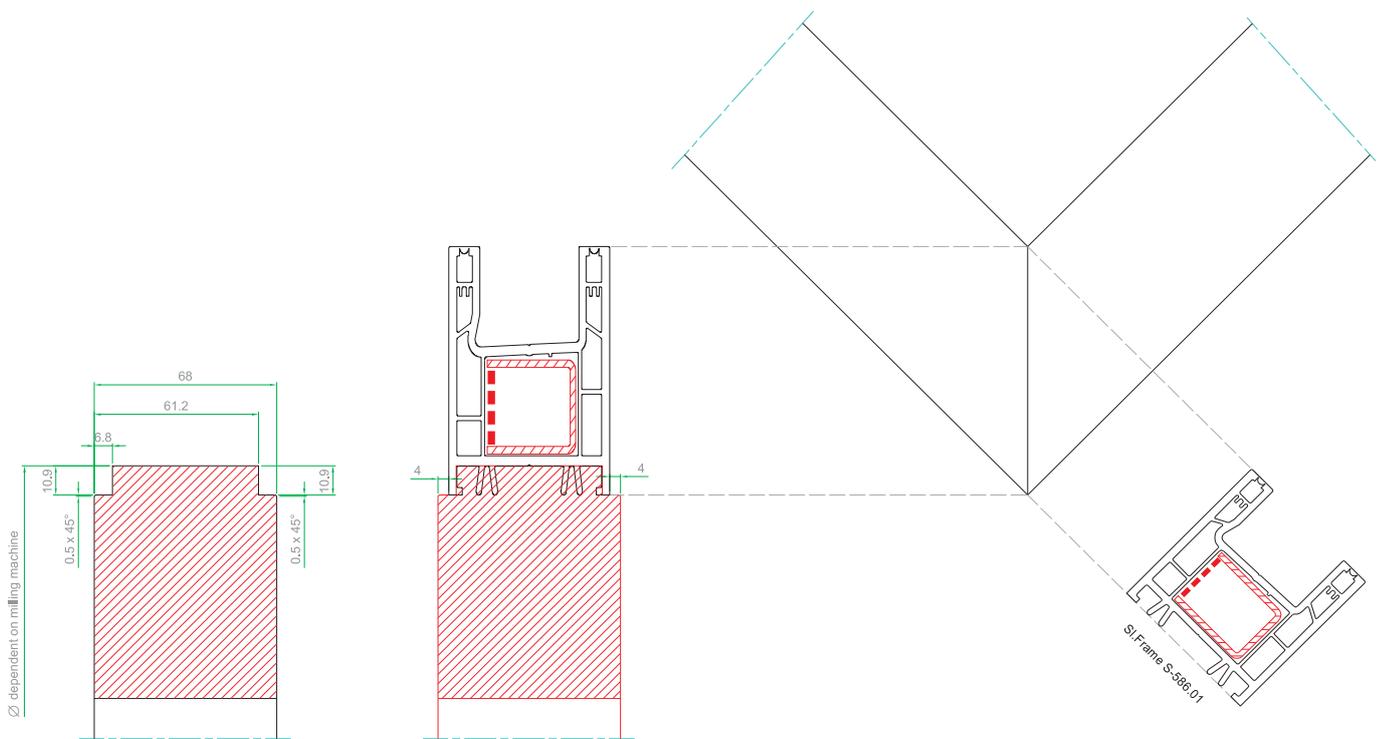


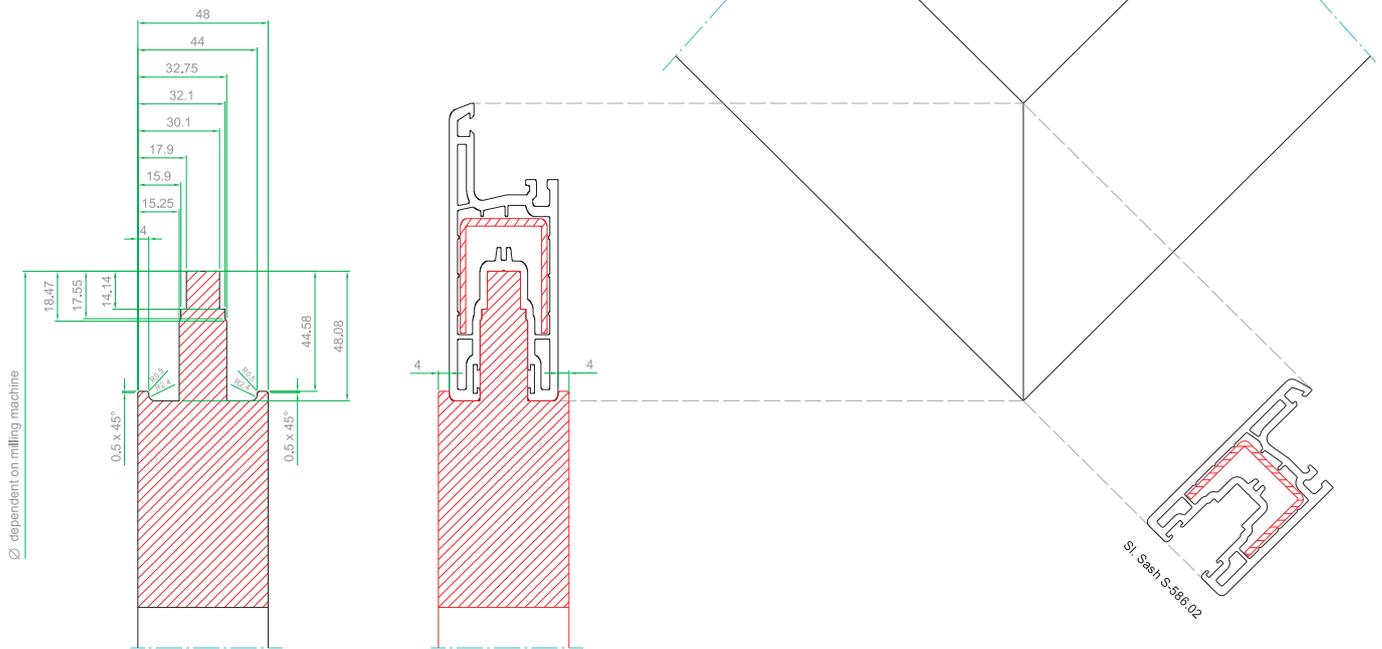
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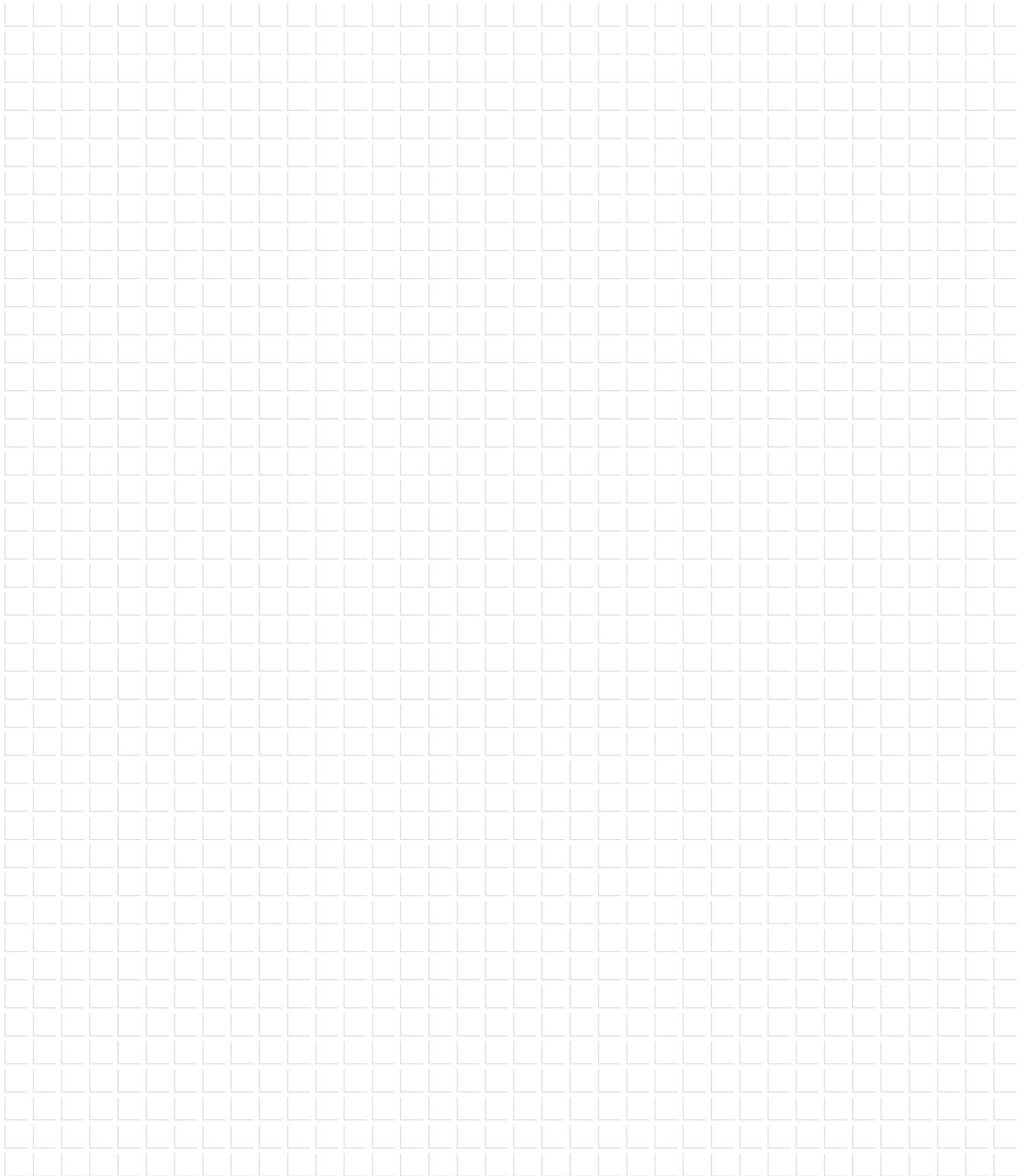




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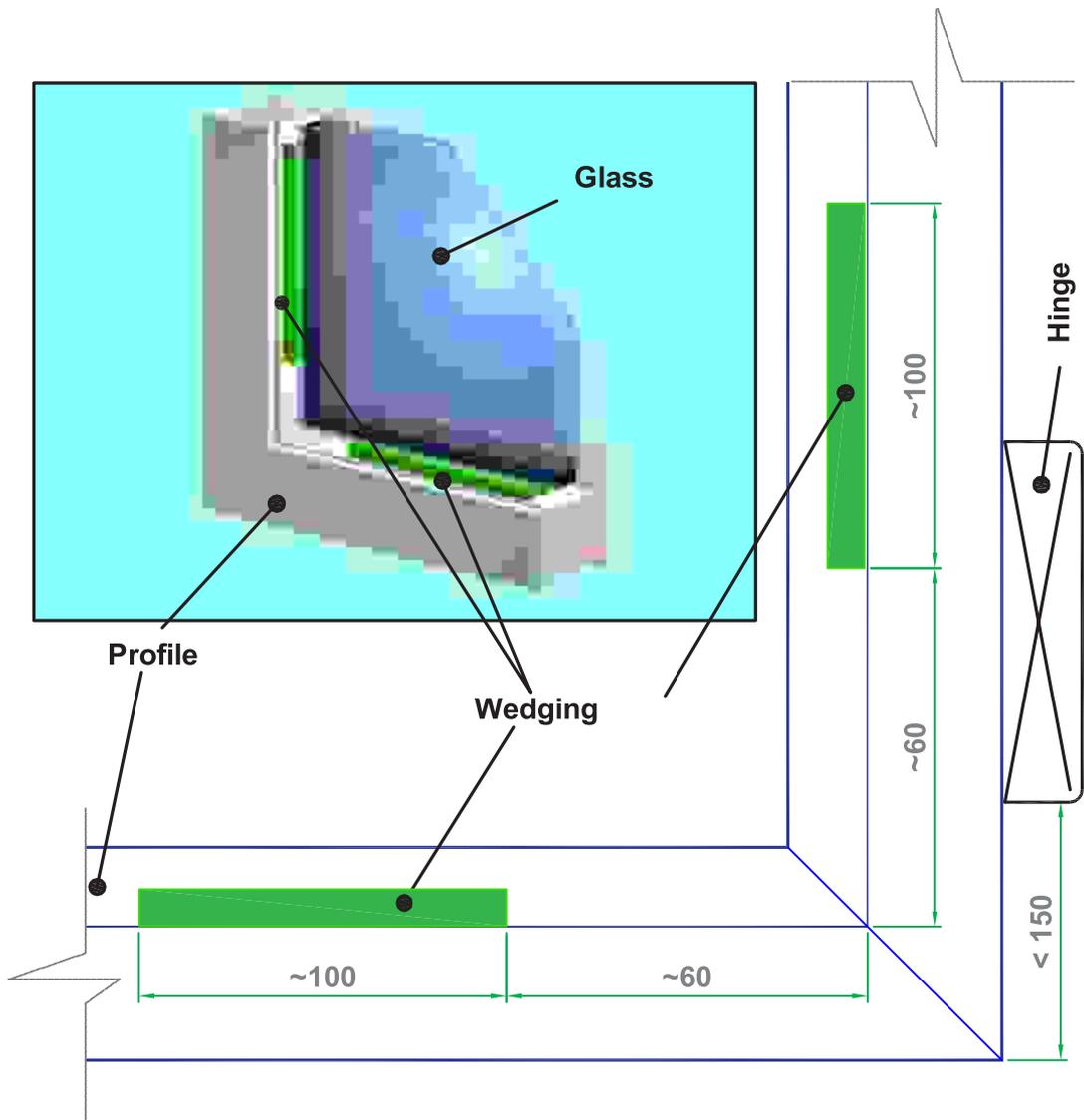


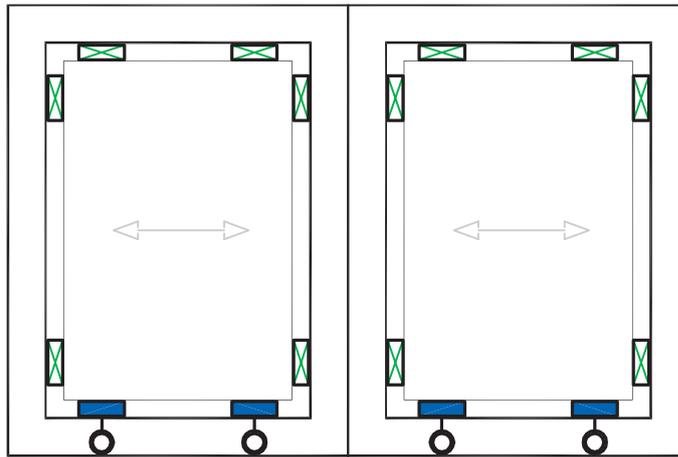
Glazing Guide Lines

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Sliding window horizontal

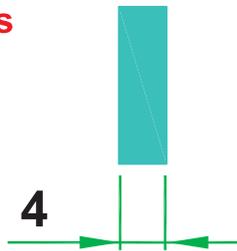
 = Distance block

 = Bearing block

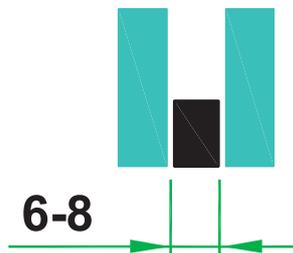
Heat transfer coefficient of various glazing units

$$U_g =$$

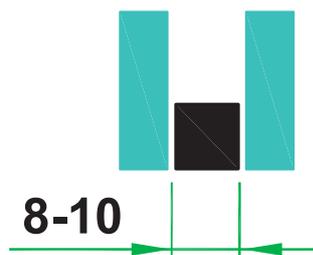
5,7 W/m² K



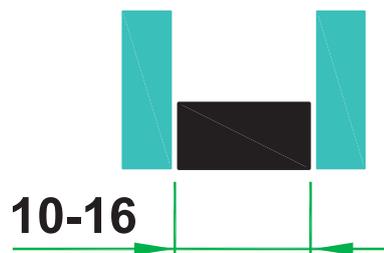
3,3 W/m² K



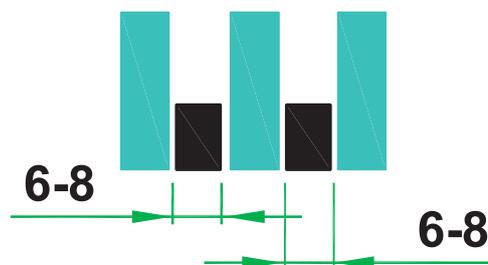
3,1 W/m² K



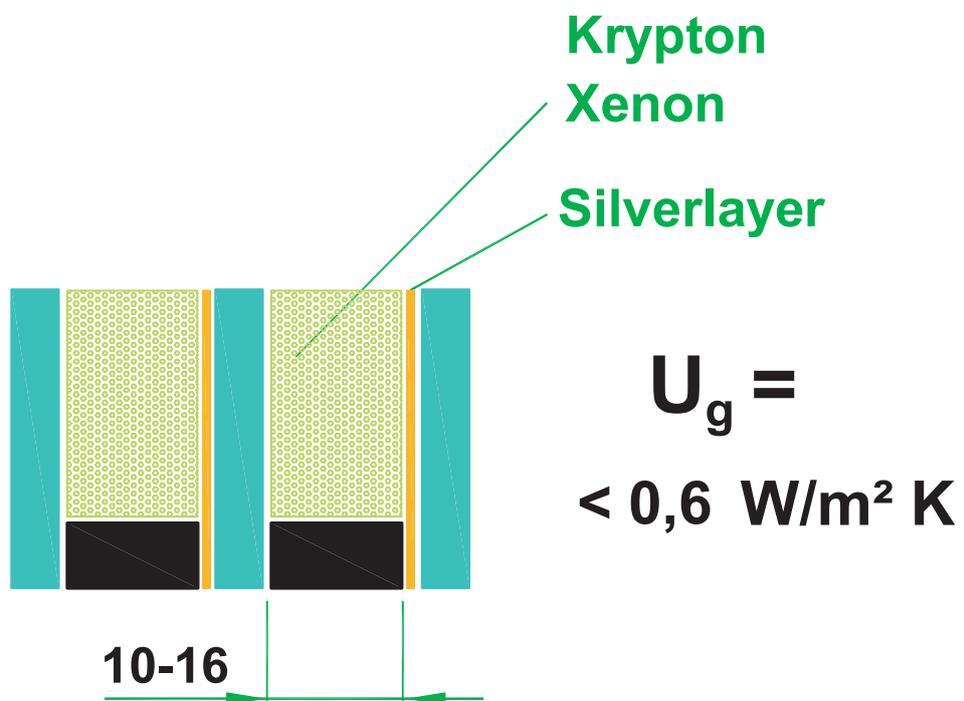
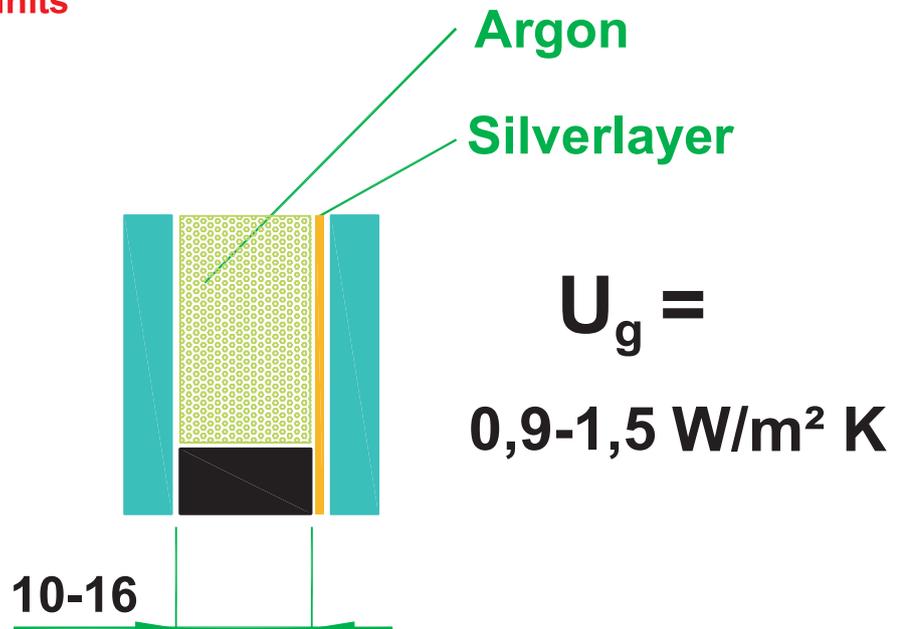
2,9 W/m² K



2,3 W/m² K



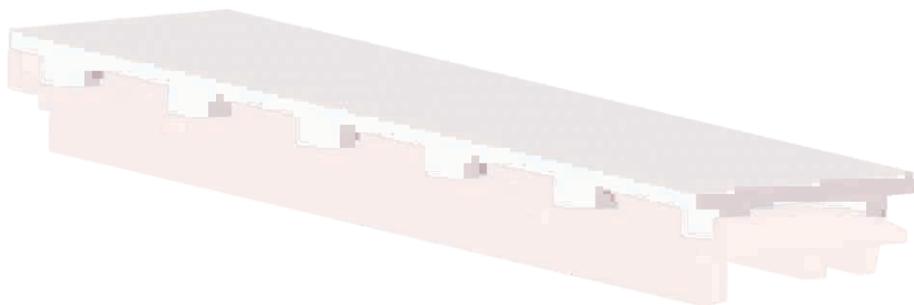
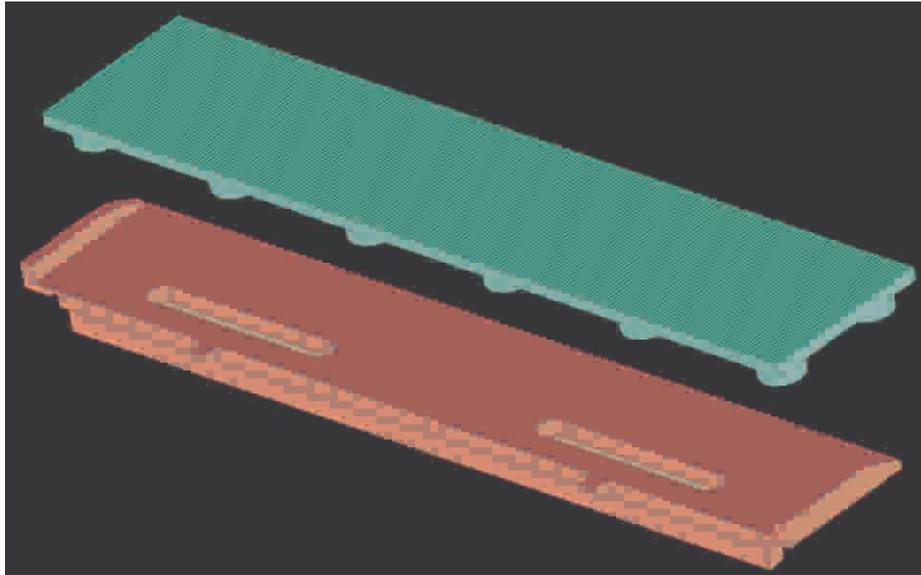
Heat transfer coefficient of various glazing units



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Sectional Drawings

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SI.Frame S-586.01

1,46 kg/m

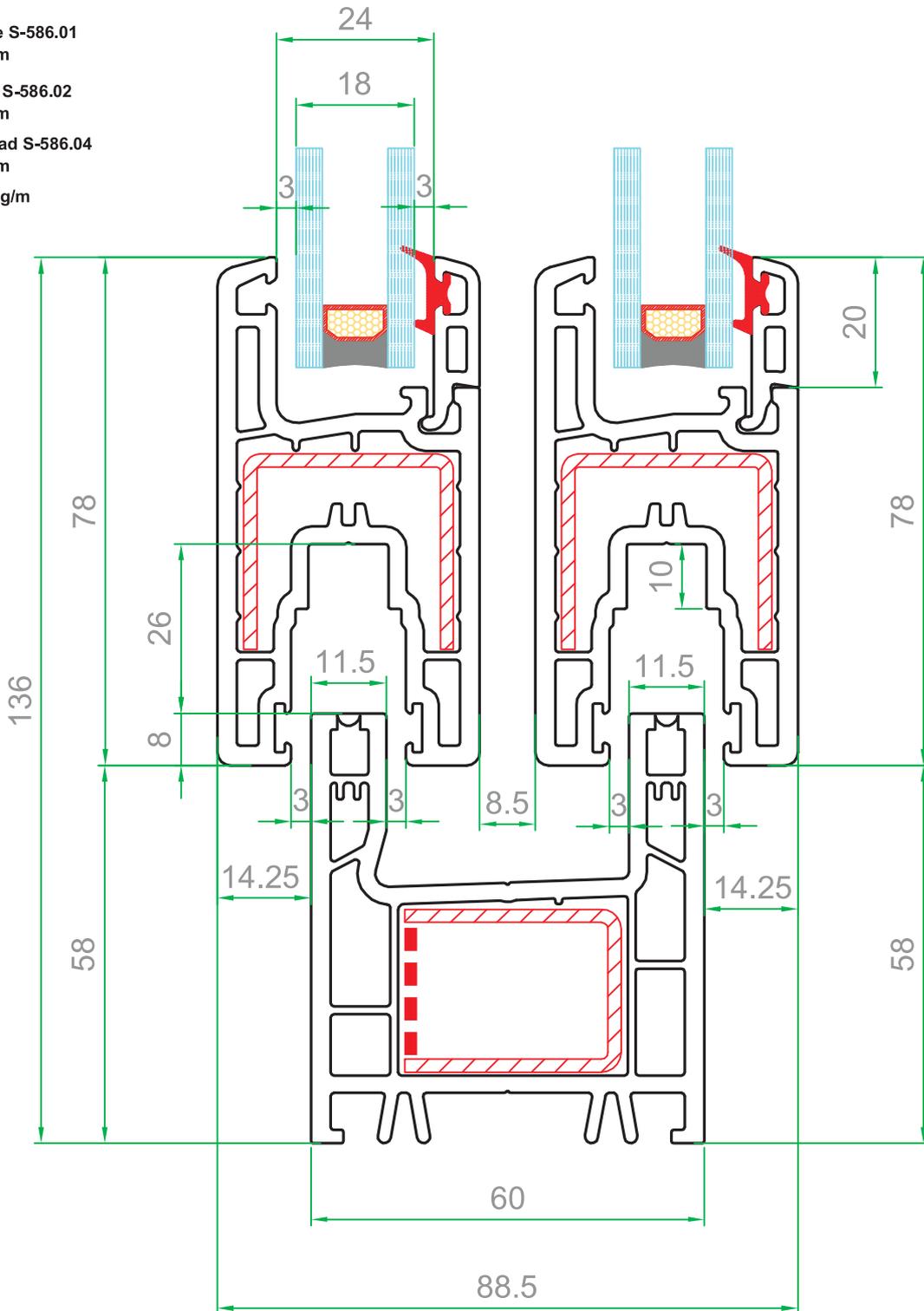
SI. Sash S-586.02

1,28 kg/m

Glassbead S-586.04

0,15 kg/m

PCE: 38 g/m



Sectional Drawing

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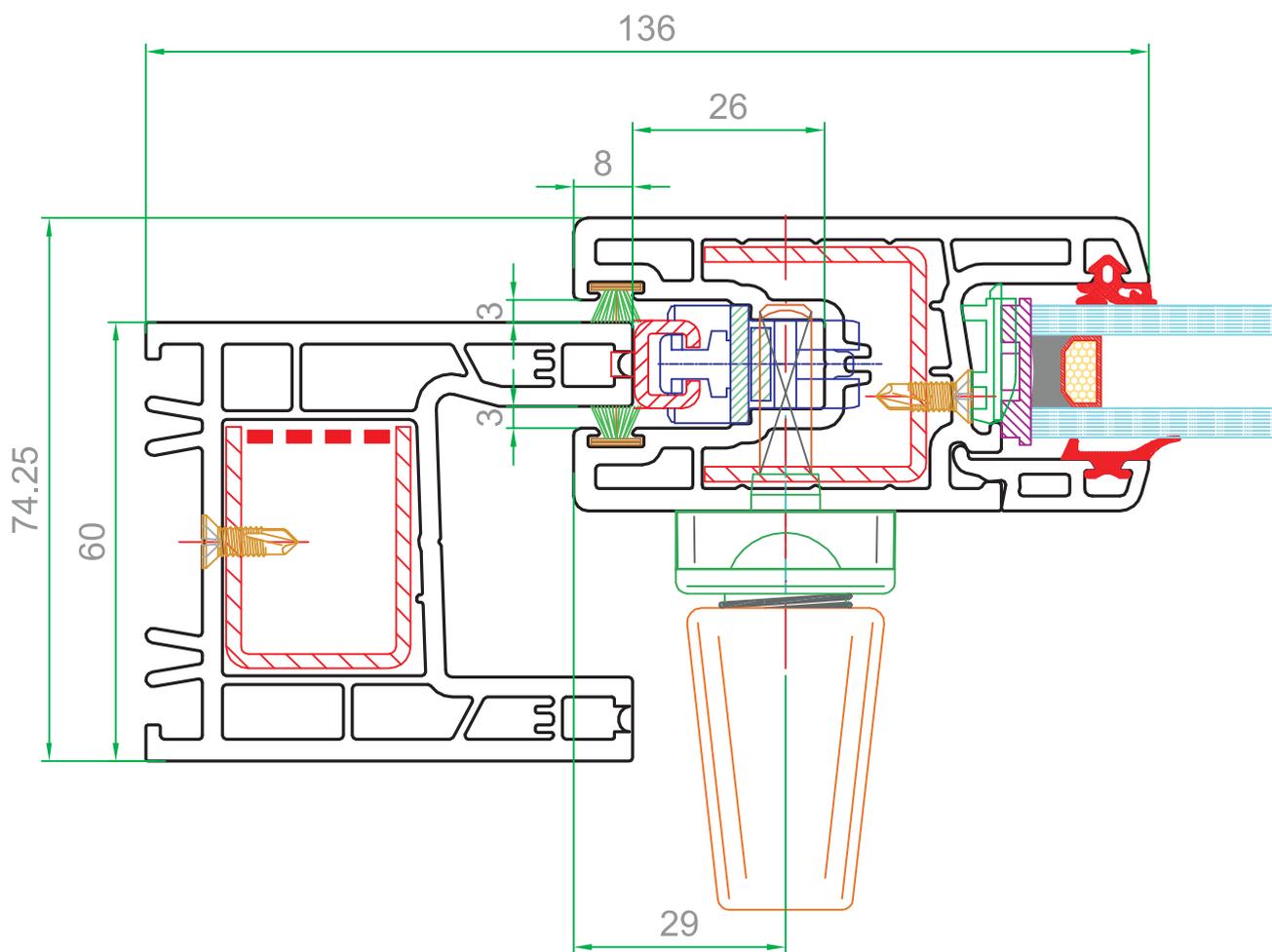
UPVC Profile Producer

SI.Frame S-586.01

1,46 kg/m

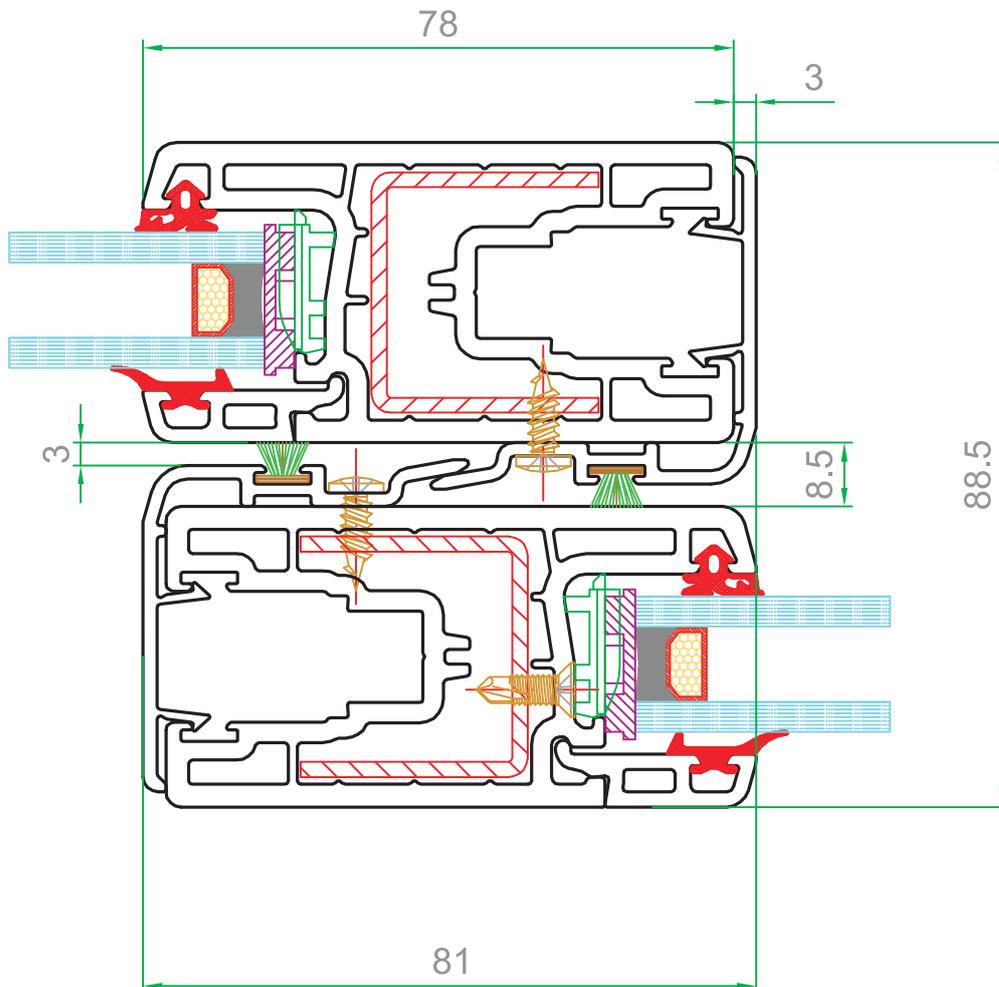
SI. Sash S-586.02

1,28 kg/m



Sectional Drawing

Interlock S-586.03
0,27 kg/m



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SI.Frame S-586.01

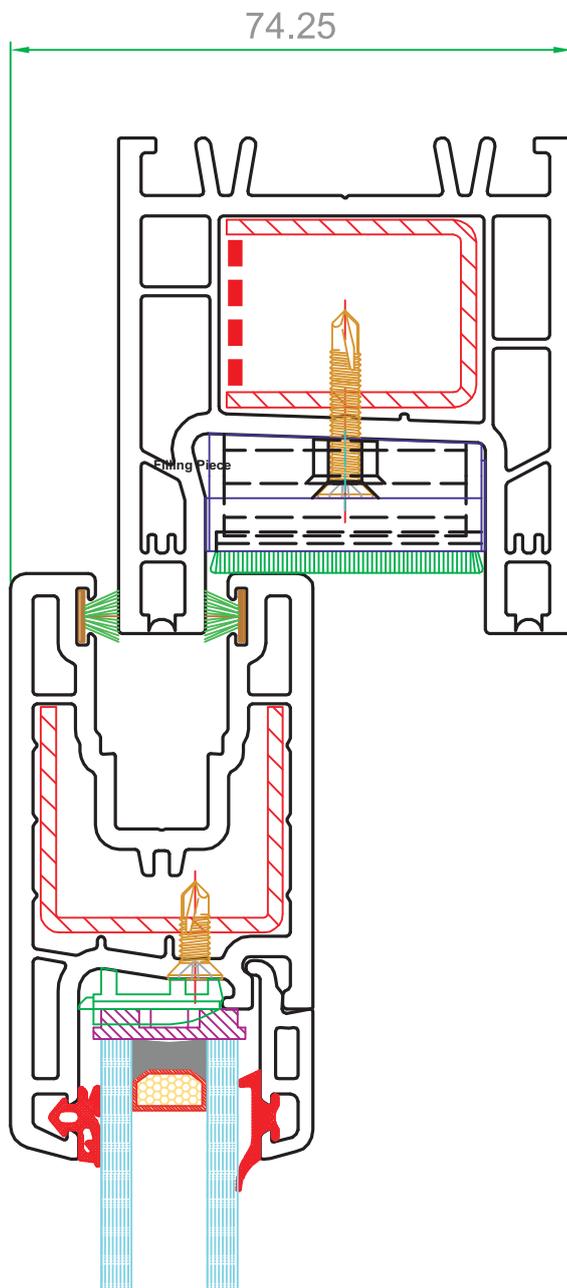
1,46 kg/m

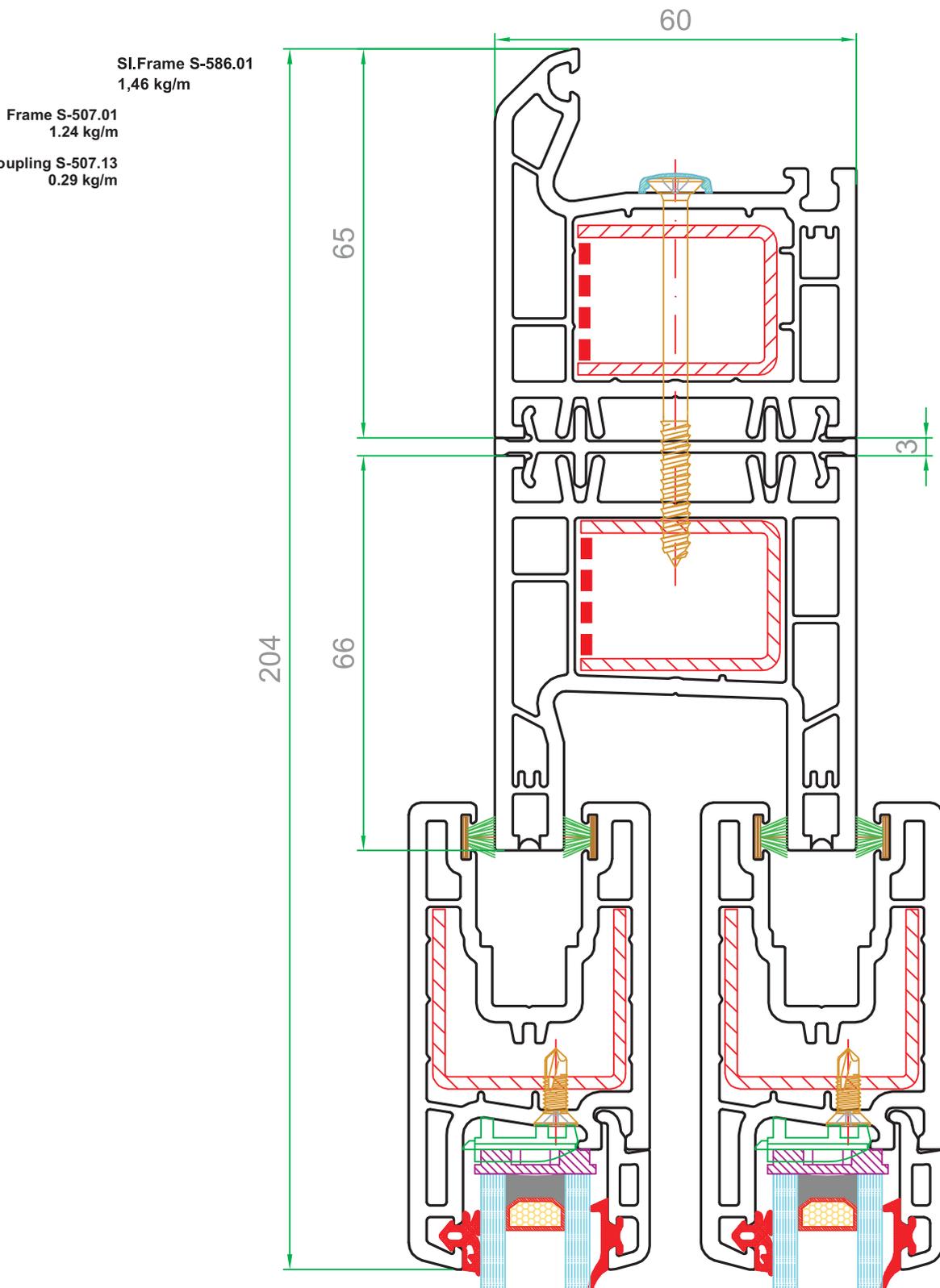
SI. Sash S-586.02

1,28 kg/m

Filling Piece

Sectional Drawing





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UPVC Profile Producer

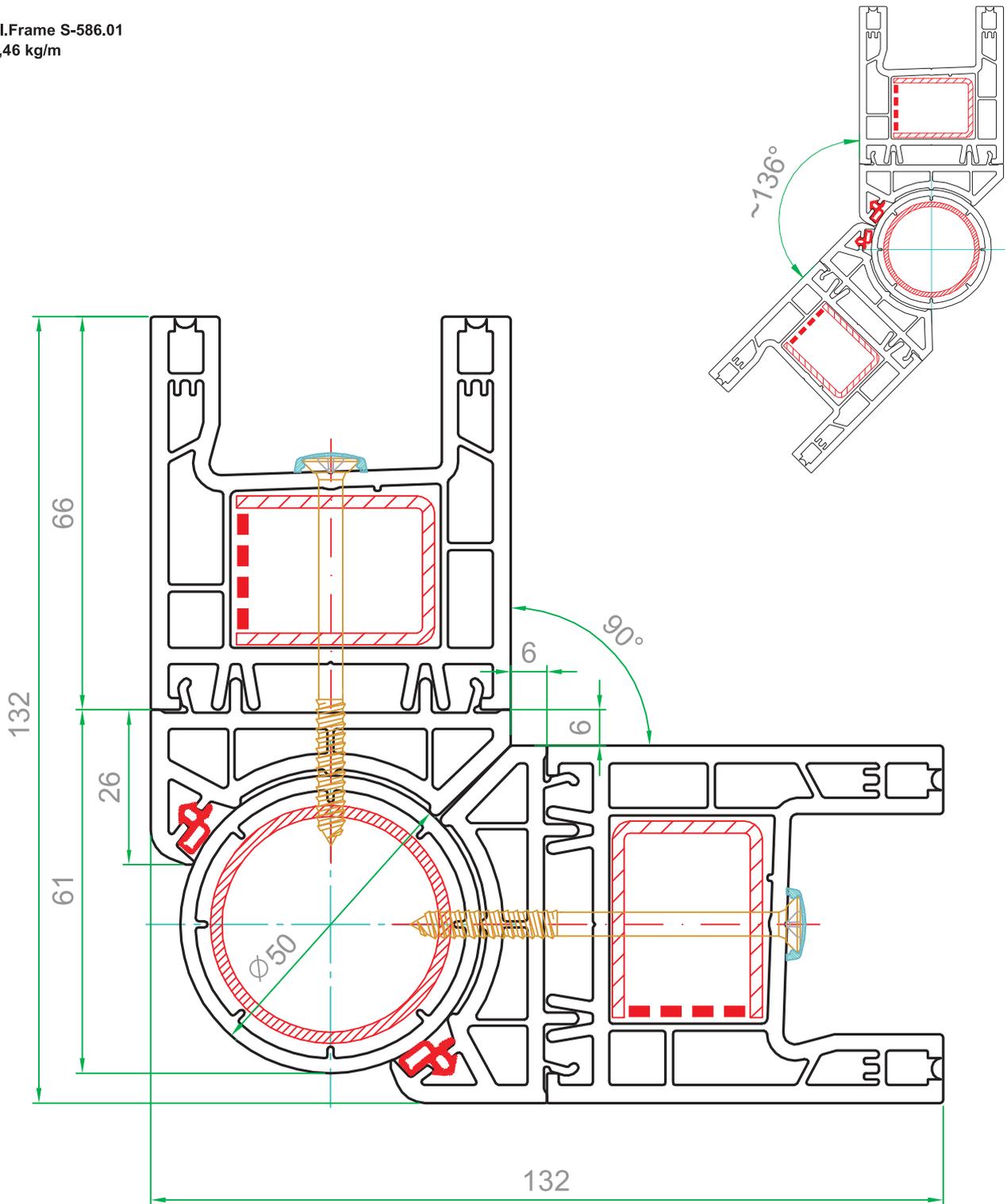
SI.Frame S-586.01

1,46 kg/m

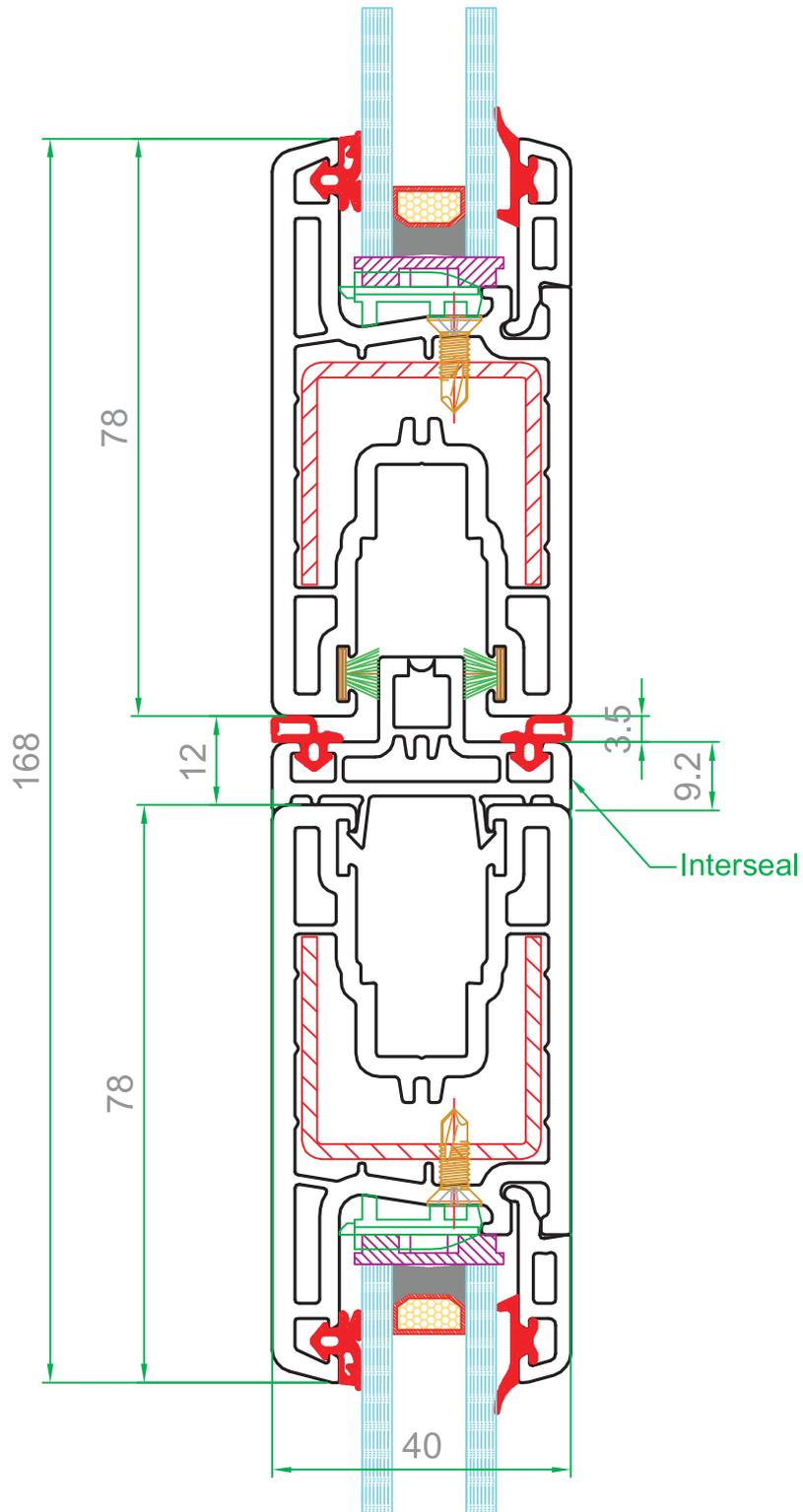
ow pole S-507.11
0.56 kg/m

daptor S-507.10
0.71 kg/m

Sectional Drawing



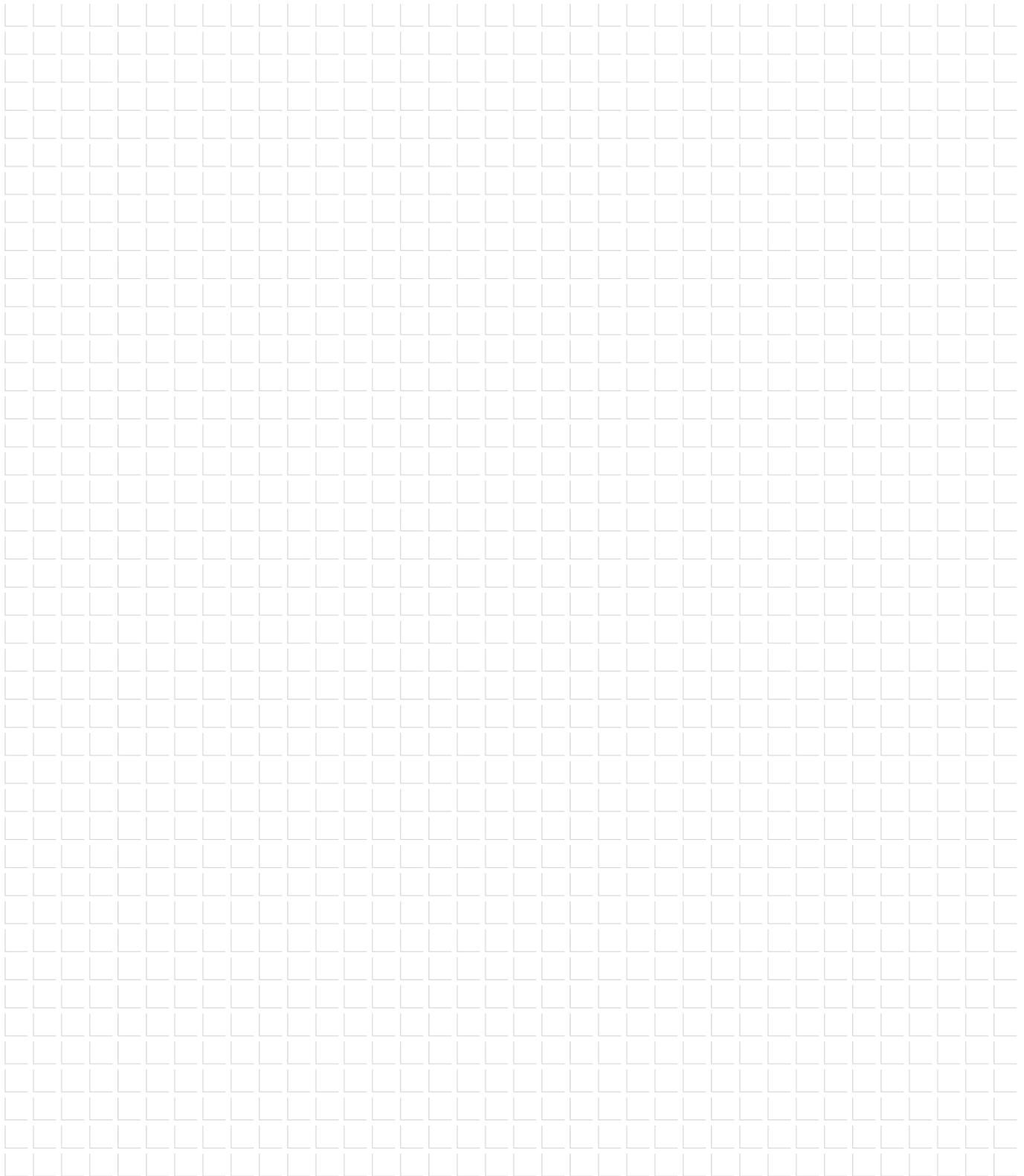
Sl. Sash S-586.02
1,28 kg/m



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Dimension Limits

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-586 Sliding System

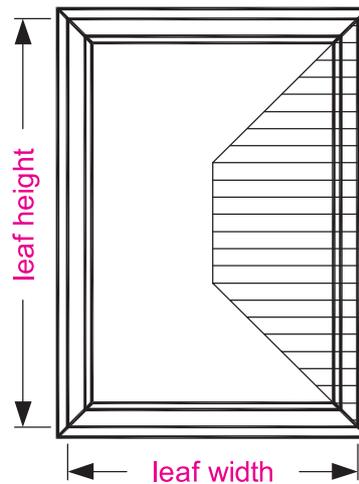
Profile label :

Sl. Sash S-586.02

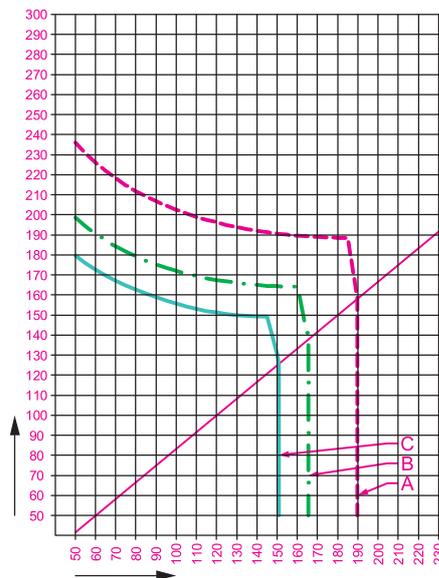
Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - · - · - · - windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

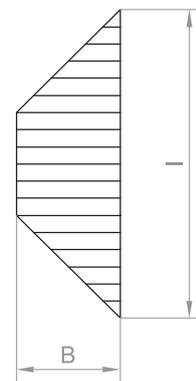
reinforce profile S-586TRE02 - 1,5mm
 moment of inertia Ix 1.26 [cm⁴]
 moment of inertia Iy 2.36 [cm⁴]
 thickness of reinforcement 1.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



height of window leaf in [cm]



width of window leaf in [cm]



B = load width
 I = supportwidth
 (lookup in index)

Caution! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-586 Sliding System

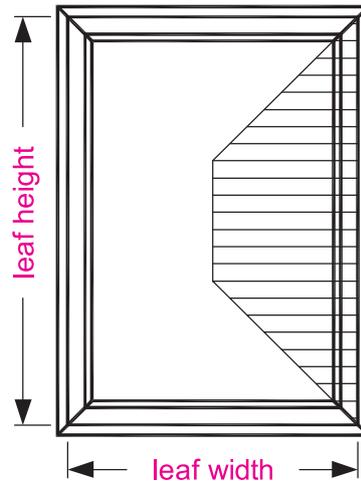
Profile label :

Sl. Sash S-586.02

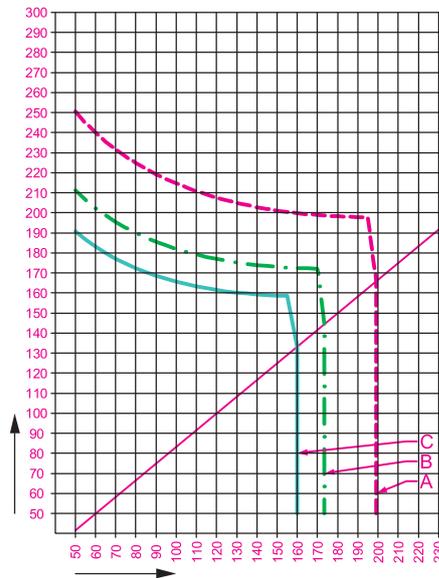
Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-586TRE02 - 2,0mm
moment of inertia Ix	1.62 [cm ⁴]
moment of inertia Iy	3.01 [cm ⁴]
thickness of reinforcement	2.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

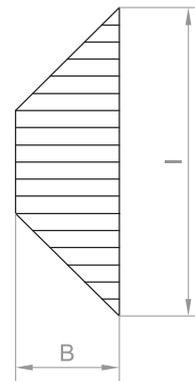


height of window leaf in [cm]



width of window leaf in [cm]

Caution! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
I = supportwidth
(lookup in index)

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-586 Sliding System

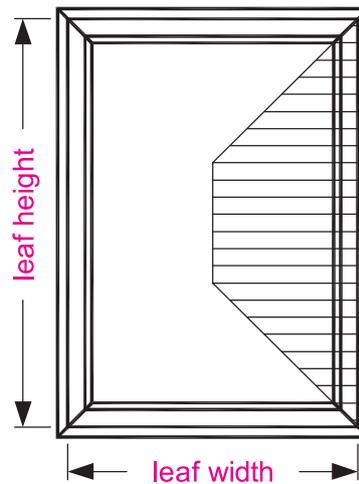
Profile label :

Sl. Sash S-586.02

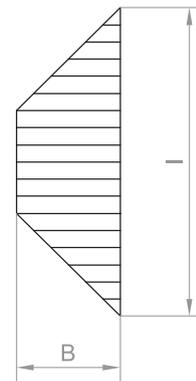
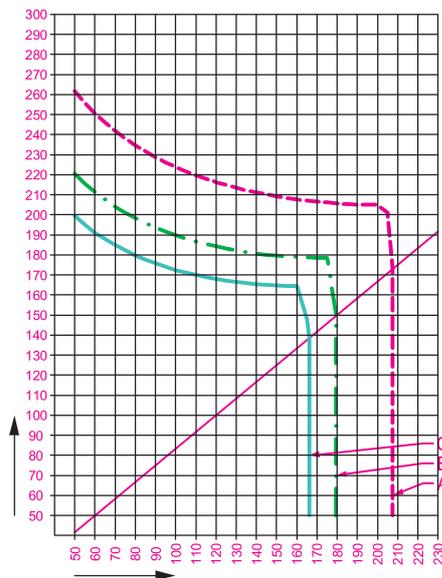
Manufacturing plant :

- A ----- windload = 400 [Pa]
(Wind speed = 91 km/h)
- B - · - · - · - windload = 800 [Pa]
(Wind speed = 129 km/h)
- C ————— windload = 1200 [Pa]
(Wind speed = 158 km/h)

reinforce profile S-586TRE02 - 2,5mm
 moment of inertia Ix 1.97 [cm⁴]
 moment of inertia Iy 3.59 [cm⁴]
 thickness of reinforcement 2.5 [mm]
 max. deflection 1 / 200
 max. mount distance 70 [cm]



height of window leaf in [cm]



B = load width
 I = supportwidth
 (lookup in index)

width of window leaf in [cm]

Caution! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.

dimension limits for white profiles

EN 12210

Manufacturer of profile :

VISTA BEST

System :

S-586 Sliding System

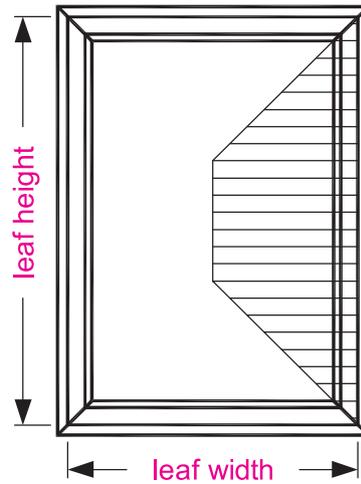
Profile label :

Sl. Sash S-586.02

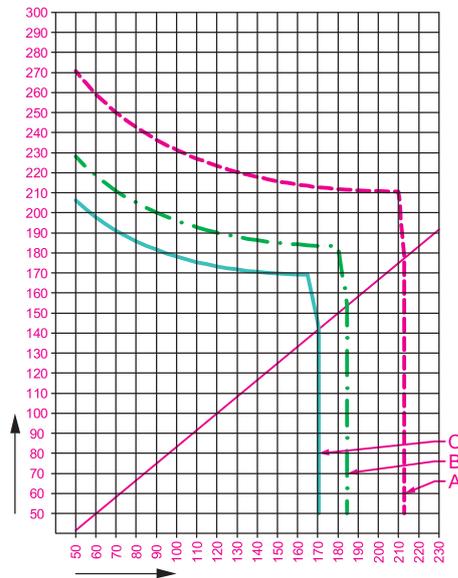
Manufacturing plant :

A	-----	windload = 400 [Pa] (Wind speed = 91 km/h)
B	-.-.-.-.-	windload = 800 [Pa] (Wind speed = 129 km/h)
C	—————	windload = 1200 [Pa] (Wind speed = 158 km/h)

reinforce profile	S-586TRE02 - 3,0mm
moment of inertia Ix	2.29 [cm ⁴]
moment of inertia Iy	4.12 [cm ⁴]
thickness of reinforcement	3.0 [mm]
max. deflection	1 / 200
max. mount distance	70 [cm]

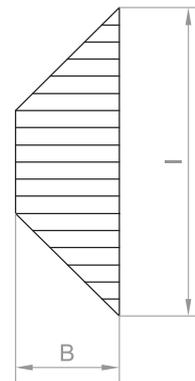


height of window leaf in [cm]



width of window leaf in [cm]

Caution! Take limits of formats for window leaf (allowed leaf weights) from diagrams of fitting supplier and glass supplier.



B = load width
I = supportwidth
(lookup in index)

CLASSIFICATION OF WIND LOAD (DIN EN 12210) :

Class	P1 [Pa]	P2 [Pa] ^{a)} = 0,5xP1	P3 [Pa] = 1,5xP1
0	NOT TESTED		
1	400	200	600
2	800	400	1200
3	1200	600	1800
4	1600	800	2400
5	2000	1000	3000
E xxx ^{b)}	xxx		

This pressure having been repeated 50 times

Specimen tested with wind loading above class 5, classified Exxx - where xxx is the actual test pressure P1 (e.g. 2350 etc.)

(Table 1)

Classification shall be according to the results of wind resistance tests to positive and negative test pressures.

This classification can be used with other relevant standards or codes of practice and can thus be used to provide correlation with actual exposure requirements.

CLASSIFICATION OF RELATIVE FRONTAL DEFLECTION (DIN EN 12210):

Class	Relative frontal deflection
A	< 1/150
B	< 1/200
C	< 1/300

(Table 2)

The relative frontal deflection of the most deforming framing member of the specimen measured at test pressure P1 shall be classified as in table 2.

CLASSIFICATION FOR RESISTANCE TO WIND LOAD (DIN EN 12210):

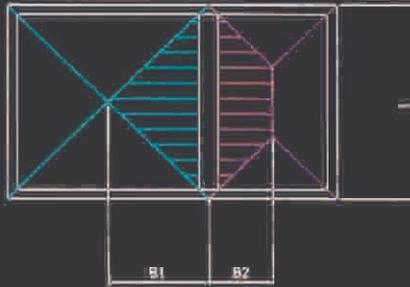
Wind loads and relative frontal deflection shall be combined into one overall classification as indicated in table 3.

Wind load class	Relative frontal deflection		
	A	B	C
1	A1	B1	C1
2	A2	B2	C2
3	A3	B3	C3
4	A4	B4	C4
5	A5	B5	C5
E xxx	AE xxx	BE xxx	CE xxx

NOTE: In the resistance to wind load classification the number refers to the wind load class, see table 1 and the letter to the relative frontal deflection, see table 2.

(Table 3)

WIND LOAD FORMULA



Calculation of the essential moment of inertia I_{eff} :

To calculate the load width B of the triangle- or trapezium load, the shorter side of the element field has to be halved.

In case of mullions and element connections you have to see to it that each of them get a load share of both of the adjoining element fields.

$$I_{\text{eff}} = \frac{W I^4 B}{1920 E f} \left[25 - 40 \left(\frac{B}{I} \right)^2 + 16 \left(\frac{B}{I} \right)^4 \right] \text{ cm}^4$$

- W = Wind load
- I = Support width (Profile length)
- B = Load width
- E = elastic modulus (for steel = 210.000 N/mm²)
- f = max. deflection
 - $f = I/200$; max. 8 mm, double glazing
 - $f = I/175$; single glazing
 - dependent at glass producer / single- or double glass

E-Modules of elasticity:

Material	Elastic module [N/mm ²]
PVC-U	ca. 2.700
Timber	ca. 10.000
Aluminium	ca. 70.000
Steel	ca. 210.000

WIND SPEED

The pressure exerted by the wind on a wall component is assumed to be uniformly distributed across the surface of the product.

Its magnitude is dependent on such factors as the geographical location, shape and surrounding of the building as well as the height of the product above grade and its location within the wall.

The jurisdiction where the windows or doors will be installed should be contacted to determine the wind load requirements that have been adopted and are enforced.

W = Wind load

L = Linear force at long pane edge

f_{max} = safe deflection $f_{max} = \frac{L}{175}$ or $\frac{L}{200}$

dependent at glass producer / single- or double glass

p = density of air (1,25 kg/m³)

v = wind speed

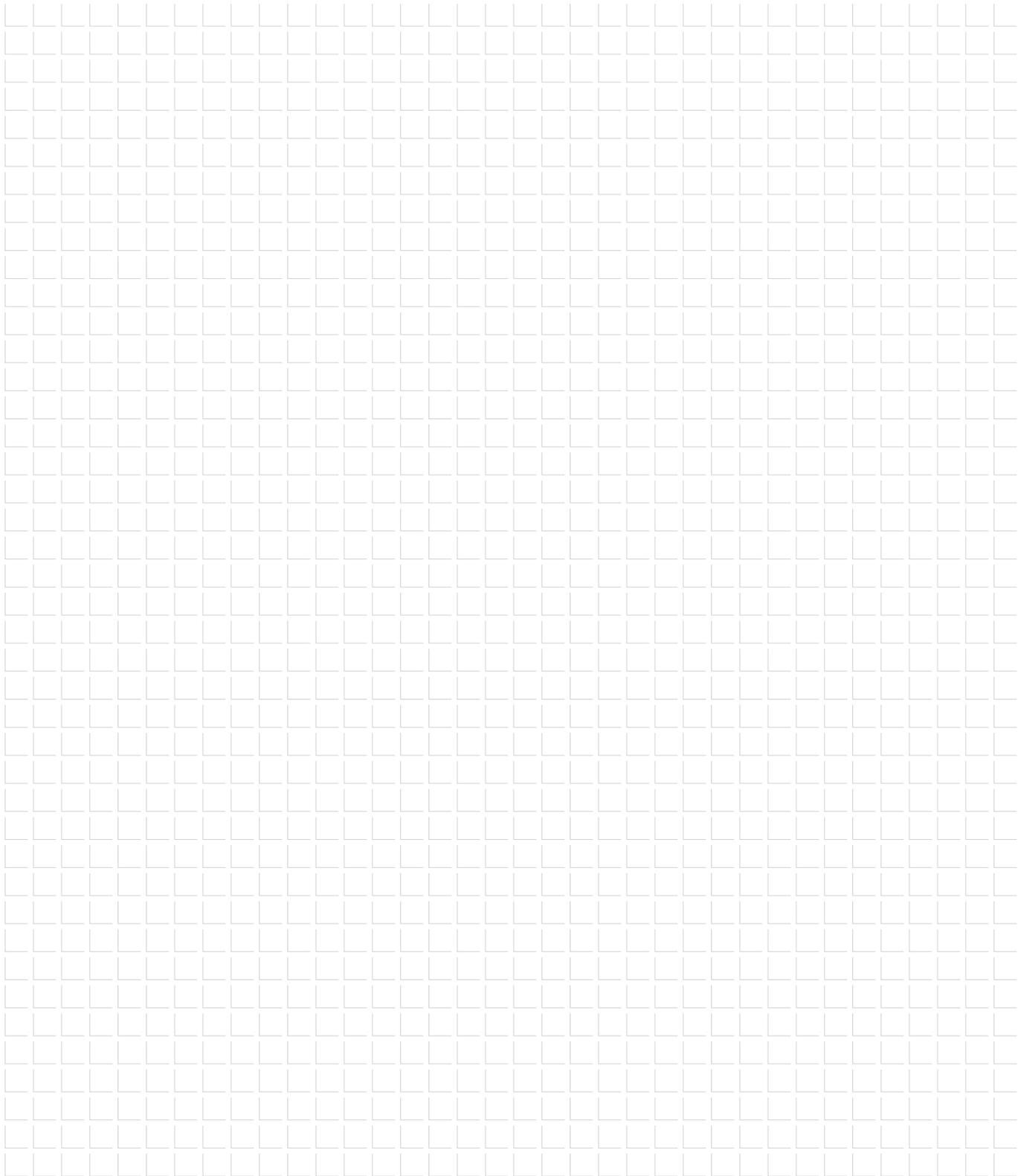
$$v = \sqrt{\frac{2 \times W}{p}} = \text{m / sec} \Rightarrow (\times 3,6) \approx \text{km / h}$$

Wind load W [Pa]	wind speed [m/s]	wind speed [km/h]
400	25,3	91
550	29,7	107
600	31	112
750	34,6	125
800	35,8	129
1000	40	144
1200	43,8	158
1500	49	176
1600	50,6	182
1800	53,6	193
2000	56,6	203
2400	62	223
2500	63,2	228
3000	69,3	249
3500	74,8	269

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UPVC Profile Producer



Chemical & Mechanical

Chemical Properties

Substance	Concentration %	Temperature °C	Resistance of PVC-U
Formic acid	100	20	+
Ammonia, liquid	100	20	0
Ammonia, gaseous	100	60	+
Aniline, pure	100	20	-
Exhaust gas			
carbon monoxide containing	any	60	+
carbon dioxide containing	any	60	+
hydrochloric acid containing	any	60	+
sulphur trioxide containing	any	20	0
Aluminium salt, aqueous	any	60	+
Benzine (aliphatic Carbon hydride)	100	60	+
Benzene	100	20	-
Beer	any	60	+
Butanol (Butyl alcohol)	100	40	+
Benzine-Benzene-mixture	80/20	20	-
Brandy	any	20	+
1,3-Butadiene, gaseous	100	60	+
Barium salt, aqueous	any	60	+
Chromic acid (Chromium-(V)-oxide), aqueous	50	20	+
Cyclohexane	100	20	+
Chlorobenzene	100	60	-
Chromic acid /Water/ Sulphuric acid (Chromic-sulphuric acid)	50/35/15	40	+
Hydrogen chloride	any	20	+
Chromium alum Chromium(III)-potassium sulfat	any	60	+
Dekalin	100	60	+
Manuring salts, aqueous	10	60	+
Diesel fuel	-	20	+
Acetic acid	95	20	+
Fatty acid soap (from C ₄)	100	60	+
Fruit juice	ready-to-use	60	+
Glycol, aqueous	ready-to-use	60	+
Heptane	100	60	+
Hexane	100	60	+
Isooctane	100	60	+

Chemical Properties

Substance	Concentration %	Temperature °C	Resistance of PVC-U
Nitrohydrochloric acid (HCL/HNO3)	75/25	20	o
Caustic potash solution	60	60	+
Potassium permanganate	6	60	+
Potassium peroxodisulfide	aqueous	40	+
Common salt	saturated	60	+
Carbon monoxide, gaseous	100	60	+
Linseed oil	100	40	+
Liqueur	ready-to-use	20	+
Mineral oils, free from aromatics	-	60	+
Methanol	100	40	+
Caustic soda solution, aqueous	60	60	+
Nitroglycerine	diluted	20	o
Sodium chlorate	10	60	+
Oils and greases animal and vegetable	-	60	+
Oxalic acid, aqueous	saturated	60	+
Phosphoric acid, aqueous	85	60	+
Hydrochloric acid	up to 37	60	+
Sulphuric acid	80	60	+
Seawater	-	40	+
Toluene	100	20	-
Trilone	commercial	60	o
Hydrogen	100	60	+
Wine	-	60	+
Xylene	100	20	-
Citric acid	10	40	+

Legend:

- +
-
- o

resistant
limited resistant
not resistant

Mechanical Properties

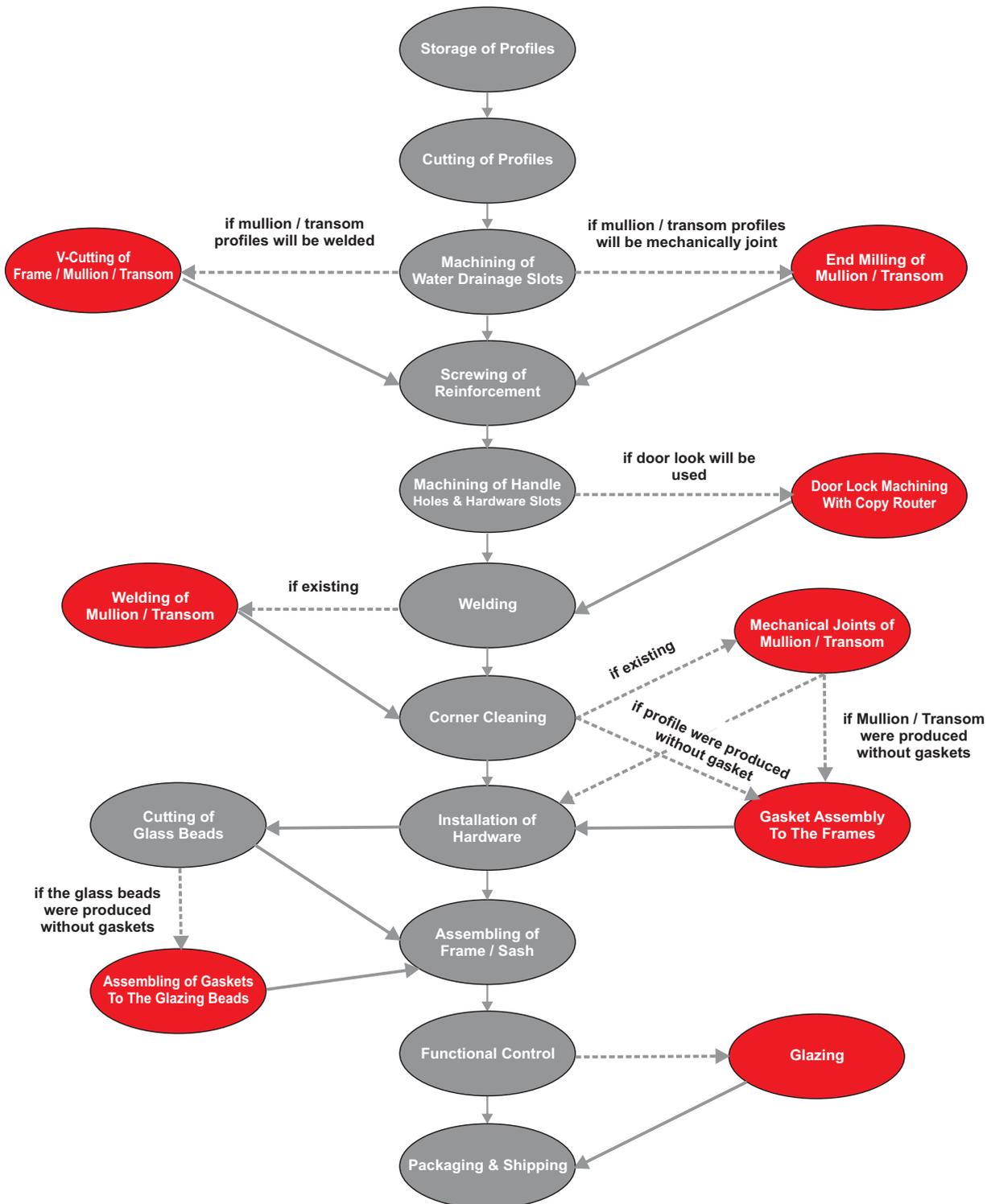
Property	Test method	Unit	PVC-U
Elastic modulus E	DIN 53 457	N/mm ² (kg/cm ²)	2 500 (25 000)
Notched impact test ak at 23°C at 0°C	DIN 53 453	KJ/m ² (kpcm/cm ²)	35 8
Impact strength an at 23°C at 0°C at -20°C at -40°C	DIN 53 453	KJ/m ² (kpcm/cm ²)	without breakage without breakage without breakage without breakage
Ball indentation hardness H 358/30	DIN 53 456	N/mm ² (kp/cm ²)	74 (740)
Tensile strength ss (yield stress**)	DIN 53 455	N/mm ² (kp/cm ²)	44 (440)
Tensile impact strength azn at 23°C at 0°C	DIN 53 488	KJ/m ² (kpcm/cm ²)	700 400
Flexural strength sbB (8 mm deflection)	DIN 53 452 Standard test piece	N/mm ² (kp/cm ²)	70 700
Heat resistance according Vicat VST/B50 according ISO 75 FISO/A	DIN 53 460 DIN 53 461	°C °C	82 72
Coefficient of linear expansion a (-30°C, +30°C)	IN 53 752	1/k (1/grad)	7,0 · 10 ⁻⁵
Thermal conductivity l	DIN 52 612 Sheet 1	W/(m · k) [kcal/(m · h · grad)]	0,20 (0,17)
Density r	DIN 53 479	g/cm ³	1,44
Water absorption WA	DIN 53 495	%	0,04

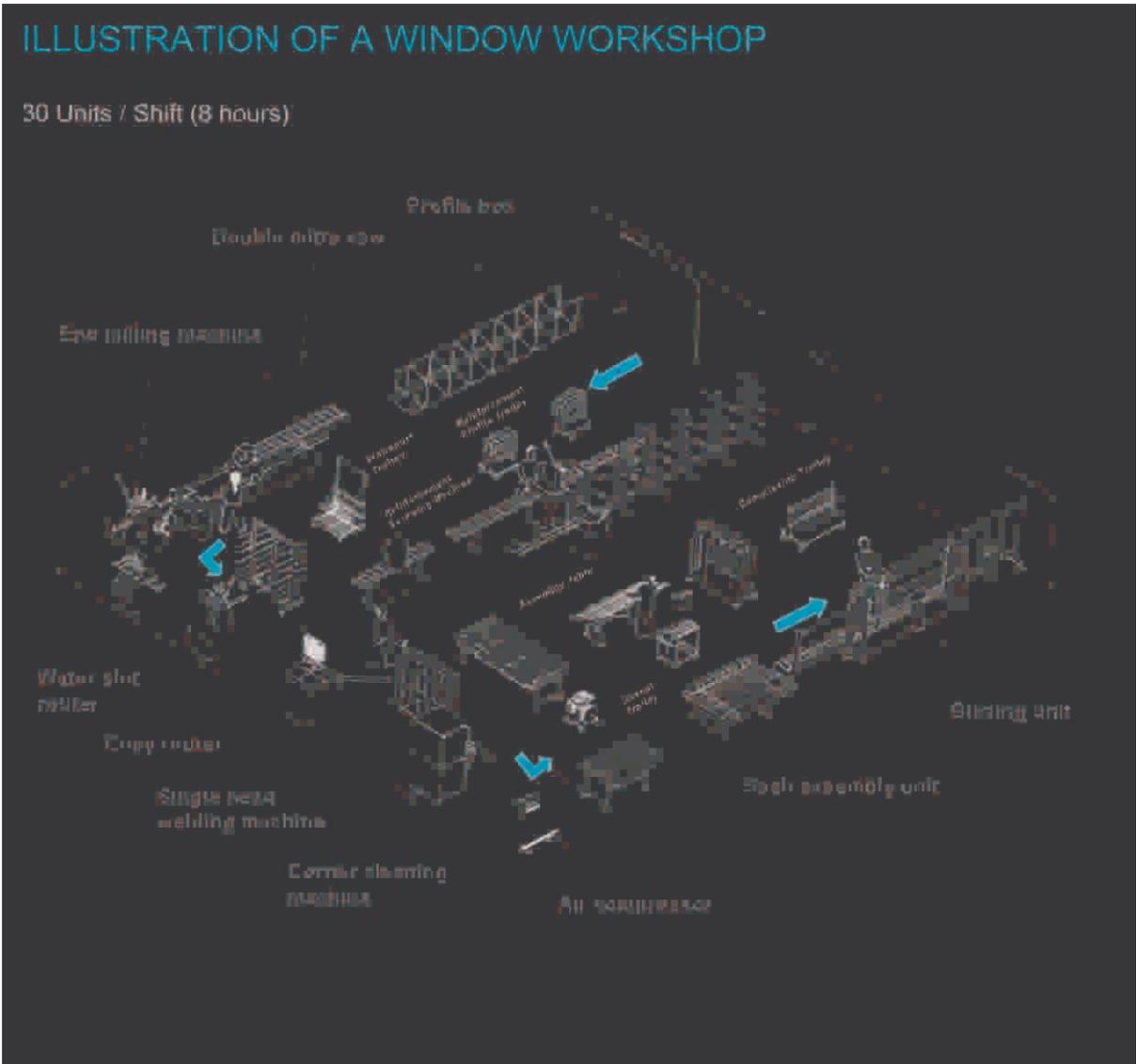
* The properties were determined at press plates according DIN 77 48 part 2 (June 1979)

** In case of U-PVC tensile force and yield stress are identical

Installation

PRODUCTION SCHEME





STEP BY STEP WINDOW MANUFACTURING

Storage of profiles

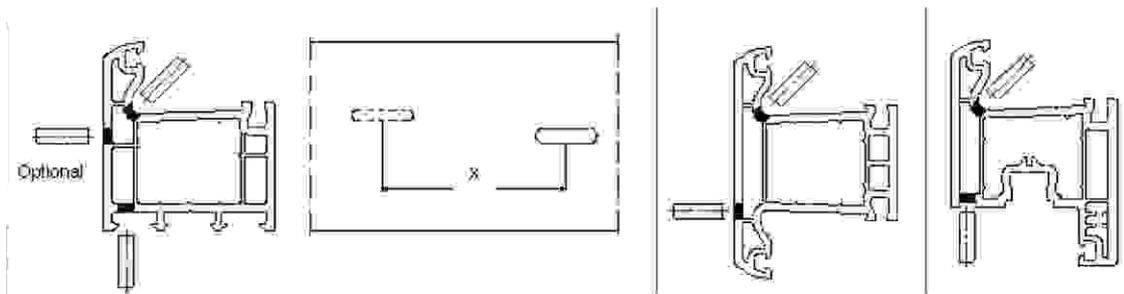
This must be located in an enlightened part of the workshop, readily accessible, and maintained at the same temperature (>15°C) as the work stations. Lower temperatures may cause some problems in welding.

Cutting of profiles

This is a high-precision operation; the quality of the welding, consequently the end product, largely depends on the accuracy of the cutting. Cutting precision and optimization can be controlled by computer.

Machining of water drainage slots

Water drainage slots are machined to the horizontal profiles located at the bottom side of the window partitions. Preset milling machines are used for this purpose. Pictures below show the placement of slots for different profiles.

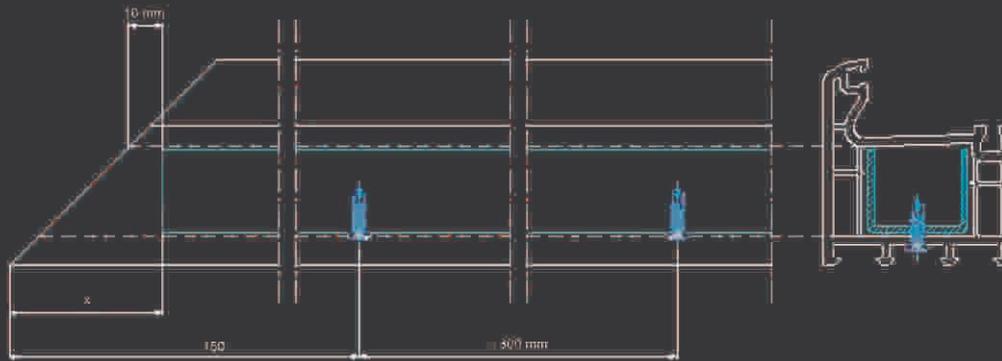


As can be seen from the pictures, there must be a certain distance (x) between the slots opened on the front side and the inner side. This distance should not be less than 50 mm.

Drainage slots for the door profile are machined like the sash profile. There shouldn't be any drainage slots in case of outward opening door sash.

Drainage from bottom is optional for the frame profiles. Widely used slot thickness is 5mm and slot length 20-25 mm.

Screwing on reinforcement profiles



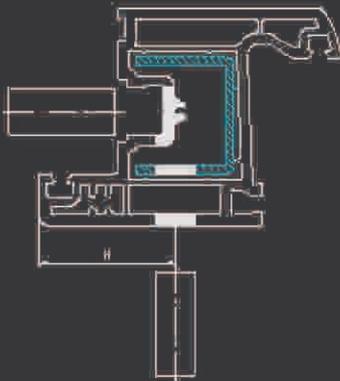
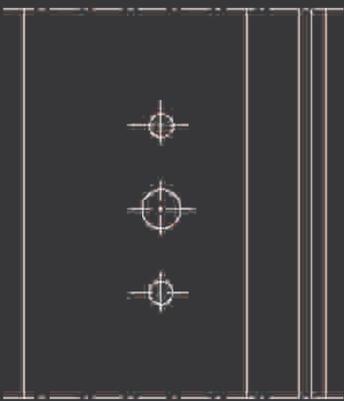
Reinforcement profiles are screwed on to the PVC profiles by self-tapping screws. Reinforcement profile cutting dimension is equal to (profile length - 2x). Determining the "x" dimension is quite important. After 45 ° cutting of the profile, a safety distance of 10mm can be measured from the wall which will be welded in the closest position to the reinforcement profile. The distance of this point to the profile edge will be the "x". This dimension should be determined for all the profiles, by this way, which will be welded while having reinforcement inside

The distance of the first screw from the profile edge may be 150mm. The distance for the following screws should not be more than 300mm. For very short profile lengths, at least 3 screws should be used.

Machining of the hardware slots and handle holes

These two operations are held at the same machine. For the widely used hardware and handles, the placement of the slot and holes on the sash profile are shown on the following picture

The same process is valid also for the door profiles. In case of usage of locked espagnolettes or door locks, machining for the barrel is made by a copy router. Copy routers can also be used for all types of non-standard machining work on the profiles.

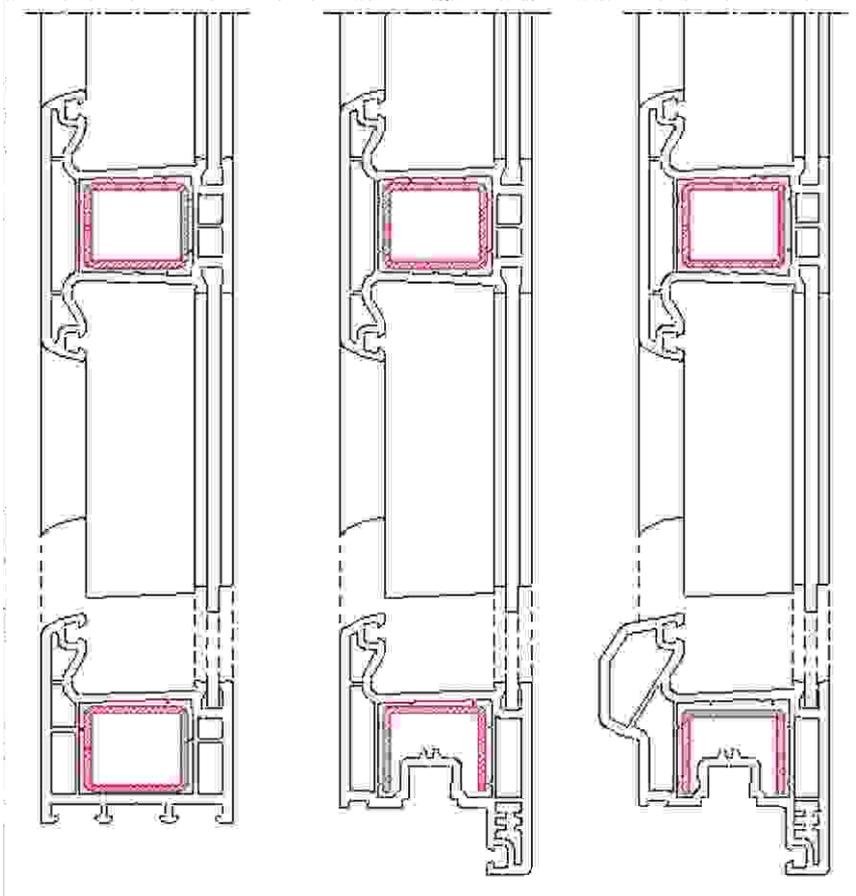


For the standard handles, the axis distance between the handle holes is 43 mm. The handle axis distance (a) and euro-groove machining width (b) depend on the hardware producer. After determination of the hardware, all these dimensions should be provided by the manufacturer.

Preparation of the mullion / transoms

Mullions and transoms are connected to the window frames by means of mechanical (mostly with metal or plastic injected parts) or welded joints. The widely used application is mechanical joint.

The mechanical connection calls for the mullion / transom profile to be end-milled. A special machine with specially designed rotating blades, according to the connection contour, is used for this purpose (see the following picture).

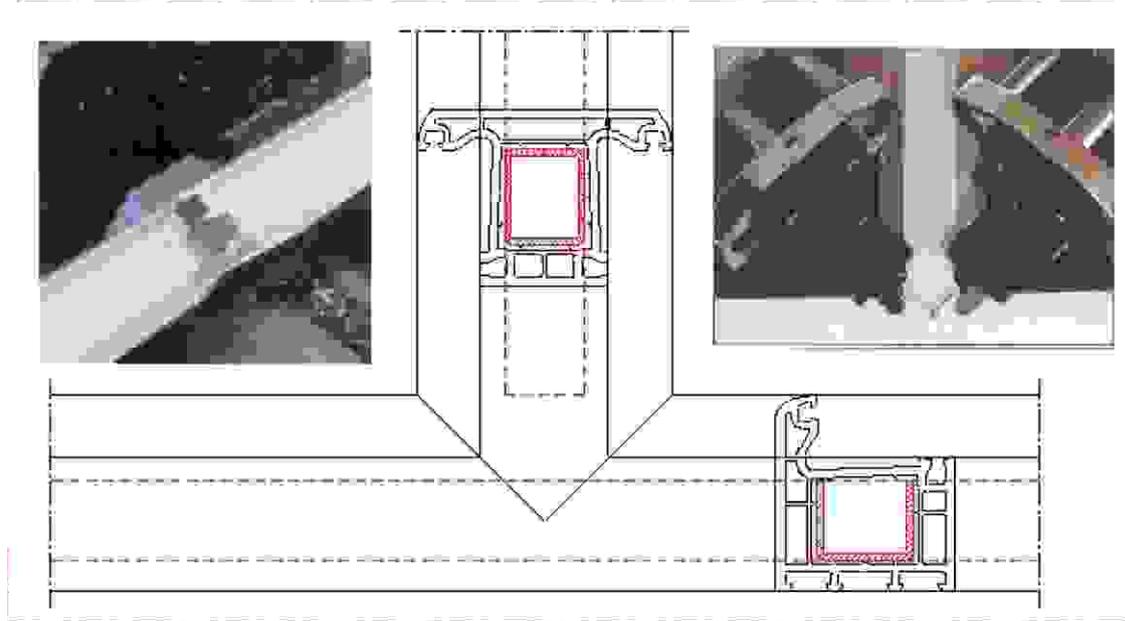


The end-machined profile mullion is assembled to the frame by means of injection parts which are mostly screwed to the reinforcement profile in the frame.

Regardless of the type of the frame (frame, sash, mullion, door etc.) which mullion / transom will be assembled, it would be very practical to have only one type of machining. In order to achieve this, the profile designer should check the connection of the mullion profile with the other profiles during the design stage (especially with the step sash and step door sash profiles).

Another concern is the screwing detail of the connection parts. To be able to screw the injection parts to the metal, the usage of the box reinforcement profile is important in the frame. The system should allow this application as can be seen on the picture above.

The welded connection of mullion / transom (T- and X-connections) necessitates 45° V-cuts in the mullion profile and 45° V-notched cuts on the framing profile. For these purposes, a special cutting machine is fitted with two blades working alternately. The accuracy of this V-cut is critical to the quality of the end product.



Welding of the profiles

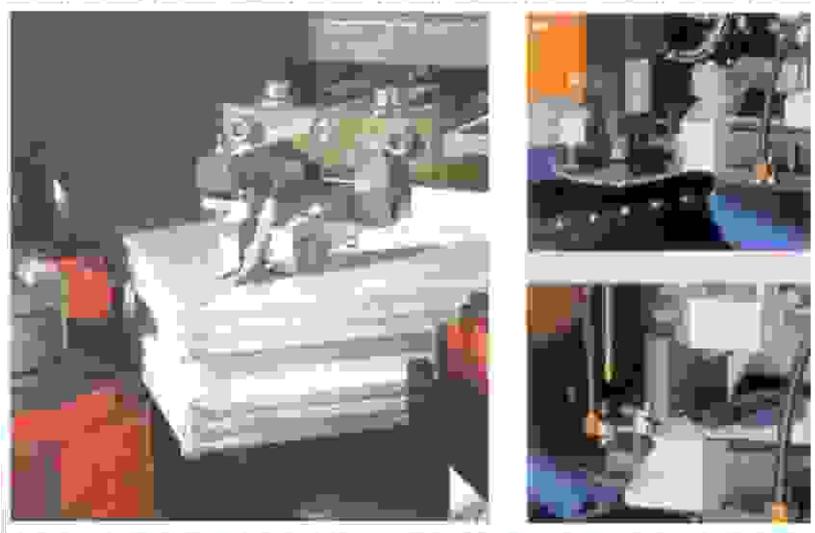
This is a very important operation in PVC window construction, which makes it completely watertight.



There is a wide range of welding machines, varying from the single-head welder to the multi-head welders which simultaneously weld the mullions / transoms, crosses, corner butt welds, and angles.

Corner cleaning

After the welding operation, weld sprue is formed on the welded corners. These sprues can be cleaned with several hand tools, corner cleaning machines or fully-automatic corner cleaning units as well.



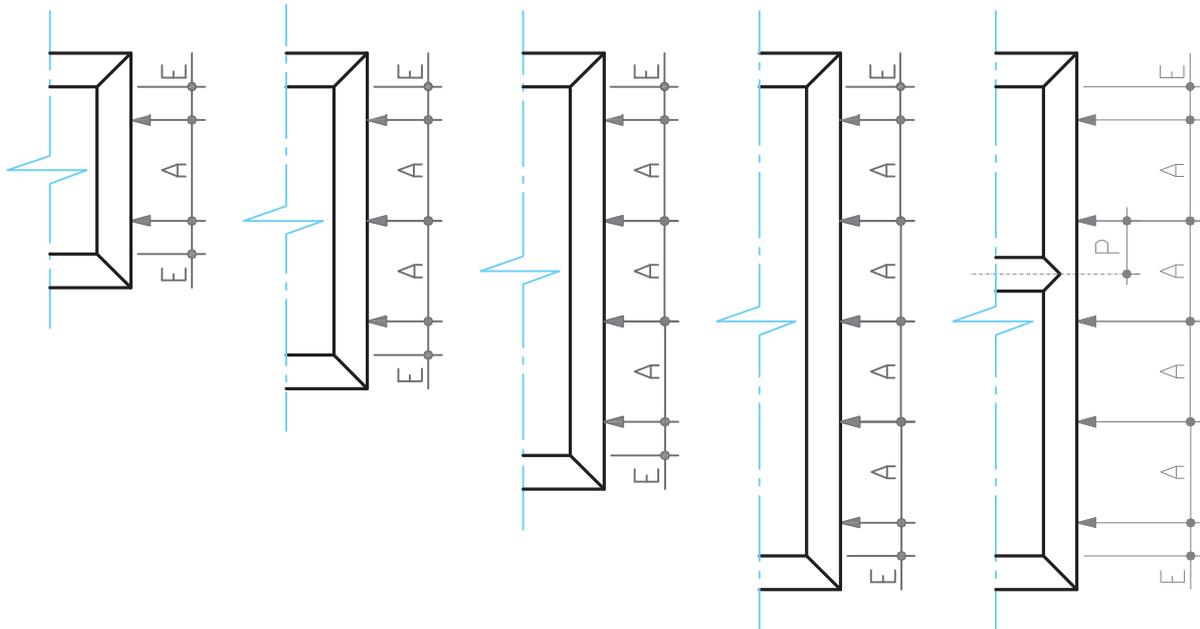
Hardware assembly

In window and door systems, all the accessories used for opening, closing and locking of the window sashes (espagnolettes, locks, locking bolts, hinges etc.) are called hardware.



Especially in the assembly of the tilt and turn opening systems, special jigs are used, mostly provided by the hardware manufacturer. Necessary holes on the frame and sash are opened by means of these jigs before the assembly of hardware.

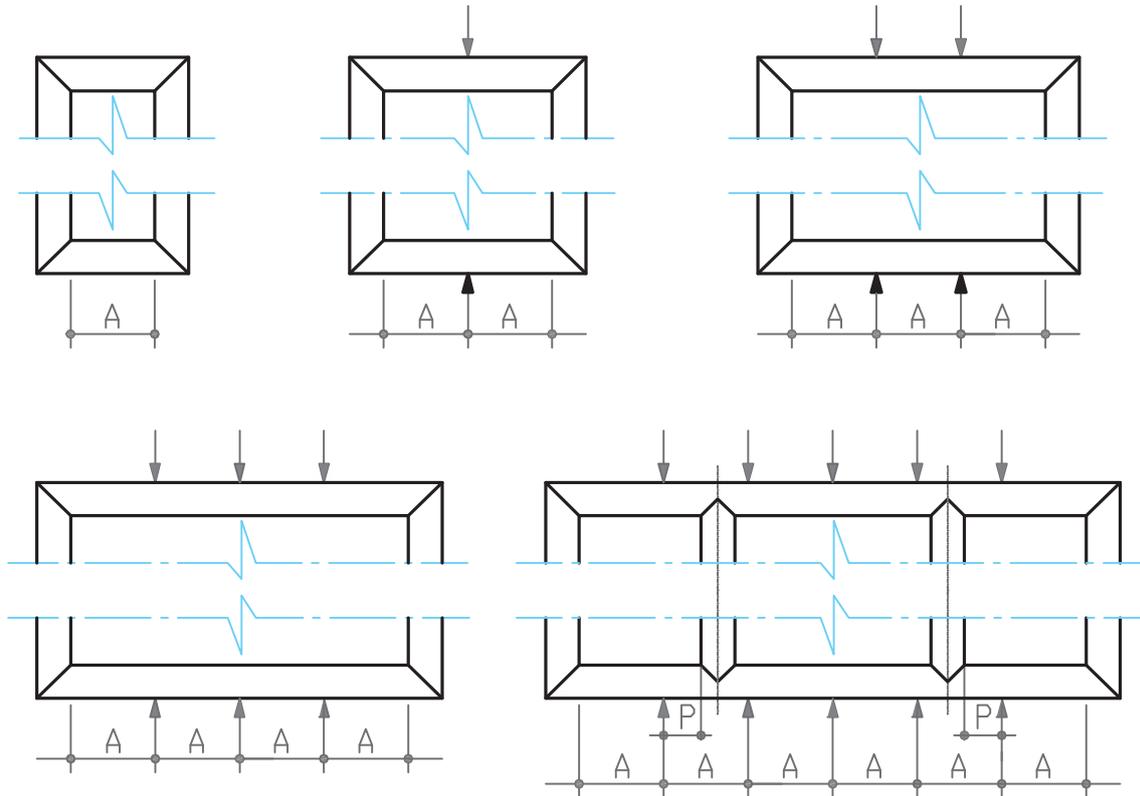
Structural installation



Anchorage distance of the vertical parts of the frame:

	for white profiles	for coloured profiles
A = distance betw. fixing points	max. 700 mm	max. 700 mm
E = distance to corner	ca. 150 mm	ca. 250 mm
P = distance to mullion	ca. 150 mm	ca. 250 mm

Structural installation

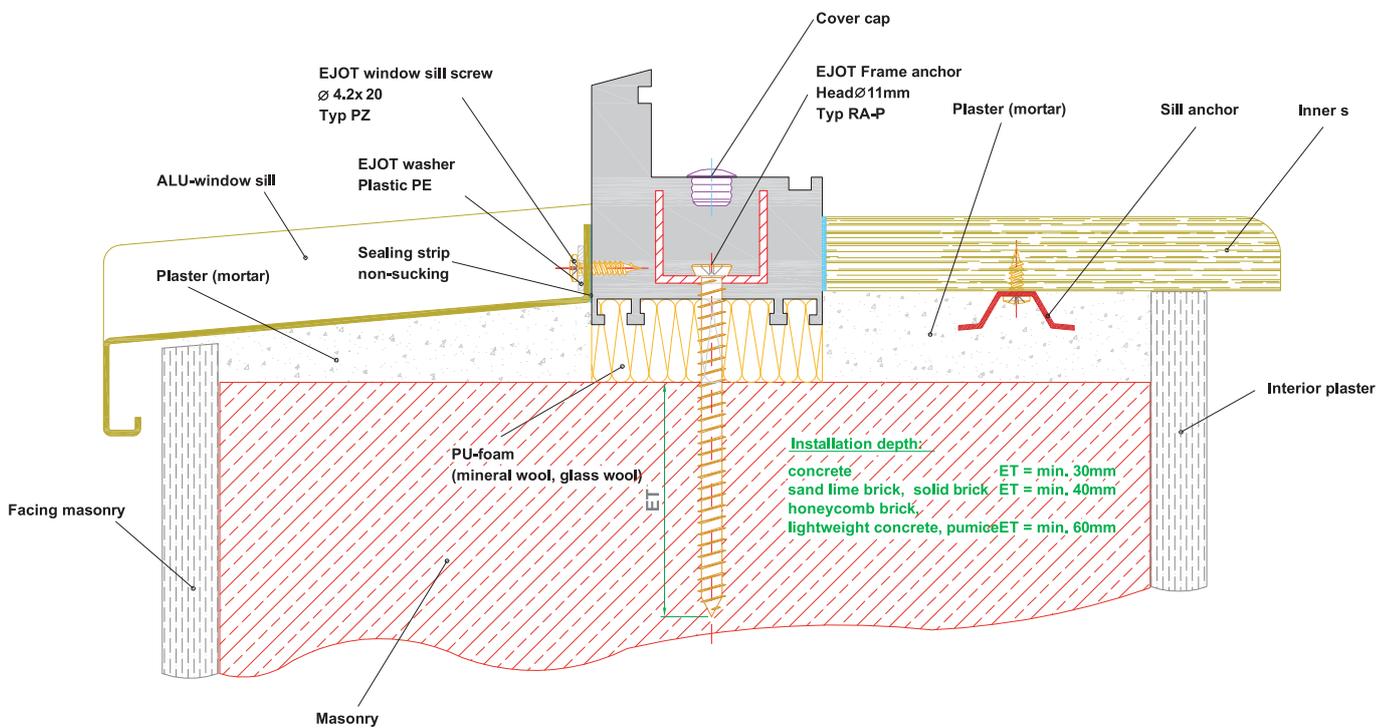


Anchorage distance of the horizontal parts of the frame:

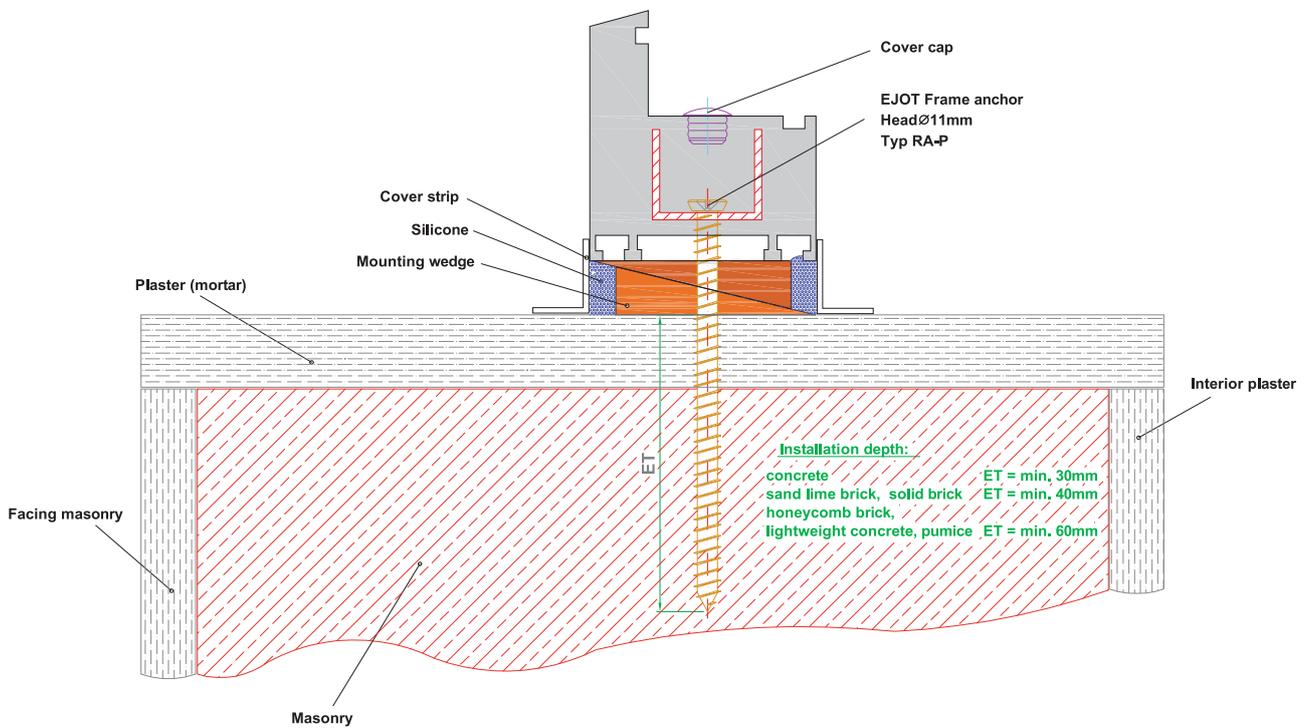
A = distance betw. fixing points
P = distance to mullion

	for white profiles	for coloured profiles
	max. 700 mm	max. 700 mm
	ca. 150 mm	ca. 250 mm

Structure connection, at the bottom



Structure connection, laterally and on the top



VISTA BEST By using our own experience and the constructive recommendations of our colleagues within the industry, with all the power invested in us we have striven to maintain and strengthen our quality and originality. We will be introducing our new products shortly.

«ویستا بیست» با بهره‌گیری از تجارب خود و نقطه نظرات مفید و سازنده همکارانی که در این صنعت فعالیت دارند، با تمامی توان در جهت تقویت و تداوم کیفیت و نوآوری کوشش نموده و بزودی محصولات جدید دیگری را معرفی خواهد نمود.

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UPVC Profile Producer

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ویستا بست (سهامی خاص)

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