

proEvolution

Planning manual



Designation	Chapter
Introduction	1
System features	2
Profile overview	3
Profile combinations	4
Window statics	5

Chapter 1

Introduction

Designation

Page

Introduction Planungshandbuch

1

About this manual

This manual contains important information and instructions for planning window and door elements with Salamander products. We present a wide range of applications and possible combinations. It is, however, not possible to show all applications. Please use our planning tool as a supplement or consult our technical customer service.

This manual has been prepared and checked with great care. However, errors cannot be excluded. We therefore kindly ask you to contact our technical customer service if you discover any errors or discrepancies.

This manual is an important part of the proEvolution system kit.

- ▶ Always keep it within easy reach.

Standards

Most of the illustrations and drawings are not to scale. Scale illustrations are marked accordingly.

Online

This manual, test certificates and other technical documents are also available in electronic form in the login area of our website salamander-windows.com. Please note that the electronic documents may be more up to date than the printed versions.

Further information

Further information can be found in the log-in area of our website salamander-windows.com:

- Production manual
- Planning tool
- Statics calculator


We also recommend the following on the website ift-rosenheim.de:

- ift assembly planner

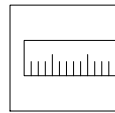
Abbreviations

RAM	Outer frame dimension
FAM	Outer sash dimension
FFM	Sash rebate dimension
B	Width
H	Height
L	Length
D	Thickness
AD	Stopper gasket, stopper gasket system
MD	Central gasket, central gasket system
DK	Tilt-turn
D-DK	Turn/tilt-turn
PSK	Parallel slide and tilt

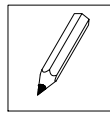
Symbols

~	Dimensions are approximate
-----	Pattern film
- . - .	Screwing axis
- - - -	Line of symmetry
	Sealing compound

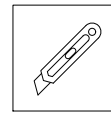
Pictograms



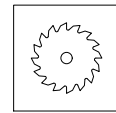
Measuring



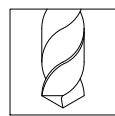
Marking



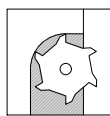
Cutting



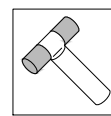
Sawing



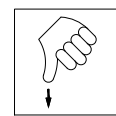
Drilling



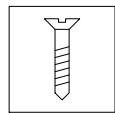
Shaping



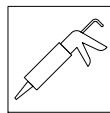
Tapping in with a recoilless soft-face hammer



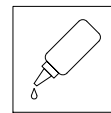
Pressing in



Screwing



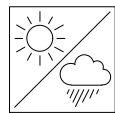
Sealing**



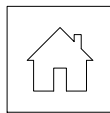
Gluing



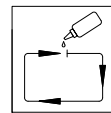
On the construction site



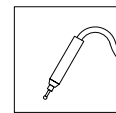
Outside



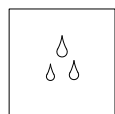
Room side



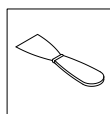
Inserting gasket, bonding joint



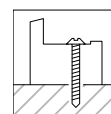
Shaping sealing groove



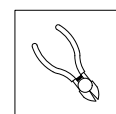
Condensation



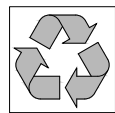
Sickle knife, spatula



Dowel drilling



Removing with side cutters



Profile with coloured recycled core

i INFO

** Seal with permanently elastic, neutrally cross-linking sealing compound, suitable for PVC and galvanised steel.

Deviations noted separately.

Standards and guidelines	<p>Standards and guidelines specified in this manual and other applicable standards and directives:</p> <ul style="list-style-type: none">▪ RAL-GZ 716▪ DIN EN 12210▪ DIN EN 12608▪ DIN 16941-2A▪ DIN 18055▪ Eurocode 1▪ DIN EN 14351-1▪ Fastening of load-bearing hardware parts of turn and tilt-turn fittings (TBDK guideline)▪ Technical guidelines of the glass trade▪ Guideline for planning and executing the installation of windows and entrance doors
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Disclaimer

Our advice – whether verbal or written – is based on experience and provided to the best of our knowledge. However, no guarantee is given for the completeness or accuracy of the information contained in this manual. In particular, it does not contain any assurance of properties. We reserve the right to make technical changes. Working conditions beyond our control and different operating conditions exclude any claims based on our information. The user must check the suitability of selected products for the specific application on their own responsibility. The application, use and processing of the products are beyond our control and are therefore the sole responsibility of the user.

Statements require written confirmation from us to be legally valid.

Where products from other suppliers are shown in this manual, this is intended to illustrate possibilities. We accept no warranty or liability, to the extent permitted by law, for these representations or the specific use of third-party products that are not original Salamander products. Please check with the supplier before using it to make sure it's right for what you need.

Should liability on our part nevertheless arise, it shall be governed exclusively by our General Terms and Conditions valid at the time. They can be viewed, downloaded and printed at salamander-windows.com/legal/terms-and-conditions. Upon written request, we will also send them to you by post or email.

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Chapter 2

System features

Designation	Page
System highlights	1
Design features	2
Element types	4
System-related dimensions	6
Opening dimensions	8
Minimum breaking forces	9
Material characteristics	11

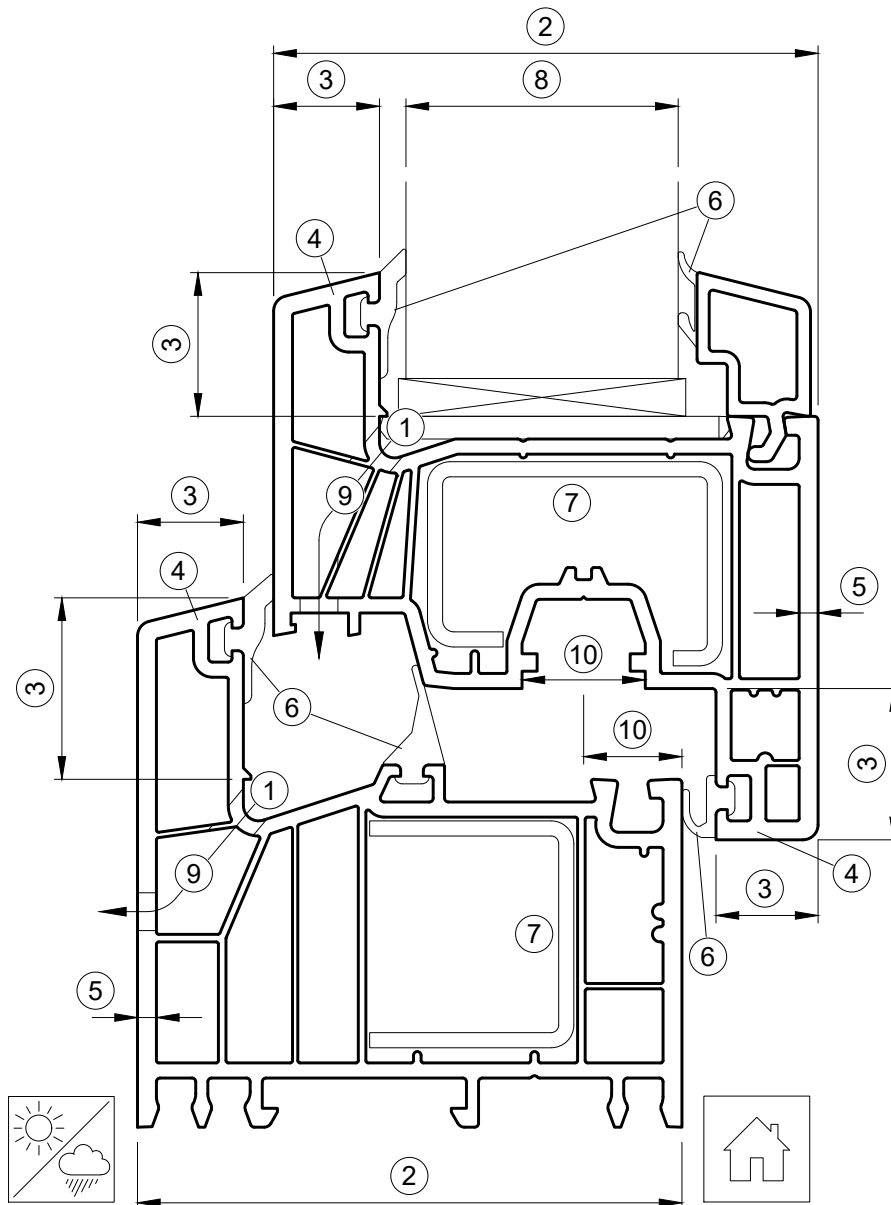
System highlights



- Combination system AD / MD
- Same floating mullion profiles can be used for AD and MD
- Fixed glazing / fixed light possible without additional strips and machining steps
- No gasket needs to be punched for fixed mullion connections
- Profiles optimised for bonding

Technical specifications	
Heat transfer coefficient (U_f)	Max. 1.1 W/(m ² K)
Durability against wind loading	C5 / B5
Water tightness - unprotected	9A
Air permeability	Grade 4
Sound reduction	46 dB
Burglar inhibition	RC2

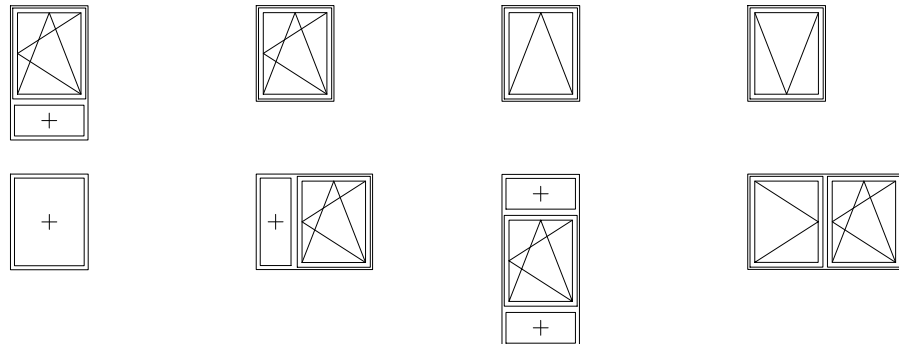
Design features



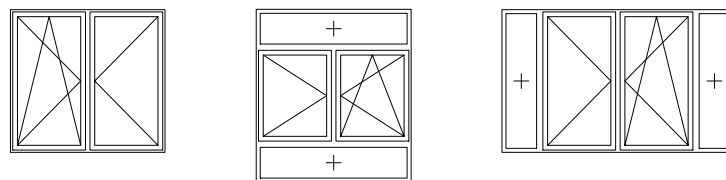
①	Rebate	Glazing rebate with water drainage channel and 3 mm upstand in frame and sash
②	Construction depth	Frame: 72 mm Sash: 72 mm Fixed mullion: 72 mm
③	Fittings	Frame stop height: outside 24 mm Sash stop height: outside 19 mm, inside 20 mm Frame stop width: outside 14 mm Sash stop width: outside 14 mm, inside 13.5 mm
④	Fitting shape	Outer stop bevelled at 14°, design versions available Interior sash stops straight Glazing-bead with 14° bevel Design version curve with radius 14 rounded Design version box straight
⑤	Profile wall thickness	Outer walls of the main profiles according to RAL-GZ 716 Interior walls according to design requirements
⑥	Gaskets	Stopper gasket, inside and central gasket, glazing gasket ex-works, made of PVC-P, weldable Glazing-bead seal made of PVC-P Gap dimension of glazing 3.5 mm Gap dimension outer stop 4 mm, gap dimension inside stop 4.5 mm
⑦	Strengthening	Galvanised steel profiles according to RAL-GZ 716
⑧	Glazing	All commercially available insulating glass panes for thermal insulation, sound reduction and burglary inhibition. Infill thickness up to 44 mm
⑨	Drainage / ventilation	Via separate antechambers to the front or concealed downwards
⑩	Hardware	All commercially available single-handed hardware for 16 mm Euro-groove and 13 mm groove centre position
⑪	Profile connection	Frame and sash corner connection by butt welding Fixed mullions, deadbolts and glazing bars by mechanical connection
⑫	Chamber construction	5 chambers in frame and sash 4 chambers in fixed mullion
⑬	Colours	White homogeneous in mass, through-dyed with long-life surface protection Standard foil décors outside and inside Special foil décors on request RAL coatings on request

Model 1**1.1 Windows and French windows e.g. 1-sashed, 2-sashed, with fixed mullion**

Fixed glazed windows; turn-only windows, single-sashed, tilt&turn windows; bottom-hung windows; tilt-only windows; also multipart elements (according to DIN EN 14351-1).

**1.2 Windows and French doors e.g. 2-sashed with loose mullion (faceplate)**

Turn-only windows and doors, two- and multiple-sashed (opening inwards or outwards), tilt&turn windows and French doors, also multipart (according to DIN EN 14351-1).

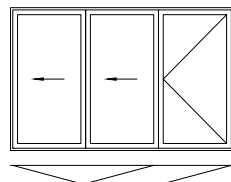
**Model 2****2.1 PSK doors and windows**

(parallel sliding and/or tilting or parking doors).

**2.2 Folding sliding windows and doors**

Folding sliding windows and doors (according to DIN EN 14351-1). Other opening types and combinations possible.

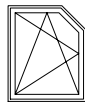
Not currently feasible.



2.3 Other (special) window designs (not part of a “RAL system passport”)

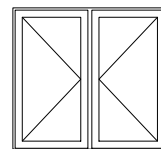
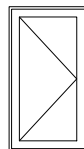
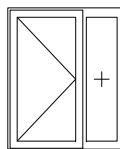
The determination of the performance characteristics varies depending on the type and requires special consideration with reference to product standard DIN EN 14351-1.

- Arched, segmental arch, basket arch windows
- Door constructions without thresholds, barrier-free elements
- Externally opening windows / French windows / front doors
- Fixed windows, gable windows (sloping elements)
- Triangular and trapezoidal windows single-sided and on both sides
- Arched windows, diamond windows, (e.g. in the gable)
- Other window designs



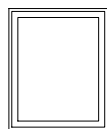
Model 3

3.1 Side entrance doors



Transfer to tested sash sizes and the size tables stored in the system description, in compliance with the locking-points distances, similar format, compliance with the sash weight and consistent manufacturing quality.

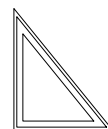
Window shapes



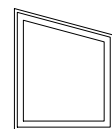
Rectangle



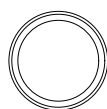
Triangle



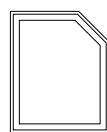
Slanted



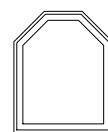
Slanted



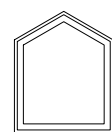
Round



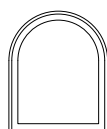
Polygon



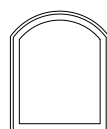
Polygon



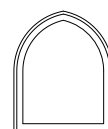
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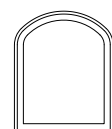
Round arch



Segmental arch



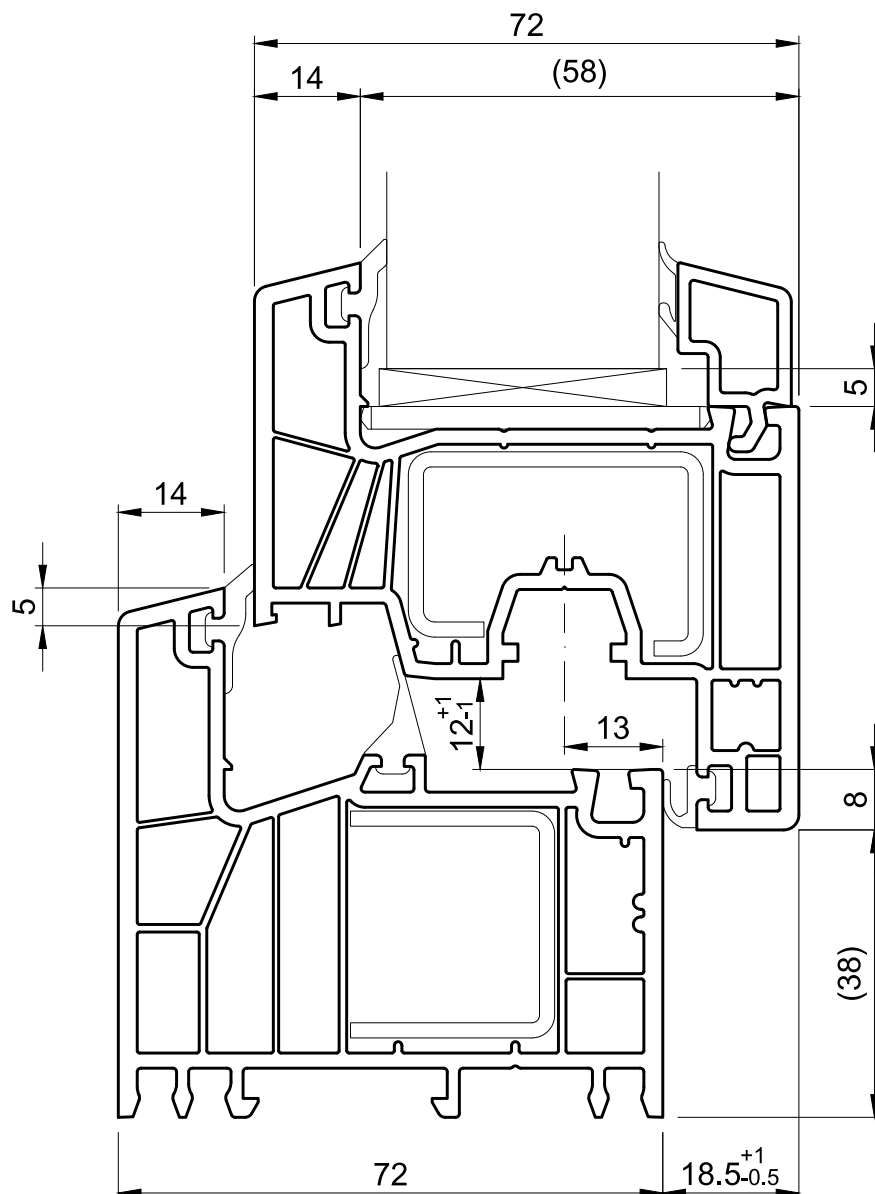
Pointed arch



Basket arch

Frame	Fixed mullion	Sash
720---	722---	721---

MD system



Dimensional deviations

The dimensions listed below are approximate. Tolerances result from DIN 16941-2A, unless agreed separately.

The internal overlap depth in the proEvolution system is $18.5 +1/-0.5$ mm. Deviations from this nominal dimensional specification may result from tolerances in the profiles, seals and fittings used, as well as from the window manufacture itself.

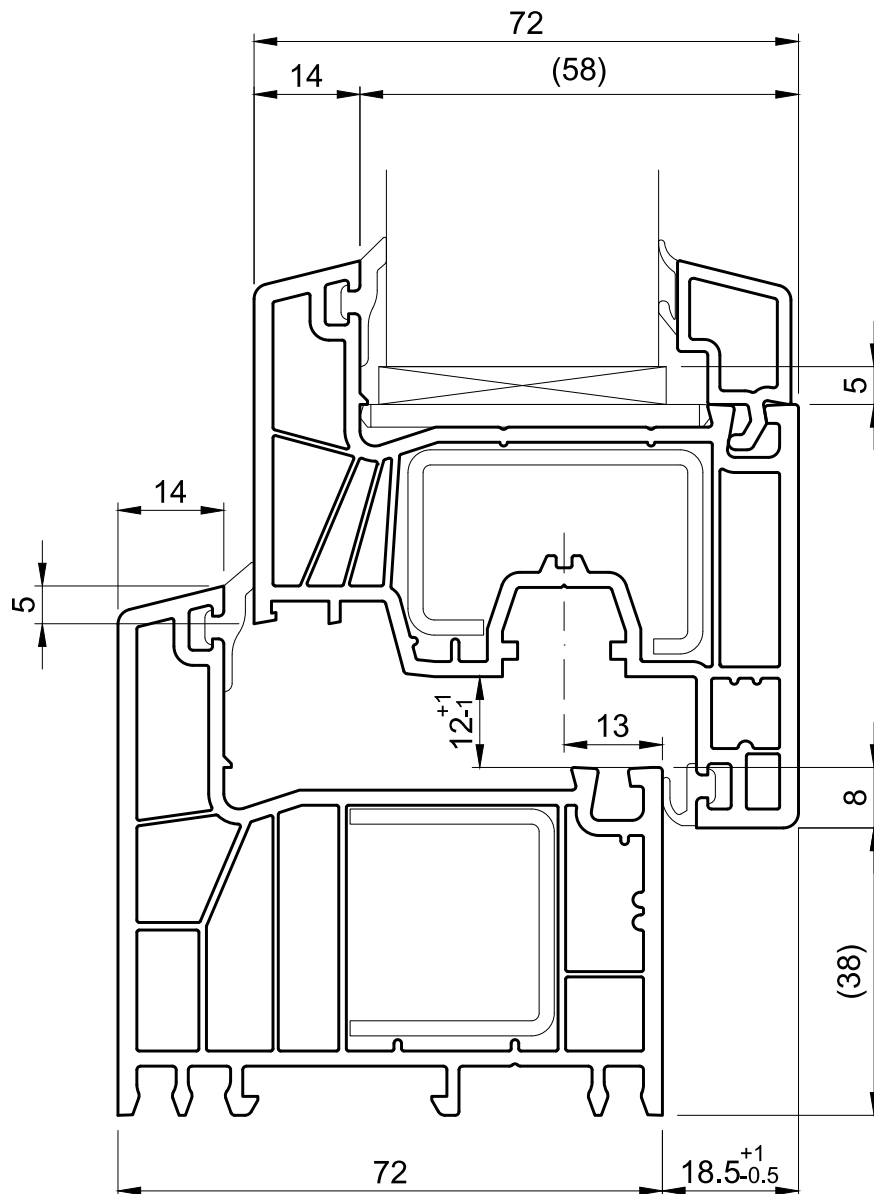
The dimension of the overlap depth alone is not meaningful for the evaluation of the tightness of window elements; possible dimensional deviations therefore do not necessarily constitute a defect. Only technical test assessments and classifications in accordance with the applicable EN standards are authoritative for air and water tightness. The specification for permissible operating forces on window elements (≤ 10 Nm) has priority over compliance with the overturning dimensions.

Frame
720---

Fixed mullion
722---

Sash
721---

AD system



Dimensional deviations

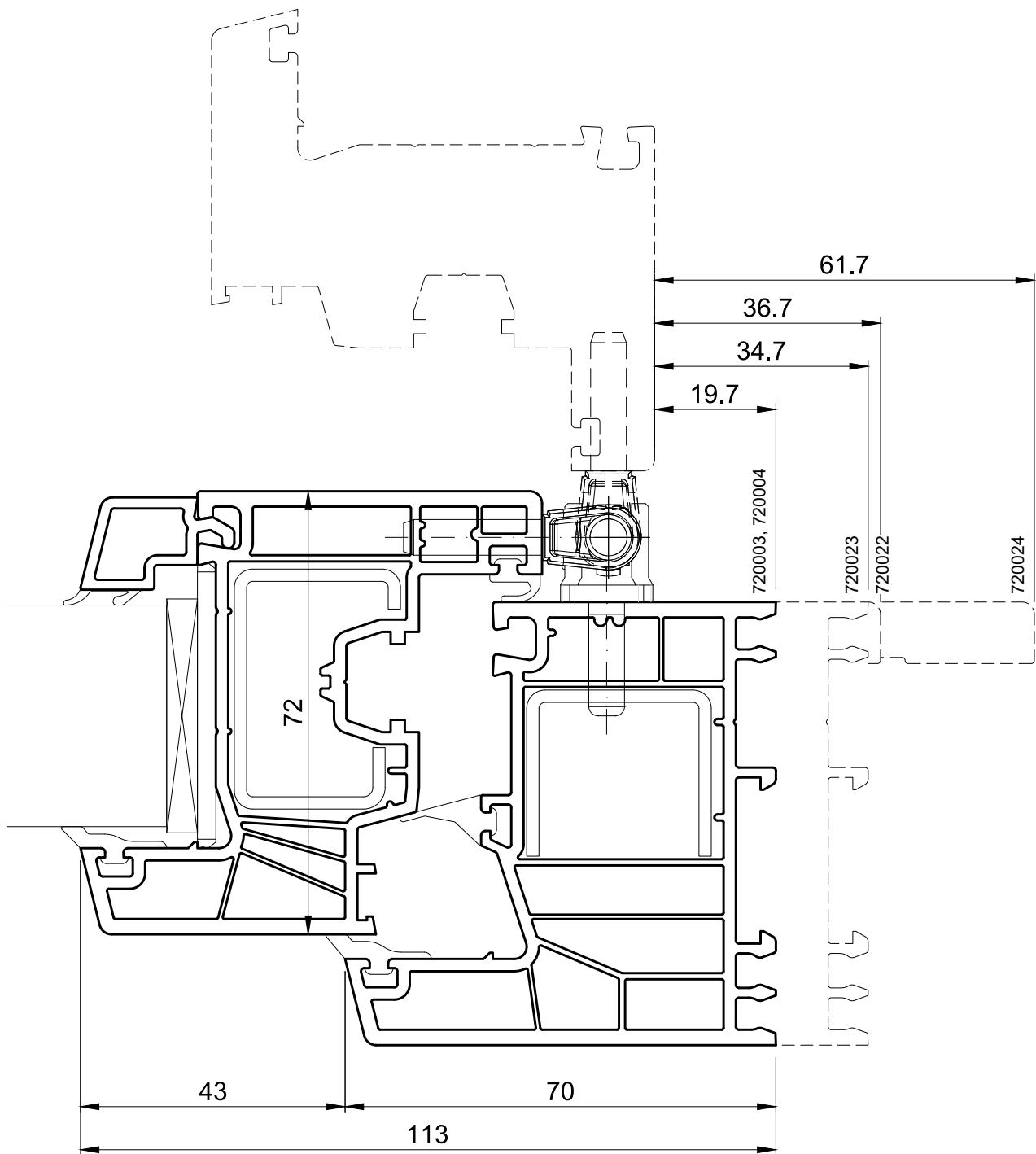
The dimensions listed below are approximate. Tolerances result from DIN 16941-2A , unless agreed separately.

The internal overlap depth in the proEvolution system is 18.5 +1/-0.5 mm. Deviations from this nominal dimensional specification may result from tolerances in the profiles, seals and fittings used, as well as from the window manufacture itself.

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Frame
720003 - 720023

Sash
721001



Functional dimension drawing

Dimensions without tolerances according to quality assurance for PVC windows, RAL-GZ 716.

Weldability

**(Excerpt from RAL-GZ 716
Technical Appendix;
January 2023 edition)**

The following applies for main profiles:

The weldability test is used to check the weldability of the formulation used.

During the pressure bending test on welded corner joints, at least the following stresses must be verified as fracture stress:

Individual value per sample $\sigma_{\min \text{ individual}} = 30 \text{ N/mm}^2$

Average value from three samples $\sigma_{\min \text{ average}} = 35 \text{ N/mm}^2$

The following applies as an exception: For a profile depth or overall width of ≥ 100 mm: $\sigma_{\min \text{ individual}} = 24 \text{ N/mm}^2$, $\sigma_{\min \text{ average}} = 28 \text{ N/mm}^2$

The maximum force F measured must not fall below the minimum breaking force F_c calculated using the equation below.

The minimum permissible individual value is calculated from the calculated minimum breaking force F_c for $\sigma_{\min \text{ average}}$ by multiplying it by factor $\left(\frac{30}{35}\right)$ or $\left(\frac{24}{28}\right)$, without taking the decimal place into account (cut off, do not round).

A test is considered passed if a measured force of $F \geq 8000 \text{ N}$ is achieved.

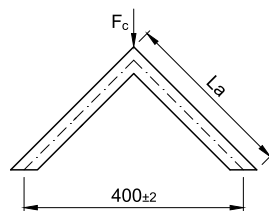
$F_c = \frac{2 \cdot W \cdot \sigma_{\min}}{a - \frac{e}{\sqrt{2}}}$	F_c	Calculated minimum breaking force in [N]
	W	Section modulus of the profile in direction of stress (inner corner) in [mm ³]
	σ_{\min}	Minimum stress in [N/mm ²]
	a	Distance between rotation axes in [mm]; $a = (400 \pm 2) \text{ mm}$
	e	Distance of the critical fibre from the neutral fibre in [mm]

The calculated minimum breaking force F_c is specified by the profile manufacturer. Calculated minimum breaking forces $\geq 8000 \text{ N}$ are for information purposes only.

To determine the cross-sectional area of the profile, the nominal external dimensions specified in the cross-sectional drawing filed with the quality association and the minimum wall thickness (lower tolerance) must be taken into account. For renovation frames (old building/slip-on frames) with a wide overlap (for profile or wall covering), this overlap is not taken into account when calculating the minimum breaking force.

Calculated minimum breaking forces

Art. no.	La (mm)	Cut (mm)	100% - unplastered corners		80% - plastered corners	
			F _c Average value (N)	F _c Individual value (N)	F _c Average value (N)	F _c Individual value (N)
720003	340	343	3068	2629	2454	2103
720004	341	344	3160	2708	2528	2166
720022	321	324	1653	1416	1322	1133
720023	355	358	4924	4220	3939	3376
720024	321	324	1653	1416	1322	1133
721001	357	360	3067	2629	2454	2103
721005	358	361	3103	2659	2482	2127
721008	387	390	6115	5241	4892	4193
721009	387	390	6119	5244	4895	4195
721014	402	405	9482	8127	7586	6502
721015	402	405	9488	8132	7591	6506
722000	377	380	5439	4662	4351	3729
722005	377	380	4667	4000	3734	3200
722006	377	380	4869	4173	3895	3338
722010	393	396	5969	5116	4775	4093



F_c Calculated minimum breaking force in [N]

La Length of the profile-pieces on the outside

* A test is considered passed if a measured force of $F \geq 8000$ N is achieved.

Profile material

SALAMANDER plastic window profiles are made of high-impact modified rigid PVC in accordance with the RAL quality and testing regulations for plastic window profiles RAL-GZ 716.

Moulding compound:

Through-dyed rigid PVC moulding compound in white, cream, caramel, brown and anthracite.

Designation according to EN ISO 1163-1:

Moulding compound ISO 1163-PVC-U, EDLP, 082-25-28

PVC = Polyvinyl chloride

D = Powder

U = Hard (plasticiser-free)

L = Light and weather resistant stabilized (White and cream. Caramel, brown and anthracite only available with decorative film).

E = Extrusion

P = Impact modified

SALAMANDER moulding compound exceeds the requirements of RAL-GZ 716.

PVC type		Delivery form		Processing	
Letter	Meaning	Letter	Meaning	Letter	Meaning
U	Free of plasticisers	D	Powder	E	Extrusion
Vicat softening temperature VST/B		Min. notched impact strength		Min. bending modulus of elasticity	
Digit	°C	Digit	kJ/m ²	Digit	N/mm ²
082	>80 ≤84	25	>20	28	>2500

Testing on press plates

Window profiles

Measurement on test pieces made of extruded profiles: (removed in extrusion direction)

	Test method	Unit	Value
Density	EN ISO 1183 - 1	g/cm ³	1.44 ±0.03
Thermostability	EN ISO 182 - 2	min	>30
Vicat softening temperature VST/B	EN ISO 306	°C	80-83 °C
Coefficient of linear expansion between -30 °C and +50 °C	Leitz dilatometer	K ¹	8x10 ⁻⁵
Thermal conductivity	EN ISO 10077 - 1	W/(m·K)	0.17
Fire behaviour	EN 13501 - 1		Class E
Resistance to artificial weathering	EN 513	GJ/m ²	12, ΔE <3.8
Tensile modulus of elasticity	EN ISO 527	N/mm ²	>2500 ±300
Notched impact strength at +23 °C	EN ISO 179-1/fA	kJ/m ²	>55 (wall thickness A) >60 (wall thickness B)
Impact strength	EN ISO 8256	kJ/m ²	>500 (23 °C)

Gaskets, PVC-P

PVC-P quality according to RAL-GZ 716, section II; product class IV (exterior and interior)

	Test method	Unit	Value
Density	EN ISO 1183-1	g/cm ³	1.22 ±0.03
Tensile strength	DIN 53 504	N/mm ²	≥5.0
Elongation at break	DIN 53 504	%	≥250
Compression set (-25 °C / 22 h / 25 %)	DIN ISO 815	%	≤90
(23 °C / 22 h / 25 %)		%	≤35
(70 °C / 22 h / 25 %)		%	≤50
Behaviour after heat ageing	DIN 53 508 (7 days, 100 °C)		No complaints
Change in hardness	DIN ISO 48	IRHD	≤5
Change in tensile strength	DIN 53 504/53 455	%	≤25
Elongation at break (absolute)	DIN 53 504/53 455	%	≥200
Change in Shore hardness with temperature change from 23 °C to -10 °C	DIN 53 505	-	≤25
Behaviour after exposure to ozone	DIN 53 509	Crack level	0
Weatherfastness	ISO 188	GMA02	≥3 no cracks, blisters
Weather resistance	ISO 105 A	%	≥200
Contact discolouration	ISO 3865	GMA02	≥4
Weight loss	DIN 53407, Method A	%	≤3.0
Compatibility	Contact under tensile bending stress of 0-15 N/mm ²		No cracking in the contact material

Gaskets, EPDM

Quality in accordance with DIN 7863 or RAL-GZ 716, section II; elastomer class A

	Test method	Unit	Value	Value
Nominal hardness		IRHD	≤50	>50 / ≤70
Density	DIN 53479, procedure A	g/cm ³		
Tolerance of nominal hardness	DIN 53 519	IRHD	±5	±5
Tensile test	DIN 53 504			
Tensile strength		N/mm ²	≥7.5	≥7.5
Elongation at break		%	≥300	≥200
Compression set (-25 °C / 22 h / 25 %)	DIN ISO 815	%	≤70	≤80
(23 °C / 22 h / 25 %)				
(100 °C / 22 h / 25 %)			≤15	≤15
			≤35	≤35
Behaviour after heat ageing	DIN 53 508 (7 days, 100 °C)		No complaints	
Change in hardness	DIN 53 519	IRHD	≤15	≤15
Change in tensile strength	DIN 53 504	%	≤25	≤25
Elongation at break (absolute)	DIN 53 504	%	≥200	≥150
Change in Shore hardness with temperature change from 23 °C to -10 °C	DIN 53 505	Shore A	≤10	≤10
Behaviour after exposure to ozone	DIN 53 509	Crack level	0	0
Behaviour under artificial weathering	RAL-GZ 716, Section I		no cracks, blisters	
Weather resistance	DIN 53504 (elongation at break)	%	≥200	≥150
Contact discolouration	DIN 53 540	Fastness number (A02)	≥3	≥3
		Fastness number (A03)	≥4	≥4
Weight loss	EN ISO 176 method A	%	≤3.0	≤3.0
Compatibility	Contact under tensile bending stress of 0 - 15 N/mm ²		No cracking in the contact material	

Chapter 3

Profile overview

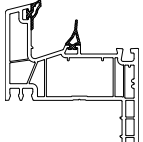
Designation	Page
Article list	1
Frames	36
Sashes	41
Fixed mullion, glazing bar / mullion	47
Floating mullion / faceplate	51
Glazing-beads	53
Gaskets	65
Block bridges, glass blocks	68
Reinforcements	69
Weldable corner connectors	76
Fixed-mullion connector, glazing bar / mullion connector	77
Forend caps	79
Thresholds	80
Widenings	85
Sill connection	88
Window sill	91
Couplings	92
Static couplings	93
Corner connectors	98
Static profiles (pilaster strips)	101
Fixing	103
Glazing bars, self-adhesive	105
Weather profile strip	106
Cladding profiles	107
Roller shutter accessories	118
Mounting-plates	124

Chapter 3

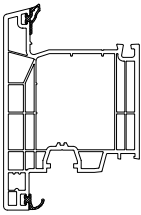
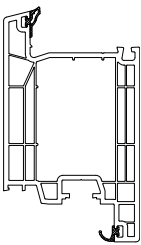
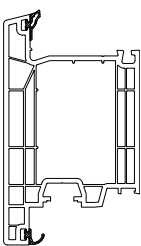
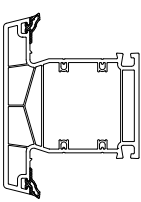
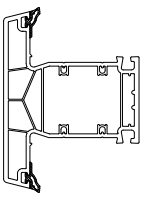
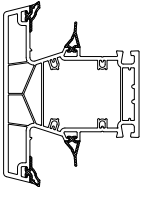
Profile overview

Drilling jigs	125
Other accessories	128
Aluminium cover profile	132

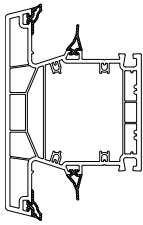
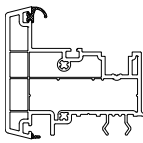
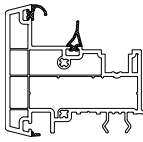
Main profiles

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Frame AD 70 5K B	720003	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 37
	Frame MD 70 5K B	720004	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 36
	Old building frame MD 87 5K B	720022	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 39
	Frame AD 85 5K B	720023	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 38
	Old building frame MD 112 5K B	720024	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 40
	Sash Max 75 5K B	721001	6.5 m	PW+s; PW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 41
	Sash 75 5K B	721005	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 42
	Sash Max 107 5K B	721008	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 43

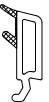









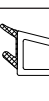
Main profiles

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Sash T Max 107 5K B	721009	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 44
	Sash 122 5K A	721014	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; AN+s; CR+g	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 45
	Sash T 122 5K A	721015	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; AN+s; CR+g	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 46
	Fixed mullion	722000	6.5 m	PW+s; PW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 50
	Fixed mullion AD 94 4K B	722005	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 48
	Fixed mullion MD 94 4K B	722006	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 47

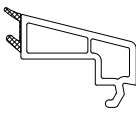
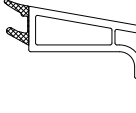
Main profiles

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Fixed mullion MD 110 4K B	722010	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; AN+s; CR+g	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 49
	Faceplate AD 70	726003	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 52
	Faceplate MD 70	726004	6.5 m	PW+s; PW+g; SW+s; SW+g; CA+s; BR+s; CR+g; AN+s	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 51

Glazing beads, gaskets

Colour base body:		PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite					
Colour seal:		s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop)					
Décor:		□ = without		□ = on both sides		□ = outside	□ = inside
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page	
Glazing beads							
	Glazing-bead	413001	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	□ □	Chapter 3 Page 58	
	Glazing-bead	413002	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 58	
	Glazing-bead	413003	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g; GL+l	□ □	Chapter 3 Page 58	
	Glazing-bead	413004	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 58	
	Glazing-bead	413005	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	□ □	Chapter 3 Page 58	
	Glazing-bead	413006	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 58	
	Glazing-bead	413007	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	□ □	Chapter 3 Page 58	
	Glazing-bead	413008	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 58	
	Glazing-bead	413009	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 58	
	Glazing-bead	413010	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 58	
	Glazing-bead	413011	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g; GL+l	□ □	Chapter 3 Page 58	

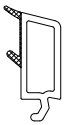
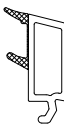


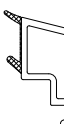





Glazing beads, gaskets

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Glazing-bead	413012	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 58
	Glazing-bead	413013	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 58
	Glazing-bead	413014	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 58
	Glazing-bead	413015	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 58
	Glazing-bead	413016	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 58
	Glazing-bead	413017	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 58
	Glazing-bead	413018	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 58
	Glazing-bead curve	413103	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 55
	Glazing-bead curve	413105	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 55
	Glazing-bead curve	413107	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 55
	Glazing-bead curve	413109	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 55

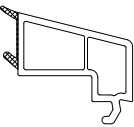
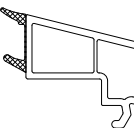
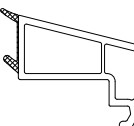
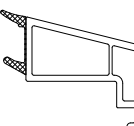







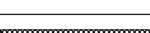


Glazing beads, gaskets

Colour base body:		PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite					
Colour seal:		s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop)					
Décor:		□ = without		□ = on both sides		□ = outside	□ = inside
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page	
	Glazing-bead curve	413111	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g	□ □	Chapter 3 Page 55	
	Glazing-bead curve	413113	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 55	
	Glazing-bead curve	413115	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 55	
	Glazing-bead box	413201	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 60	
	Glazing-bead box	413205	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 60	
	Glazing-bead box	413207	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g	□ □	Chapter 3 Page 60	
	Glazing-bead box	413209	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 60	
	Glazing-bead box	413211	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 60	
	Glazing-bead	413301	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	□ □	Chapter 3 Page 53	
	Glazing bead	413302	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	□ □	Chapter 3 Page 53	





Glazing beads, gaskets

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Glazing bead	413303	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing bead	413304	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing bead	413305	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing bead	413306	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing bead	413307	6 m	PW+s; PW+g; Sw+s; SW+g; BR+s; GL+l	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing-bead	413308	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing-bead	413309	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing-bead	413310	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing bead	413311	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53
	Glazing bead	413312	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 53

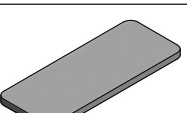
Glazing beads, gaskets

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Glazing bead	413313	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; GL+l	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 53
	Glazing bead	413314	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 53
	Glazing-bead	413315	6 m	PW+s; PW+g; SW+s; SW+g; BR+s; CR+g	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 53
	Glazing-bead	413316	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 53
Gaskets						
	Brush seal	404930	100 m	Black	-	Chapter 3 Page 67
	Brush seal	404935	100 m	Black	-	Chapter 3 Page 67
	Gasket	414025	400 m / roll	Black, grey	-	Chapter 3 Page 66
	Gasket	414566	300 m / role	Black, grey	-	Chapter 3 Page 66
	Glazing gasket	414573	200 m / roll	Black, grey	-	Chapter 3 Page 66
	Gasket, self-adhesive (static coupling)	414910	100 m / roll	Black	-	Chapter 3 Page 67
	Brush seal	414971	225 m / roll	Grey	-	Chapter 3 Page 67
	Silicone sealing tape, self-adhesive	417740	125 pc. / bag; 500 pc. / carton	SW; Black	-	Chapter 3 Page 67
	Combination gasket	464100	100 m	Black, grey	-	Chapter 3 Page 66
	Stopper gasket	464101	100 m	Black, grey	-	Chapter 3 Page 66

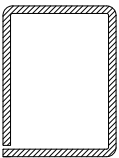
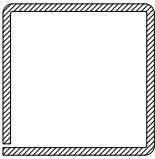
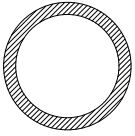
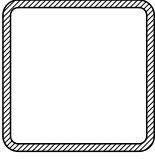
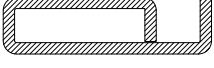
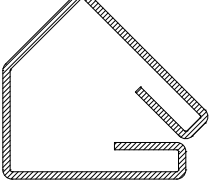
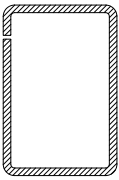
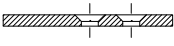

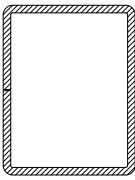
Glazing beads, gaskets

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Central gasket	464102	100 m	Black, grey	-	Chapter 3 Page 66
	Groove cover gasket	464103	100 m	Black; White	-	Chapter 3 Page 67
	Stopper gasket	464203	100 m	Black, grey	-	Chapter 3 Page 66
	Brush seal	DP7010	225 m / roll	Grey	-	Chapter 3 Page 67


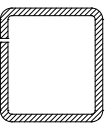
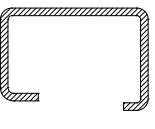
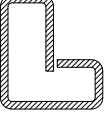

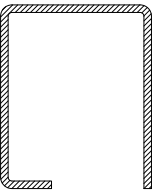
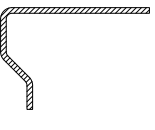
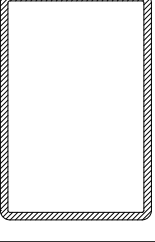
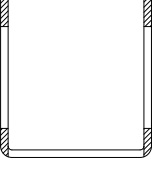
Glazing bridges, glass blocks, reinforcements

Colour base body:		PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite					
Colour seal:		s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop)					
Décor:		□ = without		□ = on both sides		□ = outside	□ = inside
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page	
Glazing bridges and glass blocks							
	Glazing bridge	417000	100 pc.	Grey	-	Chapter 3 Page 68	
	Glazing bridge	417003	500 pc.	Grey	-	Chapter 3 Page 68	
	Glass blocks 30 mm wide, 2 – 6 mm thick	417212 – 417216	1000 pc. / carton	Colourful	-	Chapter 3 Page 68	
	Glass blocks 34 mm wide, 2 – 6 mm thick	417222 – 417226	1000 pc. / carton	Colourful	-	Chapter 3 Page 68	
	Glass blocks 40 mm wide, 2 – 5 mm thick	417232 – 417235	1000 pc. / carton	Colourful	-	Chapter 3 Page 68	
	Glass blocks 48 mm wide, 2 – 5 mm thick	417242 – 417245	1000 pc. / carton	Colourful	-	Chapter 3 Page 68	
	Glass blocks 50 mm wide, 2 – 5 mm thick	417252 – 417255	1000 pc. / carton	Colourful	-	Chapter 3 Page 68	
	Glass blocks 52 mm wide, 2 – 5 mm thick	417262 – 417265	1000 pc. / carton	Colourful	-	Chapter 3 Page 68	
Reinforcements							
	Reinforcement	405012	6 m	Steel, galvanised	-	Chapter 3 Page 69	
	Reinforcement	405015	6 m	Steel, galvanised	-	Chapter 3 Page 69	

Glazing bridges, glass blocks, reinforcements

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Reinforcement	405040	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	405060	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	415016	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	415040	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	415136	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	415140	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	425002	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Rebate reinforcement	425022	4.5 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	445020	5.8 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	445040	5.8 m	Steel, galvanised	-	Chapter 3 Page 69

Glazing bridges, glass blocks, reinforcements

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Reinforcement	465001	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	465002	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	465006	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	465011	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	465013	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	465017	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	465026	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	AR4630	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	MT8531	6 m	Steel, galvanised	-	Chapter 3 Page 69

Glazing bridges, glass blocks, reinforcements

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Reinforcement	MT8551	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	VS1020	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	VS1120	6 m	Steel, galvanised	--	Chapter 3 Page 69
	Reinforcement	VS3020	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	VS3030	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	VS4020	6 m	Steel, galvanised	-	Chapter 3 Page 69
	Reinforcement	VS8450	6 m	Steel, galvanised	-	Chapter 3 Page 69

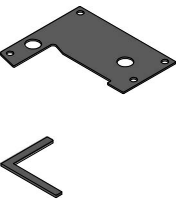
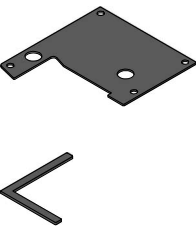
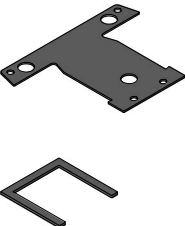






Side profiles, accessories

Colour base body:		PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite					
Colour seal:		s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop)					
Décor:		□ = without		□ = on both sides		□ = outside	□ = inside
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page	
Weldable corner connector							
	Clamping lever	207910	1 pc.	-	-	Chapter 3 Page 76	
	Weldable corner connector	MT4631	40 pc.	-	-	Chapter 3 Page 76	
	Weldable corner connector	MT8540	40 pc.	-	-	Chapter 3 Page 76	
Glazing bar and fixed-mullion connectors							
	Glazing bar cross connector	428000	50 pc.	Titanium silver	-	Chapter 3 Page 77	
	Fixed-mullion cross connector	428004	Upon request	Titanium silver	-	Chapter 3 Page 77	
	Sealing block MD	428005	500 pc.	-	-	Chapter 3 Page 77	
	Fixed-mullion cross connector MD	428006	Upon request	Titanium silver	-	Chapter 3 Page 77	
	Fixed-mullion connector AD	428009	50 pc.	Titanium silver	-	Chapter 3 Page 77	
	Fixed-mullion connector MD	428010	Upon request	Titanium silver	-	Chapter 3 Page 77	

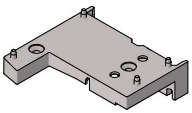
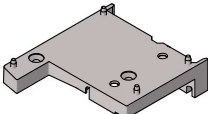
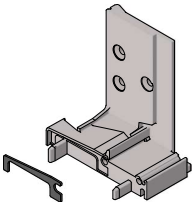
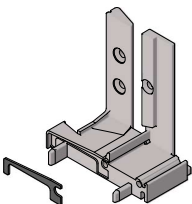
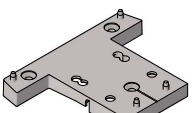

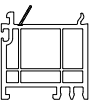
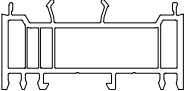
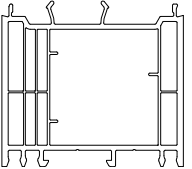
Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Fixed-mullion cross connector MD	428041	Upon request	Titanium silver	-	Chapter 3 Page 77
	Sealing block MD	428044	500 pc.	-	-	Chapter 3 Page 77
	Fixed-mullion connector MD	428045	Upon request	Titanium silver	-	Chapter 3 Page 77
Faceplate end cover caps						
	Faceplate end cover cap 2-piece AD	427014	50 pairs	PW; CA; BR; CR; black	-	Chapter 3 Page 79
	Faceplate end cover cap 2-piece MD	427016	50 pairs	PW; CA; BR; CR; black	-	Chapter 3 Page 79
Door thresholds						
	Screw block	MT7131	100 pieces	-	-	Chapter 3 Page 83
	Angled connector	418950	100 pieces.	-	-	Chapter 3 Page 83

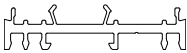
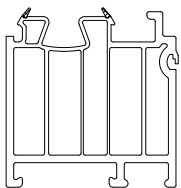
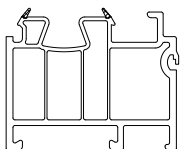
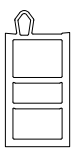
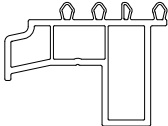
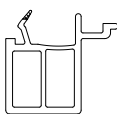
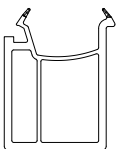
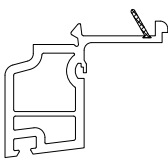
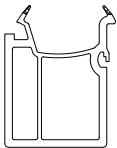
Side profiles, accessories

Colour base body:		PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite				
Colour seal:		s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop)				
Décor:		<input type="checkbox"/> = without	<input type="checkbox"/> = on both sides	<input type="checkbox"/> = outside	<input type="checkbox"/> = inside	
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Sealing pad set	424300	Upon request	-	-	Chapter 3 Page 81
	Sealing pad set	424301	Upon request	-	-	Chapter 3 Page 81
	Sealing pad set	424304	Upon request	-	-	Chapter 3 Page 82
	Door threshold	426000	6 m	Grey	-	Chapter 3 Page 80
	Door threshold	426001	6 m	Grey	-	Chapter 3 Page 80
	Protective cap for weather profile strip 429000 Passive sash DIN left	427044	50 pc.	Black	-	Chapter 3 Page 84
	Protective cap for weather profile strip 429000 Passive sash DIN right	427045	50 pc.	Black	-	Chapter 3 Page 84
	Protective cap for weather profile strip 429000 Active sash DIN right	427046	50 pc.	Black	-	Chapter 3 Page 84
	Protective cap for weather profile strip 429000 Active sash DIN left	427047	50 pc.	Black	-	Chapter 3 Page 84

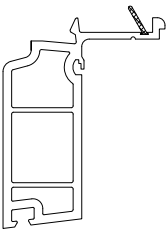
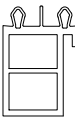
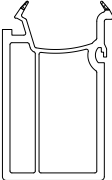
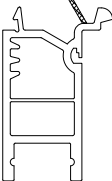


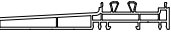

Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Threshold connector	428013	50 pairs	Grey	-	Chapter 3 Page 81
	Threshold connector	428014	50 pairs	Grey	-	Chapter 3 Page 81
	Threshold connector	428026	50 pairs	Grey	-	Chapter 3 Page 83
	Threshold connector	428028	50 pairs	Grey	-	Chapter 3 Page 83
	Threshold connector	428030	50 pairs	Grey	-	Chapter 3 Page 82
	Weather profile strip	429000	6 m	Aluminium	-	Chapter 3 Page 84
Widenings						
	Balcony door connection	416146	6.5 m	PW+s	-	Chapter 3 Page 87
	Widening	426150	6.5 m	PW; SW	Upon request	Chapter 3 Page 85
	Widening	426151	6.5 m	PW; SW	Upon request	Chapter 3 Page 85


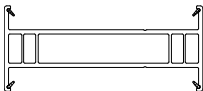







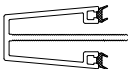
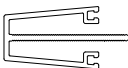
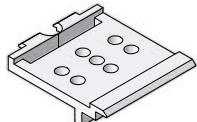
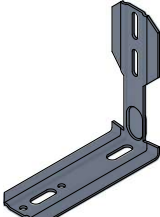
Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Widening	426152	6.5 m	PW; SW	Upon request	Chapter 3 Page 86
Sill connection						
	Sill connection	416100	6 m	Colourful	-	Chapter 3 Page 88
	Sill connection	416106	6 m	Colourful	-	Chapter 3 Page 88
	Window sill connection	416107	6.5 m	PW; CR	-	Chapter 3 Page 89
	External sill connection	416119	6.5 m	PW; SW	-	Chapter 3 Page 89
	Sill connection	416122	6 m	Colourful	-	Chapter 3 Page 88
	Sill connection	416131	6 m	Colourful	-	Chapter 3 Page 88
	Stone sill connection	416133	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 90
	Sill connection	416134	6 m	Colourful	-	Chapter 3 Page 88

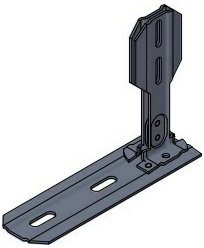






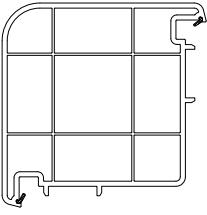
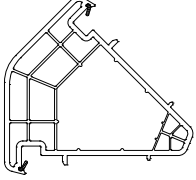

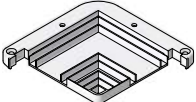
Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Stone sill connection	416135	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 90
	Window sill connection	416139	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 89
	Sill connection	416141	6 m	Colourful	-	Chapter 3 Page 88
	Sill connection	416142	6 m	PW	-	Chapter 3 Page 90
	Window sill connection	416147	6.5 m	PW; BR; GL	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 89
	Window sill connection	416148	6.5 m	PW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 89
Window sill						
	Window sill	426100	6.5 m	PW; SW; BR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 91
Couplings						
	Coupling profile	406255	6 m	PW; SW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 92

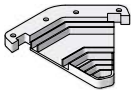
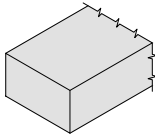
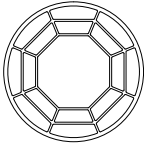
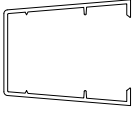
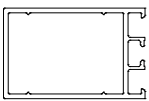


Side profiles, accessories

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Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Coupling spring	414915	150 m / roll	Black, grey	-	Chapter 3 Page 92
	Coupling profile	426200	6.5 m	PW; SW	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 92
Static couplings						
	Static coupling	405155	6 m	Steel, galvanised	-	Chapter 3 Page 94
	Static coupling	405165	6 m	Steel, galvanised	-	Chapter 3 Page 94
	Static coupling	405175	6 m	Steel, galvanised	-	Chapter 3 Page 94
	Cover cap with gaskets	406280	6 m	PW	-	Chapter 3 Page 96
	Pattern cover cap without gasket	406281	6 m	PW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 97
	Cover cap with gaskets	406285	6 m	PW; SW	-	Chapter 3 Page 96
	Pattern cover cap without gasket	406286	6 m	PW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 97
	Cover cap with gaskets	406290	6 m	PW	-	Chapter 3 Page 96
	Pattern cover cap without gasket	406295	6 m	PW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 97
	Distancer	407055	100 pc.	-	-	Chapter 3 Page 95
	Shear connector	407540	1 pc.	Steel, galvanised	-	Chapter 3 Page 95

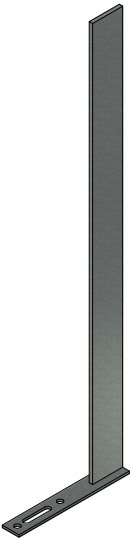
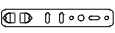


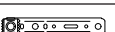





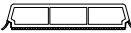
Side profiles, accessories

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Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Shear connector	407575	1 pc.	Steel, galvanised	-	Chapter 3 Page 95
	Coupling profile	416264	6 m	PW	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 93
	Spacer	416265	100 pc.	White	-	Chapter 3 Page 93
	Coupling profile	416267	6 m	White	-	Chapter 3 Page 93
	Spacer	416268	100 pc. / 50 mm	White	-	Chapter 3 Page 93
	Coupling steel	VS0150	6 m	Steel, galvanised	-	Chapter 3 Page 93
	Cover profile	ZF2110	Upon request	PW	<input type="checkbox"/> <input type="checkbox"/> l	Chapter 3 Page 93
Corner connections						
	Corner connection profile, 90°	416210	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l <input type="checkbox"/>	Chapter 3 Page 98
	Corner connection profile, 135°	416240	6 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/> l <input type="checkbox"/>	Chapter 3 Page 99
	Corner connection, variable	416251	6 m	PW; GL	<input type="checkbox"/> <input type="checkbox"/> l <input type="checkbox"/>	Chapter 3 Page 100
	Cover cap	417210	30 pc.	PW; BR	-	Chapter 3 Page 98

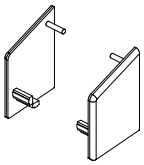


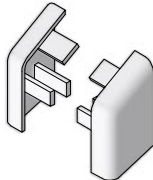
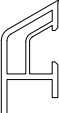
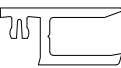
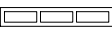
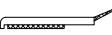

Side profiles, accessories

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Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Cover cap	417240	30 pc.	PW; BR	-	Chapter 3 Page 99
	Insulation strip	417810	1 m / 100 pc.	-	-	Chapter 3 Page 98
	Corner connection, variable	NP0160	6 m	PW	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 100
Static profiles (pilaster strips)						
	Attachment frame	406271	6.5 m	PW; SW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 101
	Sheathing profile	416269	6.5 m	PW; SW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 102
	Cover profile	416311	6.5 m	PW; SW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 102
Fixings						
	Fixed iron	407570	1 pc.	Steel, galvanised	-	Chapter 3 Page 104




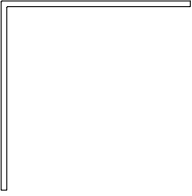
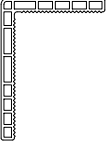
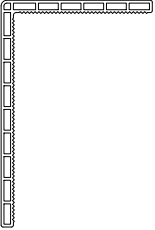



Side profiles, accessories

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Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Fixed iron	407571	1 pc.	Steel, galvanised	-	Chapter 3 Page 104
	Wall anchor	417540	250 pc.	Galvanised	-	Chapter 3 Page 103
	Wall anchor	417545	150 pc.	Galvanised	-	Chapter 3 Page 103
	Wall anchor	417548	250 pc.	Galvanised	-	Chapter 3 Page 103
	Wall anchor	417550	250 pc.	Galvanised	-	Chapter 3 Page 103
Glazing bars, self-adhesive						
	Glazing bar, self-adhesive	416302	5 m	PW+s; PW+g; SW+s; SW+g; BR+s; AN+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 105
	Glazing bar, self-adhesive	416304	5 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 105
	Glazing bar, self-adhesive	416306	5 m	PW+s; PW+g; SW+s; SW+g	-	Chapter 3 Page 105
	Glazing bar, self-adhesive	416322	5 m	PW+s; PW+g; SW+s; SW+g; BR+s; AN+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 105
	Glazing bar, self-adhesive	416324	5 m	PW+s; PW+g; SW+s; SW+g; BR+s	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 105
	Glazing bar, self-adhesive	416326	5 m	PW+s; PW+g; SW+s; SW+g	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 105

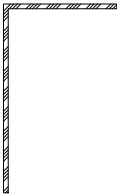
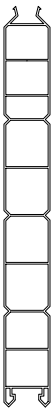

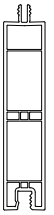
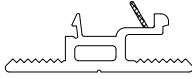
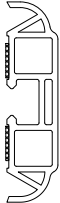

Side profiles, accessories

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Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
Weather profile strip						
	End caps	ES0220	200 pc.	Black	-	Chapter 3 Page 106
	Clamp-strip	NP1940	6 m	Colourful	-	Chapter 3 Page 106
	Weather profile strip	NP0220	6 m	PW; CA	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 106
	End caps	SG1940	200 pc.	PW; CA; BR	-	Chapter 3 Page 106
	Weather profile strip	ZF1940	6 m	PW; CA; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 106
Cladding profiles						
	Adapter for cladding	406307	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 116
	Trim profile	406310	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114
	Self-adhesive trim profile	406312	6 m	PW; BR; AN; CR; GL	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114
	Self-adhesive trim profile	406315	6 m	PW; BR; AN; CR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114
	Trim profile	406316	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 110

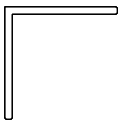






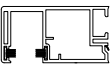
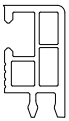

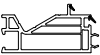




Side profiles, accessories

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Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Self-adhesive trim profile	406317	6 m	PW; SW; CA; BR	-	Chapter 3 Page 114
	Corner-bracket	406319	6 m	PW; SW; BR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 110
	Corner-bracket	406320	6 m	PW; SW; BR; CR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 110
	Corner-bracket	406321	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 110
	Old building angle	406325	6 m	PW; BR; CR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 109
	Old building angle	406329	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 109
	Cover	406340	6 m	PW; SW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 112
	Clip profile	406391	6 m	-	-	Chapter 3 Page 116
	Cover beading	406410	200 m	-	-	Chapter 3 Page 116









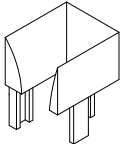
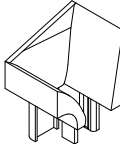
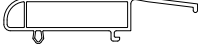

Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Pattern old building corner aluminium	406660	6 m	Aluminium brown (powder-coated)	<input type="checkbox"/>	Chapter 3 Page 109
	Panel profile	406670	6 m	PW; SW; BR; CR	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 108
	Cover profile	416182	6.5 m	PW; SW; BR; CR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 116
	Filling panel	416274	5.8 m	SW	Upon enquiry	Chapter 3 Page 108
	Adapter	416305	6 m	Colourful	-	Chapter 3 Page 109
	Trim profile, self-adhesive	416312	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 113
	Cover profile, self-adhesive	416327	6 m	PW; SW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114

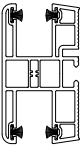
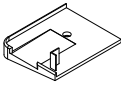
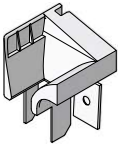
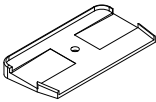
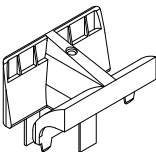
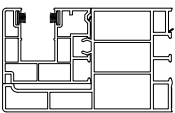


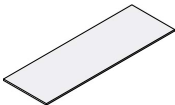
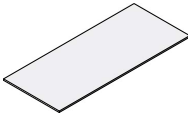
Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Corner-bracket	416330	5.8 m	SW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 110
	Trim profile	416331	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114
	Adhesive tape	416332	6 m	Black	-	Chapter 3 Page 114
	Cover profile, self-adhesive	416337	6 m	PW; SW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114
	Trim profile	416338	6 m	PW, BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114
	Adhesive tape	416339	6 m	Black	-	Chapter 3 Page 114
	Cover profile, self-adhesive	416357	6 m	PW; SW; BR; GL	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 114
	Tapee	416386	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 107
	Snap-on profile	466400	6.5 m	PW; BR	-	Chapter 3 Page 112
	Cladding	550800	6.5 m	PW; SW; CA; BR; CR; GL	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 117
	Cladding	550801	6.5 m	PW; SW; CA; BR; CR; GL	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 117
	Panel strip	553424	6.5 m	PW; SW; CA; BR; CR; GL	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 117
	End caps	ES8250	50 pc.	White; Caramel; Brown	-	Chapter 3 Page 113
	Beading	NP0060	300 m	White; Caramel; Brown; Light grey	-	Chapter 3 Page 116
	Beading	NP8000	300 m	White; Caramel; Brown	-	Chapter 3 Page 116

Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Inside right-angled profile	NP8250	6.5 m	PW; SW; BR; GL	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 113
Roller shutter accessories						
	Roll-off slat	406050	6 m	PW	-	Chapter 3 Page 119
	Roller shutter cross bar	406051	6 m	PW; BR	-	Chapter 3 Page 118
	Cover connection	406053	6 m	PW; CA; BR	-	Chapter 3 Page 118
	Roller shutter guide	406065	6 m	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 119
	Reinforcement	406066	6 m	PW; BR	-	Chapter 3 Page 119
	Roller shutter guide	406073	6 m	PW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 120
	Reinforcement	406081	6 m	PW	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 121
	Inlet funnel	407065	50 pairs	PW; BR	-	Chapter 3 Page 119
	Inlet funnel	407070	50 pairs	PW	-	Chapter 3 Page 120
	Roller shutter cross bar	416056	6.5 m	PW; AN	-	Chapter 3 Page 118
	Roller shutter guide	416086	6 m	PW; CA; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 121









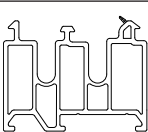




Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Double roller shutter guide	416096	6 m	PW; CA; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 122
	End cap	417081	50 pairs	White; Caramel; Brown	-	Chapter 3 Page 121
	Inlet funnel	417082	50 pairs	PW; CA; BR	-	Chapter 3 Page 121
	End cap	417095	30 pc.	White; Caramel; Brown	-	Chapter 3 Page 122
	Inlet funnel	417096	30 pc.	PW; BR	-	Chapter 3 Page 122
	Adapter profile with roller shutter guide and brush	556070	6.5 m	PW; SW; BR; AN	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 123
	Roll-off profile	556075	6 m	PW; BR; black	-	Chapter 3 Page 123
	Inlet funnel	557170	50 pairs	PW; BR	-	Chapter 3 Page 123
Panels						
	PVC panel	407912	1 pc.	PW	-	Chapter 3 Page 124
	Laminate board	407914	1 pc.	PW; BR	<input type="checkbox"/> <input type="checkbox"/>	Chapter 3 Page 124

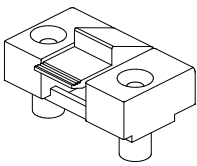

Side profiles, accessories

Colour base body:		PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite					
Colour seal:		s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop)					
Décor:		□ = without		□ = on both sides		□ = outside	□ = inside
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page	
	Sandwich panel	407920	1 pc.	PW; CR	□ □ □	Chapter 3 Page 124	
Drilling templates							
	Drilling jig for mounting holes	417008	1 pc.	-	-	Chapter 3 Page 127	
	Drilling jig	427002	1 pc.	-	-	Chapter 3 Page 125	
	Drilling jig	427003	1 pc.	-	-	Chapter 3 Page 125	
	Drilling jig	427004	1 pc.	-	-	Chapter 3 Page 125	
	Drilling template threshold	427041	1 pc.	-	-	Chapter 3 Page 126	
	Drilling template threshold	427042	1 pc.	-	-	Chapter 3 Page 126	
	Drilling template threshold	427043	1 pc.	-	-	Chapter 3 Page 126	
Miscellaneous accessories							
	Kick plate	216615	6 m	E6/EV1; aluminium	-	Chapter 3 Page 128	
	Kick plate	216620	6 m	E6/EV1; aluminium	-	Chapter 3 Page 128	
	Clamp-strip PVC	406335	30 m	Colourful	-	Chapter 3 Page 107	

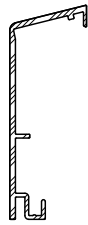
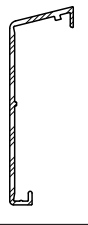
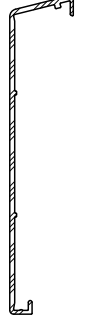
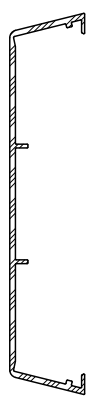
Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Clamp-strip aluminium	406635	6 m	Aluminium	-	Chapter 3 Page 107
	Pipe cap	407025	100 pc.	PW; CA; BR	-	Chapter 3 Page 130
	APTK adhesive	407710	1 pc.	-	-	-
	Adhesive Fenoplast KF (for white profiles)	407720-000 edition	1 pc.	-	-	Chapter 3 Page 106
	Fenoplast PMMA (for pattern profiles)	407725-000	1 pc.	-	-	Chapter 3 Page 106
	Fenoplast PMMA (for white profiles)	407730-000	1 pc.	-	-	Chapter 3 Page 106
	Snap-in head screw	407900	1000 pc.	Galvanised	-	Chapter 3 Page 106
	Snap-in head screw	407965	500 pc.	Galvanised	-	Chapter 3 Page 119
	Transport protection profile	416000	6.5 m	Colourful	-	Chapter 3 Page 131
	Kick plate	416615	6 m	E6/EV1; aluminium	-	Chapter 3 Page 129
	Kick plate	416616	6 m	E6/EV1; aluminium	-	Chapter 3 Page 129
	Water slot cap	417025	200 pc.	PW; CA; AN; BR	-	Chapter 3 Page 130
	Sash-supporter component	447015	Upon request	Upon request	-	Chapter 3 Page 130

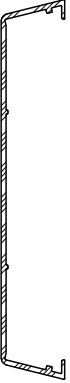
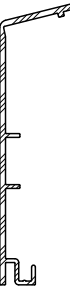
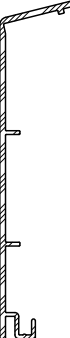
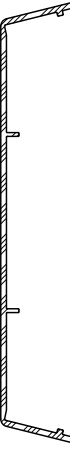
Side profiles, accessories

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Fixed glazing clip	ES1010	50 pc.	White	-	Chapter 3 Page 130
	Snap-in head screw	MZ1200	500 pc.	Galvanised	-	Chapter 3 Page 106

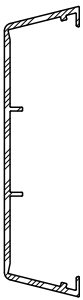




Aluminium cover profiles

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
Aluminium cover profiles						
	Aluminium cover profile	429001	Upon request	-	-	Chapter 3 Page 132
	Aluminium cover profile	429002	Upon request	-	-	Chapter 3 Page 135
	Aluminium cover profile	429003	Upon request	-	-	Chapter 3 Page 136
	Aluminium cover profile	429004	Upon request	-	-	Chapter 3 Page 137

Aluminium cover profiles

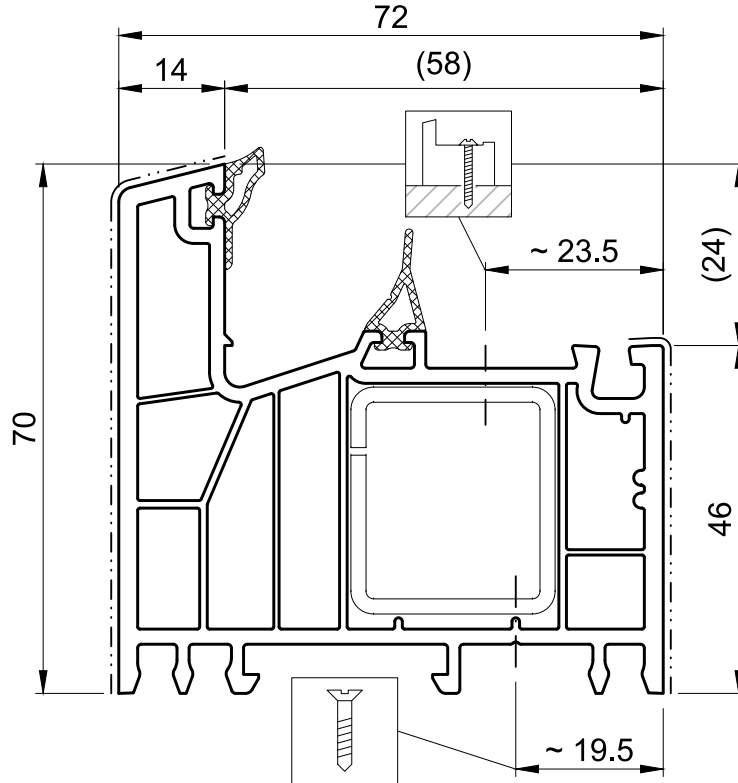
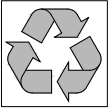
Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Aluminium cover profile	429005	Upon request	-	-	Chapter 3 Page 138
	Aluminium cover profile	469001	Upon request	-	-	Chapter 3 Page 133
	Aluminium cover profile	469002	Upon request	-	-	Chapter 3 Page 134
	Aluminium cover profile	469013	Upon request	-	-	Chapter 3 Page 139

Aluminium cover profiles

Colour base body: PW = pureWhite; CA = caramel; BR = brown; AN = anthracite, CR = cream; GL = Greta@Fenster_loop SW = solidWhite Colour seal: s = black; g = grey; l = light grey (suitable with Greta@Fenster_loop) Décor: <input type="checkbox"/> = without <input type="checkbox"/> = on both sides <input type="checkbox"/> = outside <input type="checkbox"/> = inside						
Illustration	Description	Article no.	Length / PU	Colour main body+colour gasket	Pattern	From page
	Aluminium cover profile	469015	Upon request	-	-	Chapter 3 Page 140
Gaskets						
	Stopper gasket	DP2720	100 m	Black, grey	-	Gaskets Floating-mullion end cover cap Distance compensation
	Glazing gasket	DP2730	100 m	Black, grey	-	Gaskets Floating-mullion end cover cap Distance compensation
Floating-mullion end cover cap, distance compensation						
	Floating-mullion end cover cap for aluminium cover profiles	467025	50 pc.	White; Cream; Caramel; Brown; Black	-	Gaskets Floating-mullion end cover cap Distance compensation
	Distance compensation	MT9080	1000 pc.	Black	-	Gaskets Floating-mullion end cover cap Distance compensation

Frame MD 70 5K B

720004



Accessories (not to scale)

Reinforcement

Reinforcement

Reinforcement

Glazing bridge

Aluminium cover profile

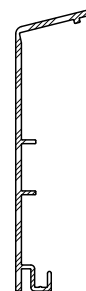
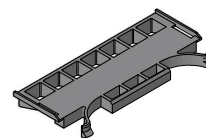
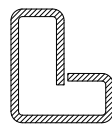
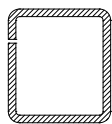
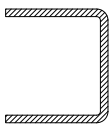
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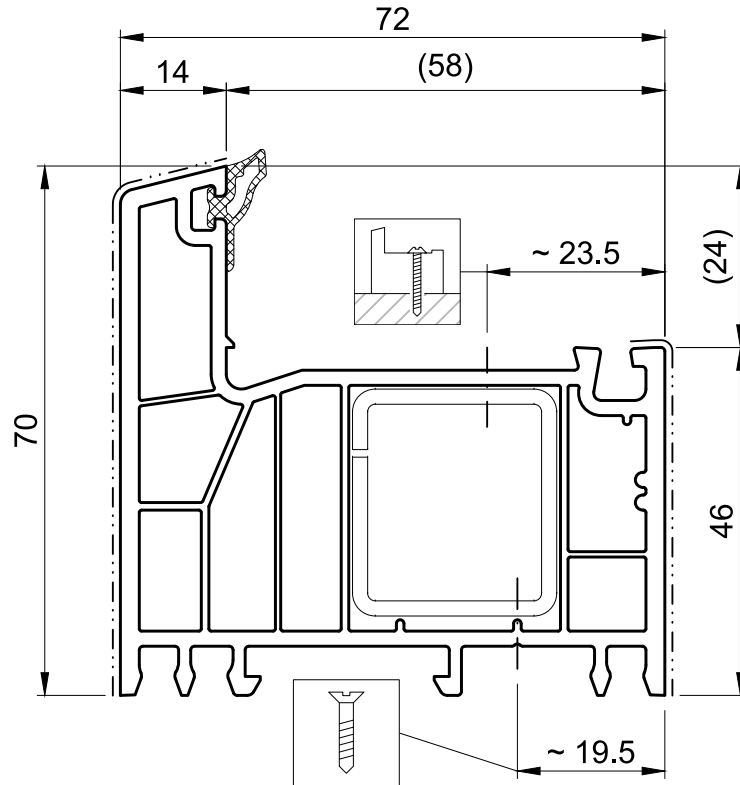
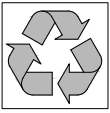
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465011

417003

469001





Accessories (not to scale)

Reinforcement

Reinforcement

Reinforcement

Glazing bridge

Aluminium cover profile

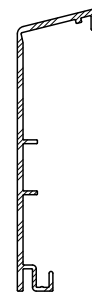
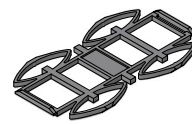
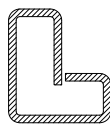
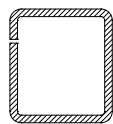
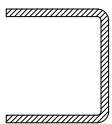
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465002

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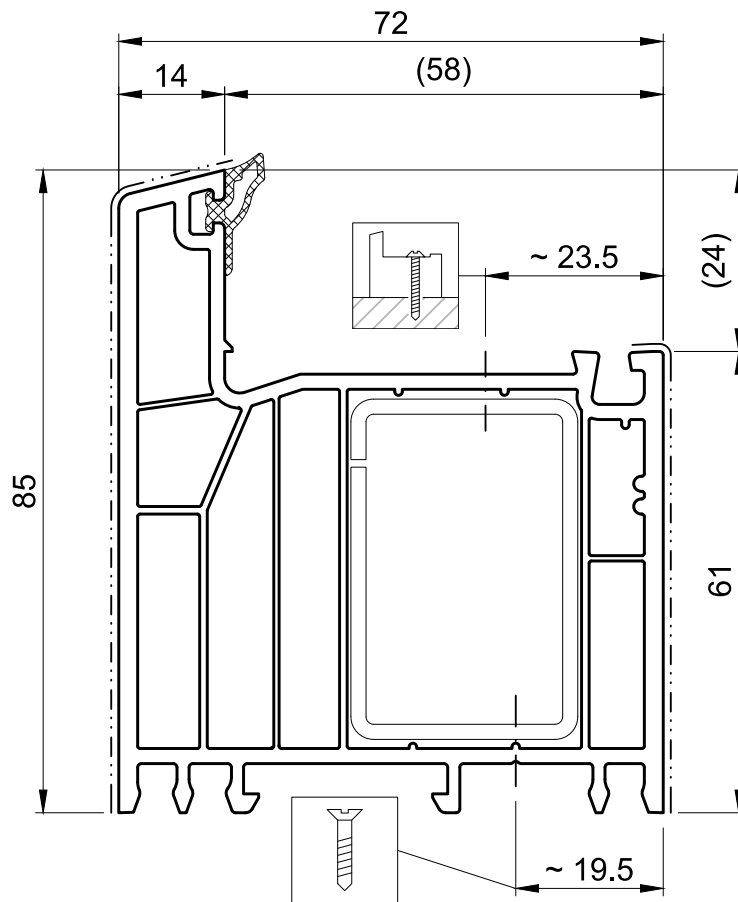
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469001



Frame AD 85 5K B

720023



Accessories (not to scale)

Reinforcement

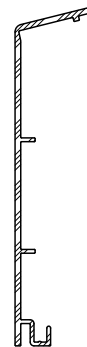
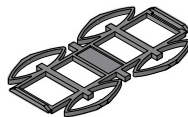
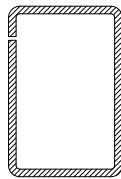
Glazing bridge

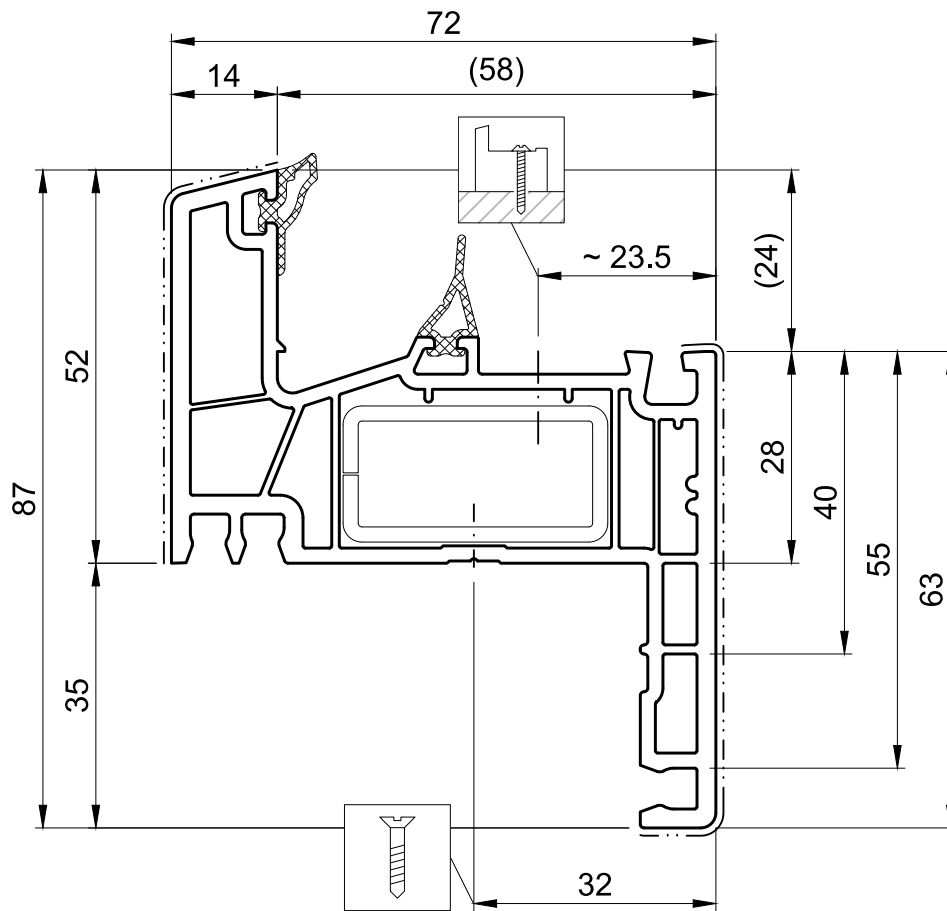
Aluminium cover profile

425002


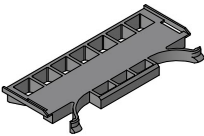

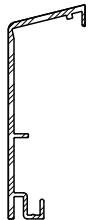
417000

469002





Accessories (not to scale)

Reinforcement	Glazing bridge	Groove cover gasket	Aluminium cover profile
445020	417003	464103	429001
			

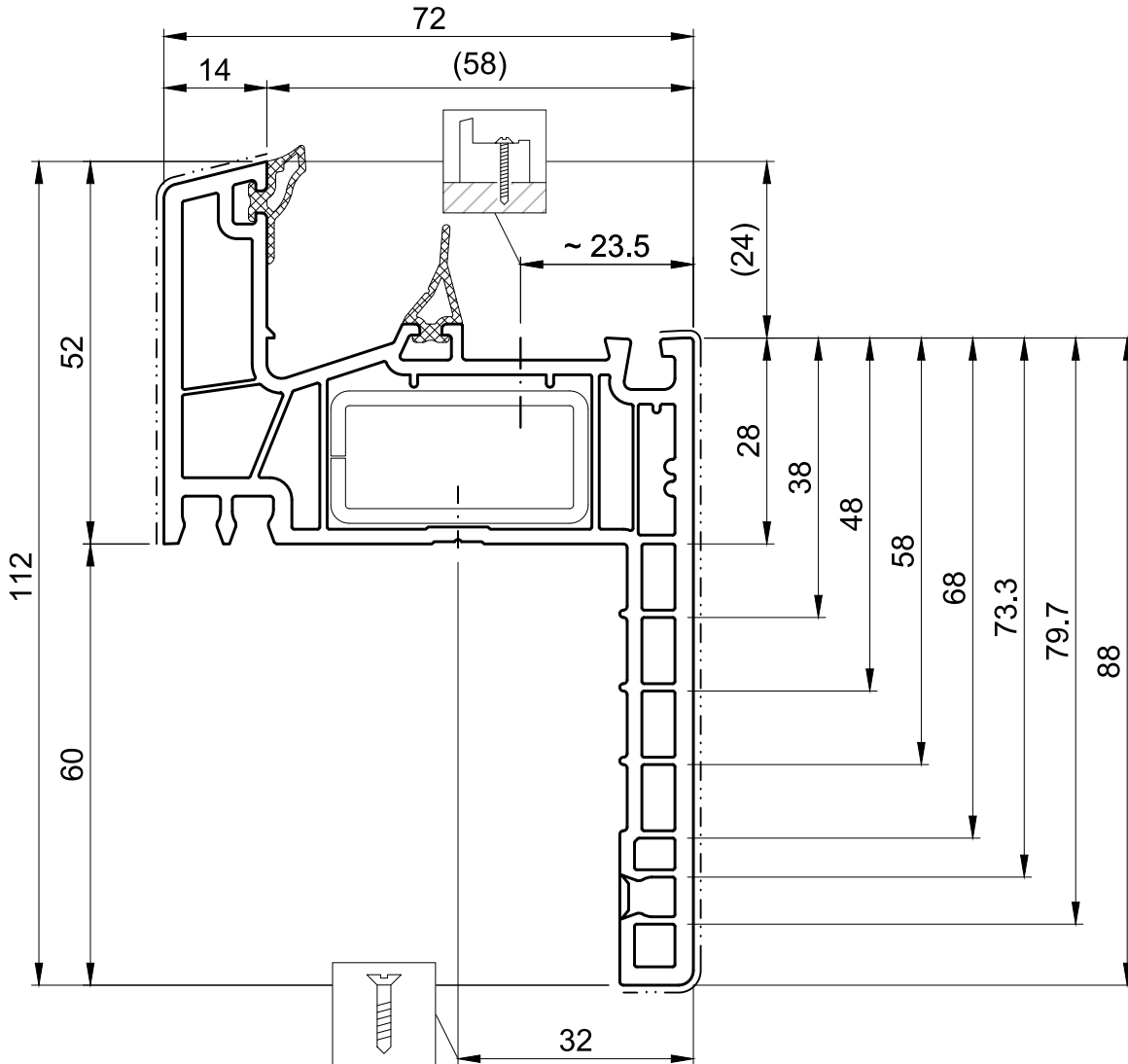
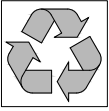
i INFO

For AD, the groove cover gasket 464103 can be inserted into the gasket groove.

- ▶ Remove central gasket on MD.
- ▶ Insert groove cover gasket into the gasket groove.

Old building frame MD 112 5K B

720024



Accessories (not to scale)

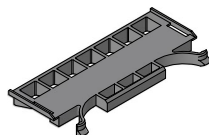
Reinforcement

445020



Glazing bridge

417003



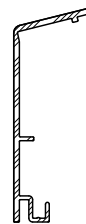
Groove cover gasket

464103



Aluminium cover profile

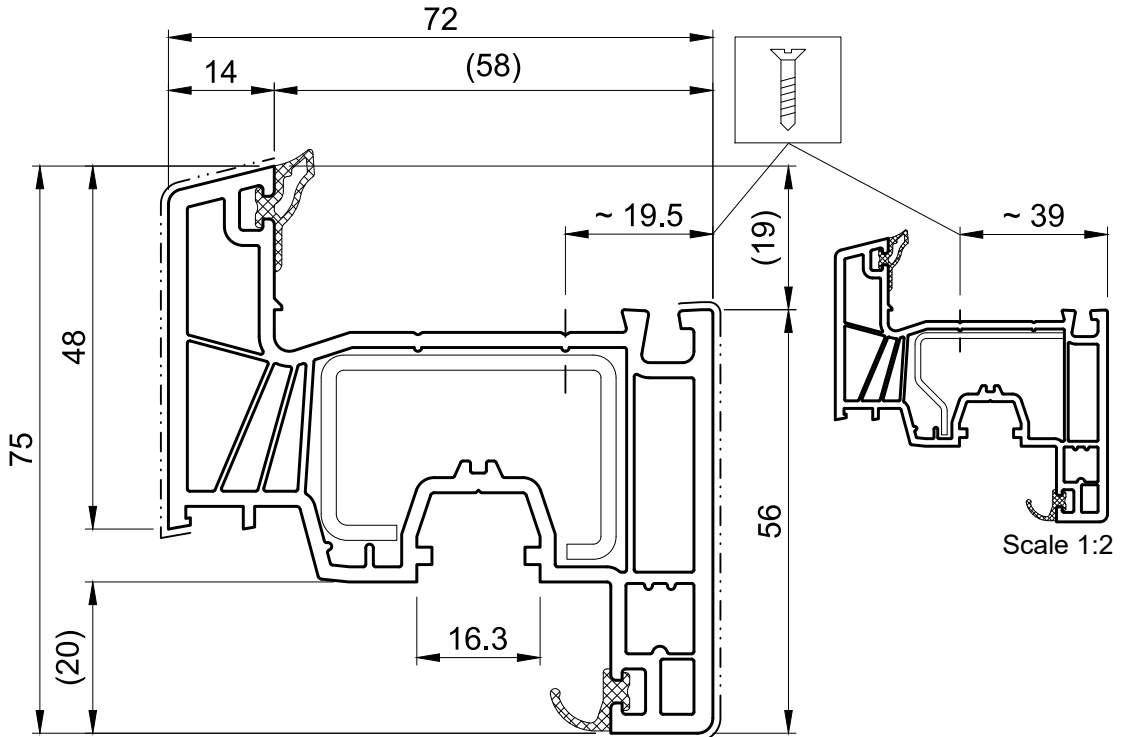
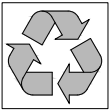
429001



i INFO

For AD, the groove cover gasket 464103 can be inserted into the gasket groove.

- ▶ Remove central gasket on MD.
- ▶ Insert groove cover gasket into the gasket groove.

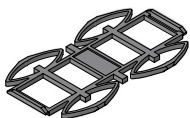


i INFO

Distance of the steel screw connection of ~ 39 mm with strengthening 465026.

Accessories (not to scale)

Reinforcement	Reinforcement	Reinforcement	Rebate reinforcement	Aluminium cover profile
465001	465006	465026	425022	429002
Glazing bridge 417000				

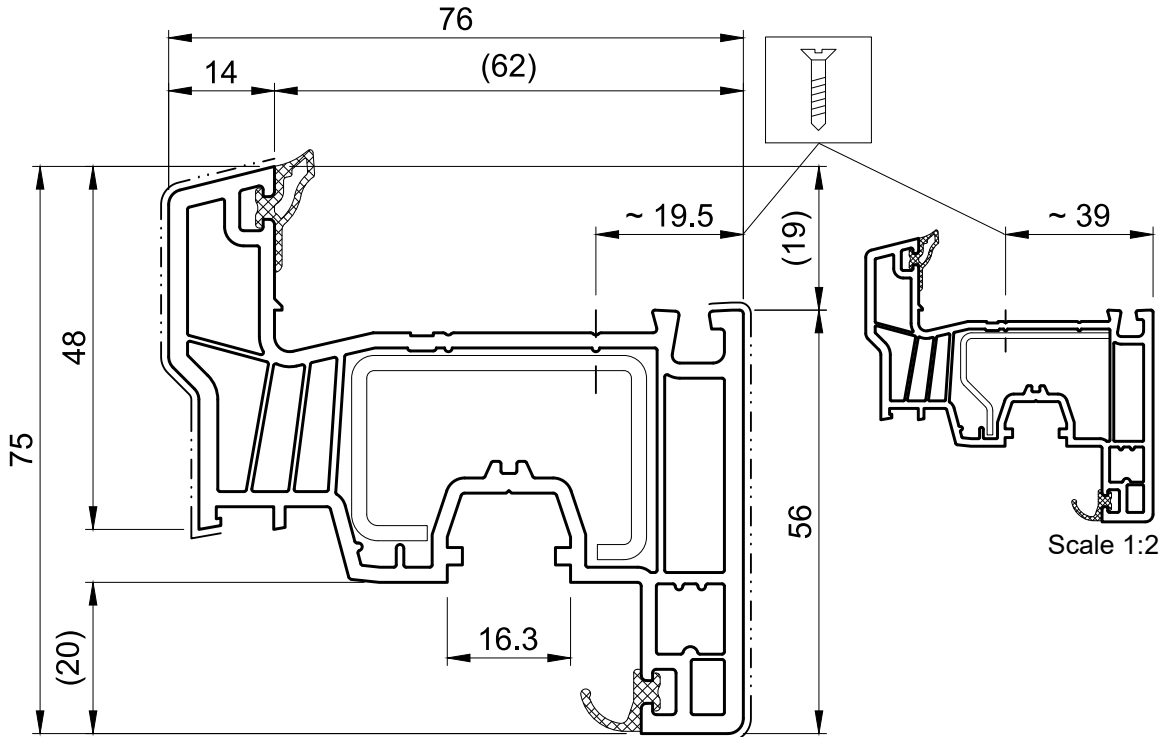
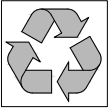


i INFO

The item with the number 465006 is protected by the EU Community design 007776794-0001 to 007776794-0004 of Salamander Industrie-Produkte GmbH; reproductions by third parties which infringe property rights are prohibited.

Sash 75 5K B

721005



i INFO

Distance of the steel screw connection of ~ 39 mm with strengthening 465026.

Accessories (not to scale)

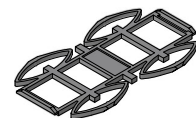
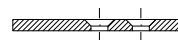
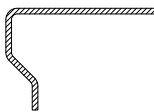
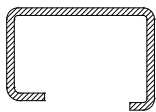
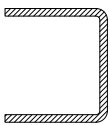
Reinforcement
465001

Reinforcement
465006

Reinforcement
465026

Rebate reinforcement
425022

Glazing bridge
417000

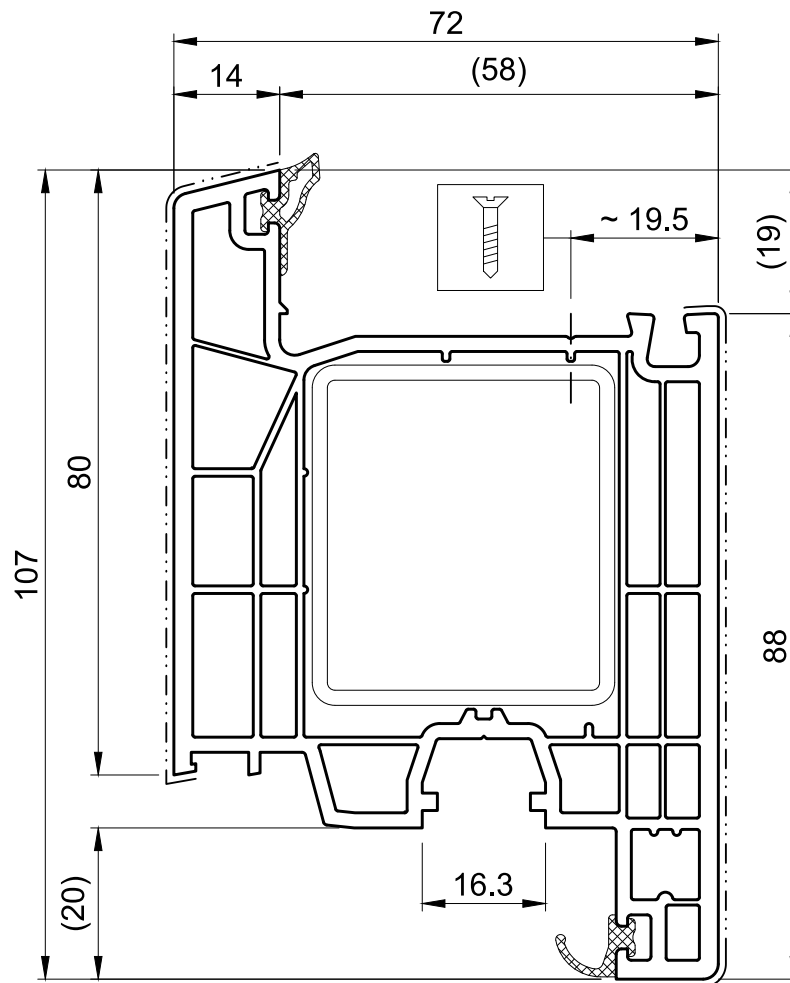


i INFO

The item with the number 465006 is protected by the EU Community design 007776794-0001 to 007776794-0004 of Salamander Industrie-Produkte GmbH; reproductions by third parties which infringe property rights are prohibited.

Sash Max 107 5K B

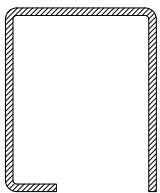
721008



Accessories (not to scale)

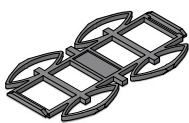
Reinforcement

465017



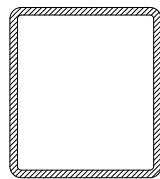
Glazing bridge

417000



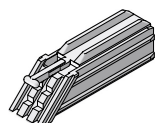
Reinforcement

VS8450



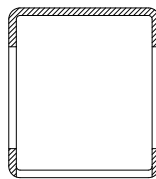
Weldable corner connector

MT8540



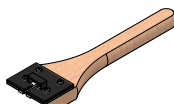
Reinforcement

MT8531



Clamping lever

207910



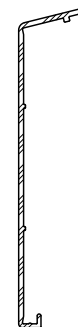
Rebate reinforcement

425022

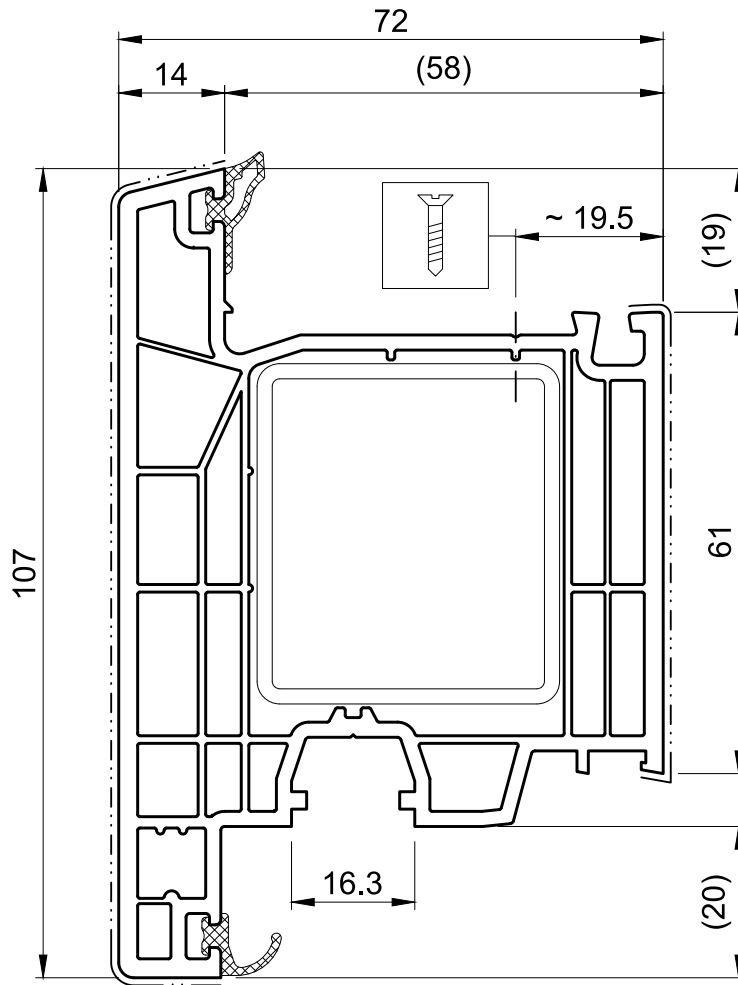


Aluminium cover profile

429003

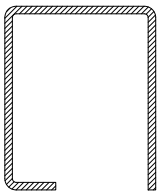


Sash T Max 107 5K B
721009

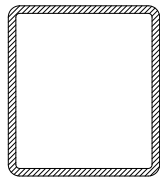


Accessories (not to scale)

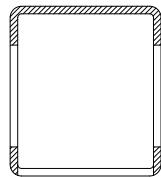
Reinforcement
465017



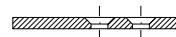
Reinforcement
VS8450



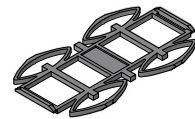
Reinforcement
MT8531



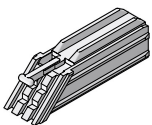
Rebate reinforcement
425022



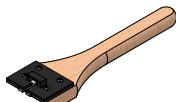
Glazing bridge
417000



Weldable corner connector
MT8540

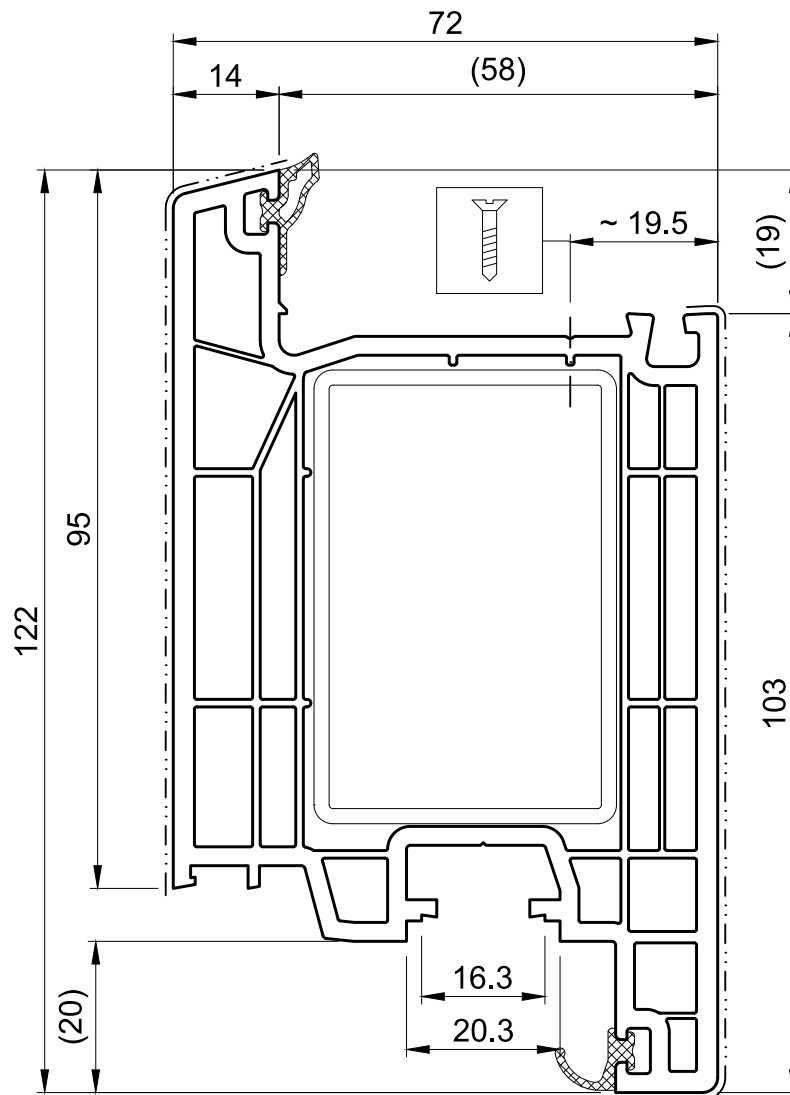


Clamping lever
207910



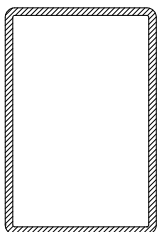
Sash 122 5K A

721014

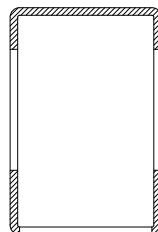


Accessories (not to scale)

Reinforcement
AR4630



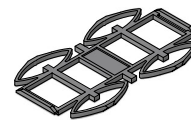
Reinforcement
MT8551



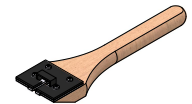
Rebate reinforcement
425022



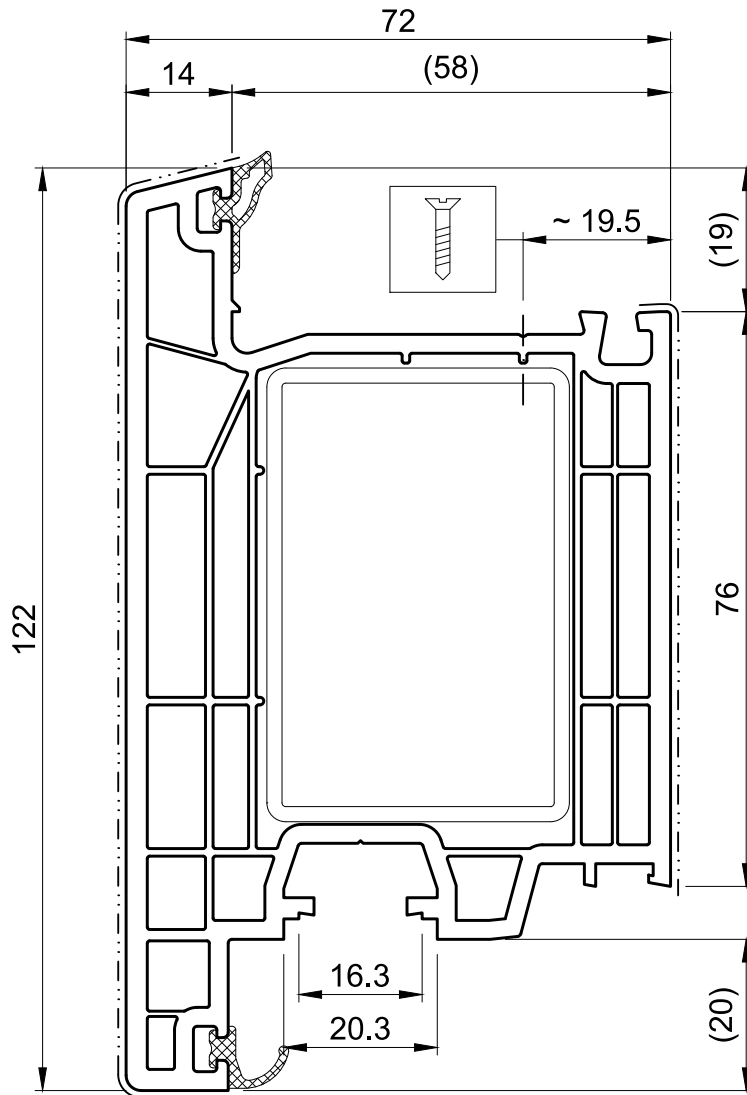
Glazing bridge
417000



Clamping lever
207910

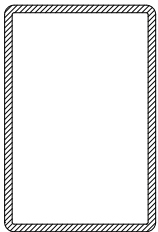


Sash T 122 5K A
721015

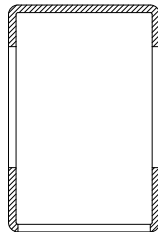


Accessories (not to scale)

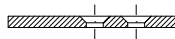
Reinforcement
AR4630



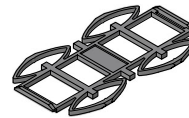
Reinforcement
MT8551



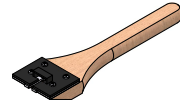
Rebate reinforcement
425022



Glazing bridge
417000

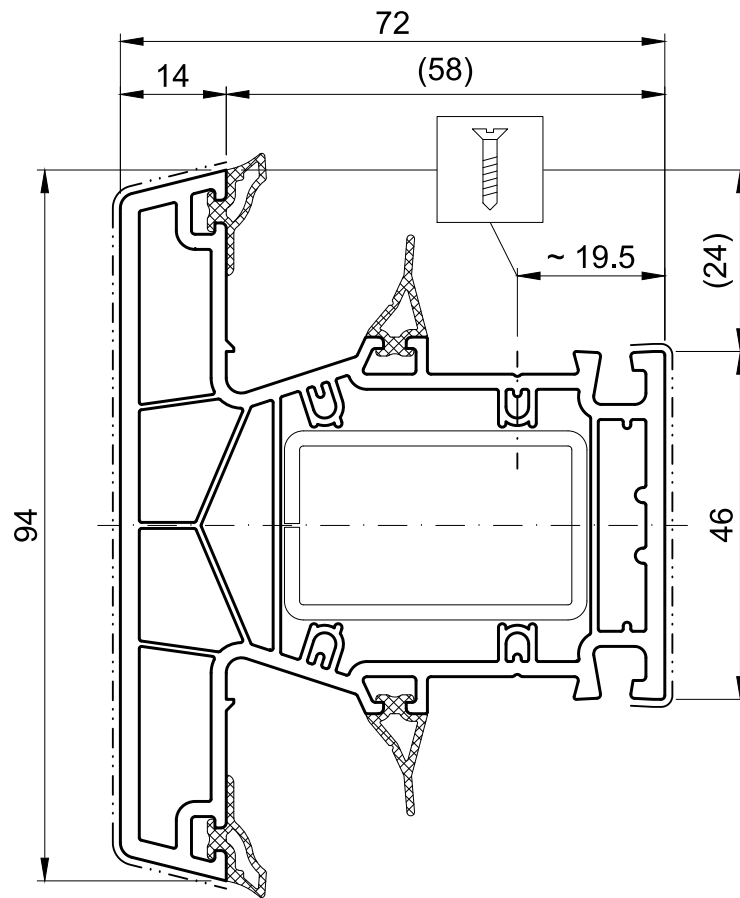


Clamping lever
207910



Fixed mullion MD 94 4K B

722006



Accessories (not to scale)

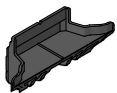
Reinforcement

VS3020



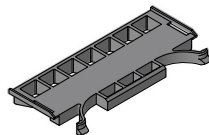
Sealing block

428005



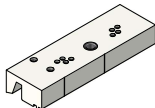
Glazing bridge

417003



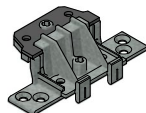
Drilling jig

427004



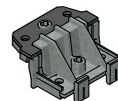
Fixed-mullion cross connector

428006



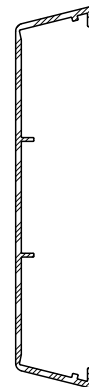
Fixed-mullion connector

428010



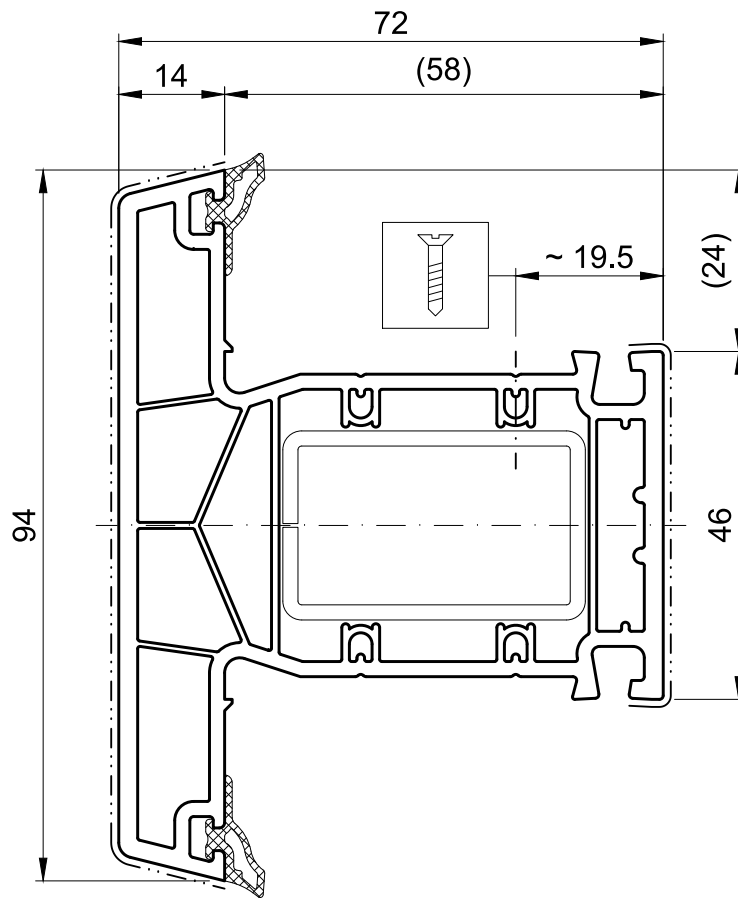
Aluminium cover profile

429004



Fixed mullion AD 94 4K B

722005



Accessories (not to scale)

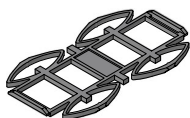
Reinforcement

VS3020



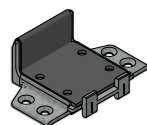
Glazing bridge

417000



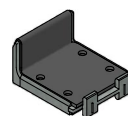
Fixed-mullion cross connector

428004



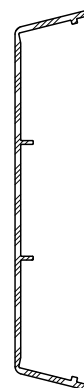
Fixed-mullion connector

428009



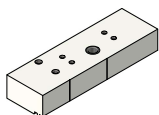
Aluminium cover profile

429004



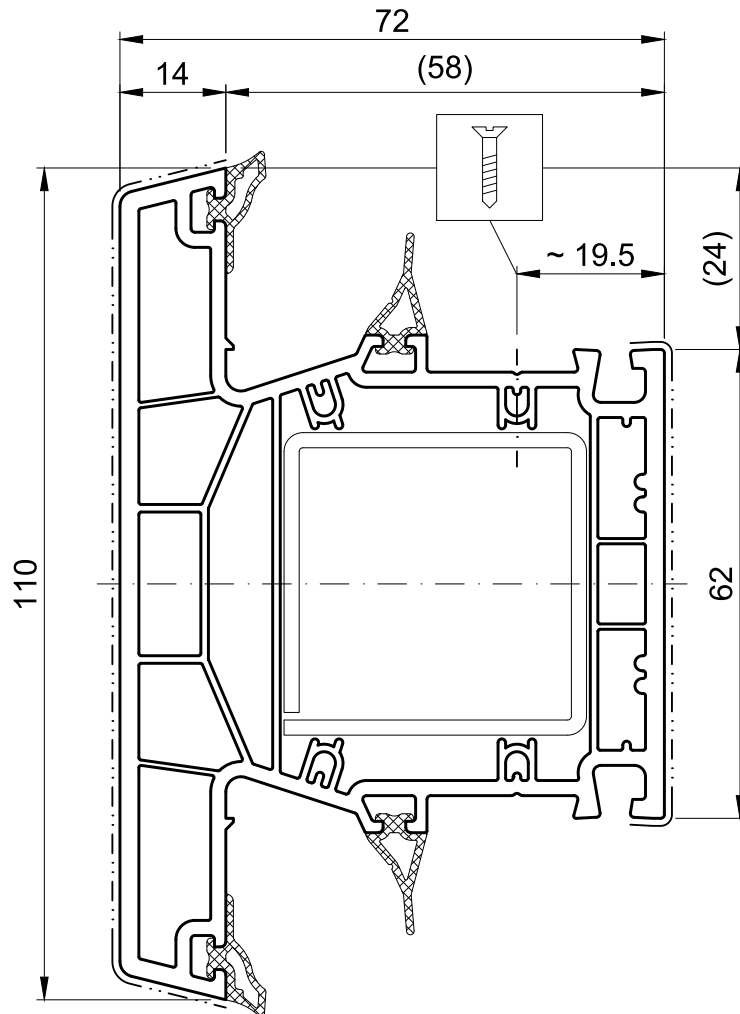
Drilling jig

427003



Fixed mullion MD 110 4K B

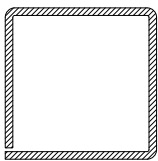
722010



Accessories (not to scale)

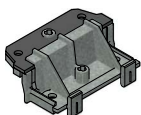
Reinforcement

405060



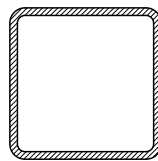
Fixed-mullion connector

428045



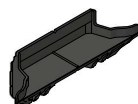
Reinforcement

415040



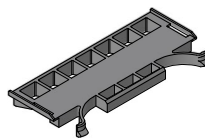
Sealing block

428044



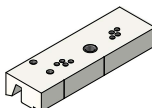
Glazing bridge

417003



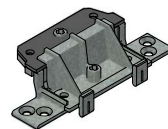
Drilling jig

427004



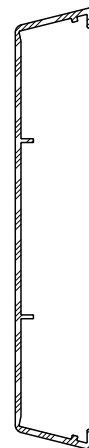
Fixed-mullion cross connector

428041



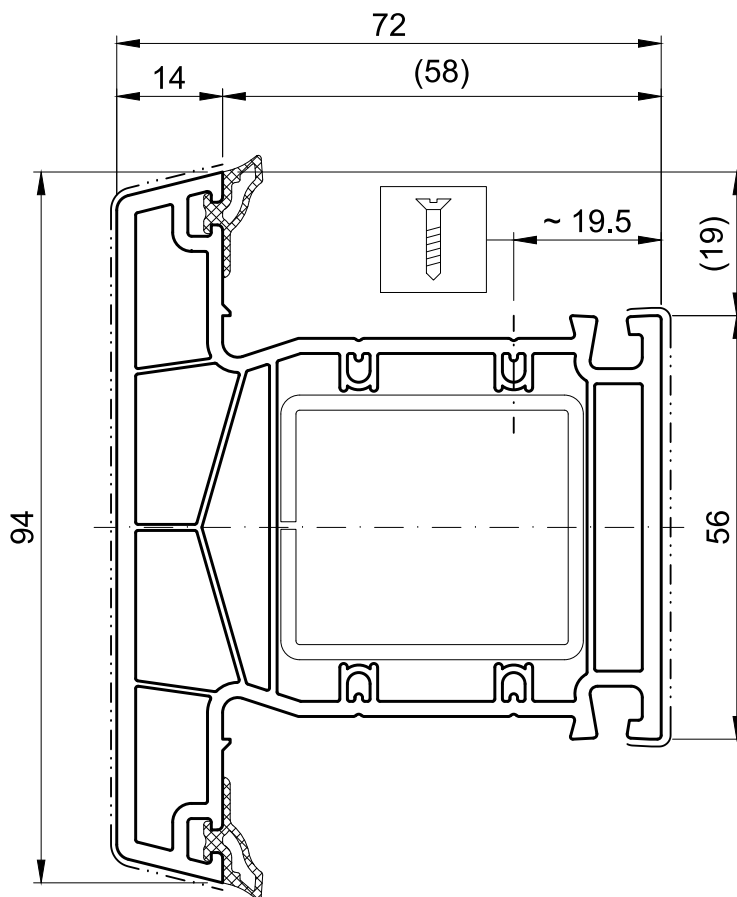
Aluminium cover profile

469013



Glazing bar / mullion Max 94 4K B

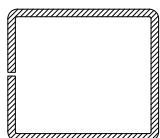
722000



Accessories (not to scale)

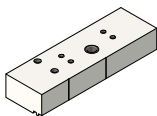
Reinforcement

VS3030



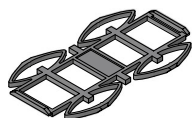
Drilling jig

427002



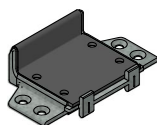
Glazing bridge

417000



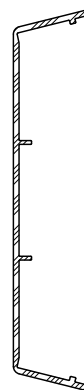
Fixed-mullion connector

428000



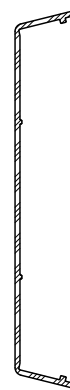
Aluminium cover profile

429004



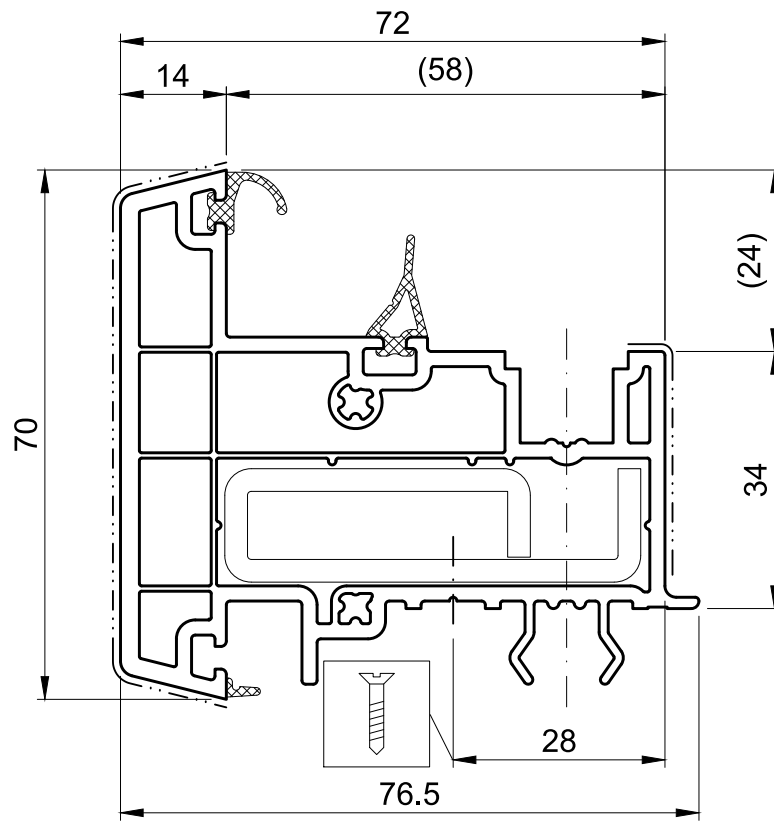
Aluminium cover profile

429005



Floating mullion / faceplate MD 70

726004



Accessories (not to scale)

Reinforcement

Reinforcement

2-piece floating-mullion end cover cap set MD

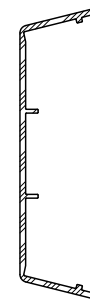
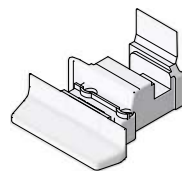
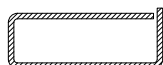
Aluminium cover profile

415136

465013

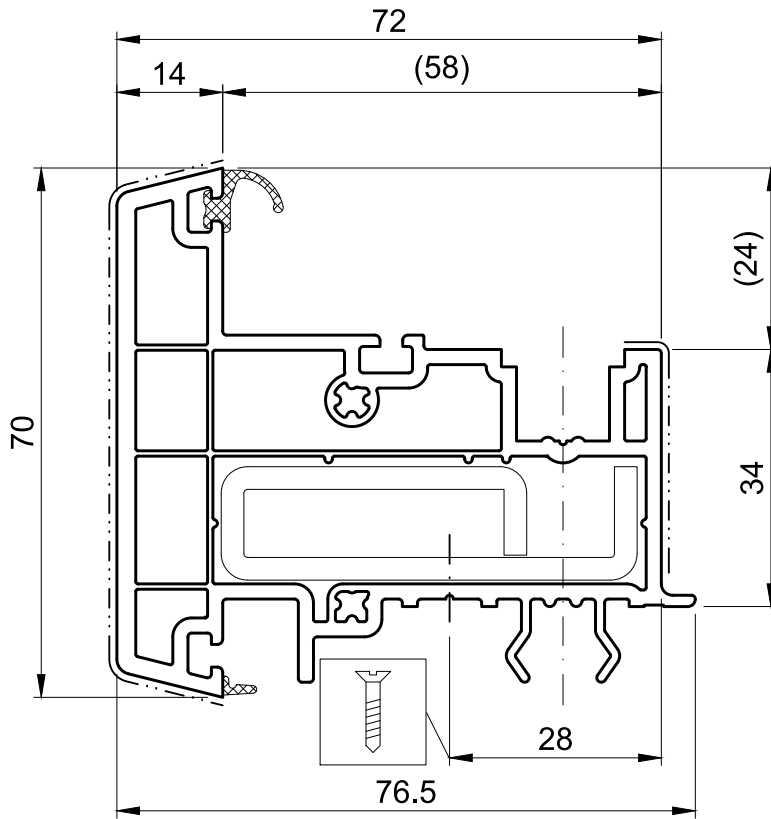
427016

469015



Floating mullion / faceplate AD 70

726003



Accessories (not to scale)

Reinforcement

Reinforcement

Floating-mullion end
cover cap set 2-piece file
AD

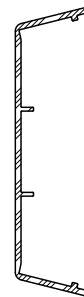
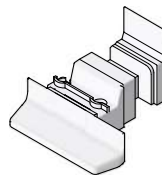
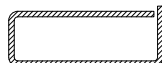
Aluminium cover pro-

415136

465013

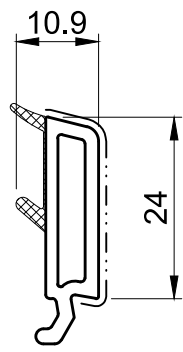
427014

469015

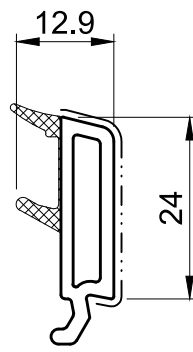


Glazing beads

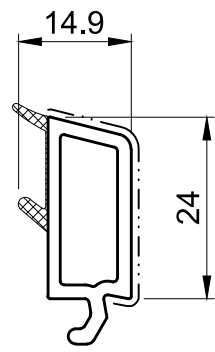
24 mm



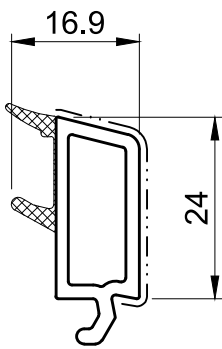
413301



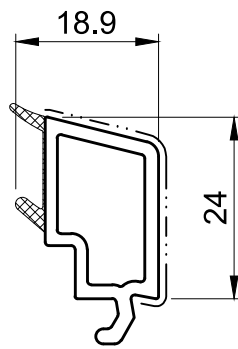
413302



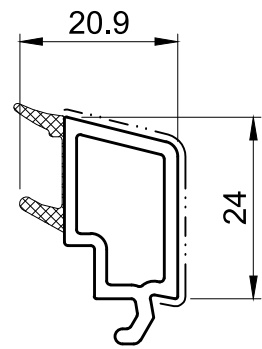
413303



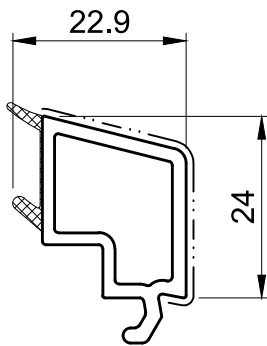
413304



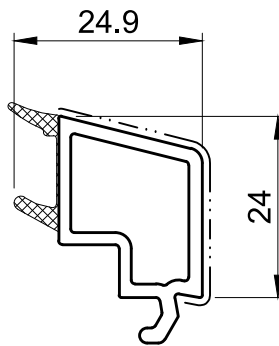
413305



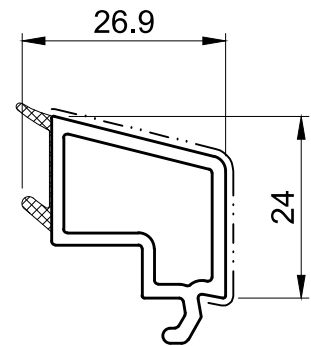
413306



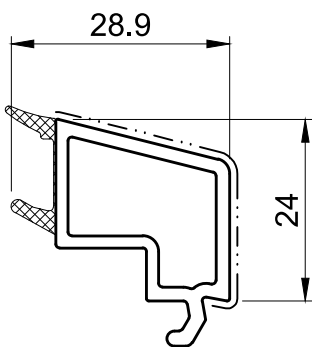
413307



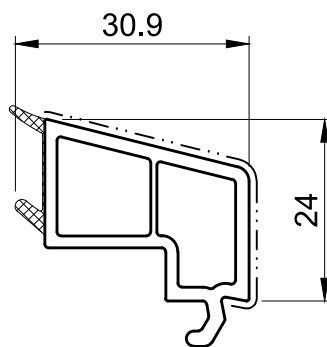
413308



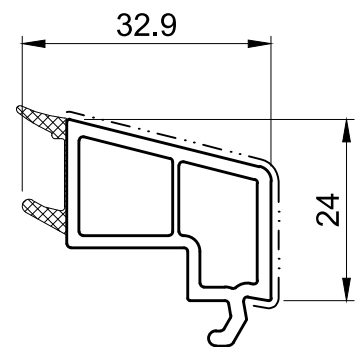
413309



413310



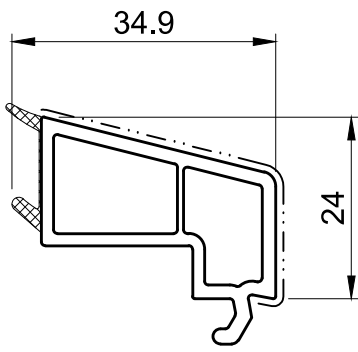
413311



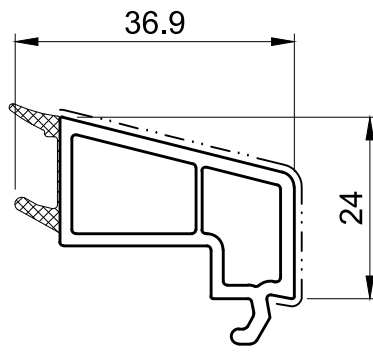
413312

Glazing beads

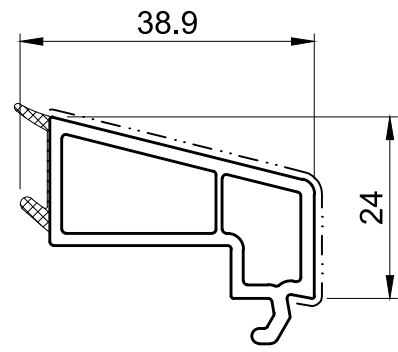
24 mm



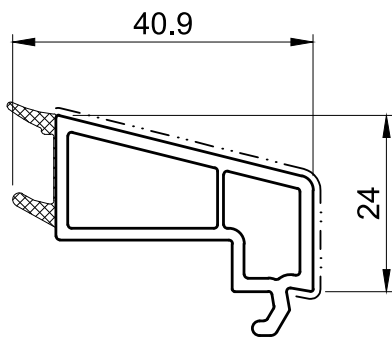
413313



413314



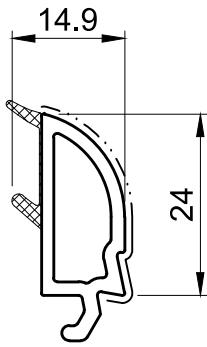
413315



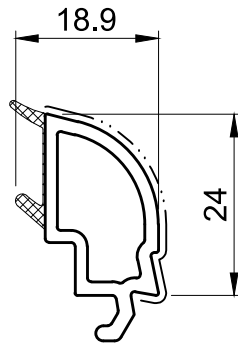
413316

Glazing beads curve

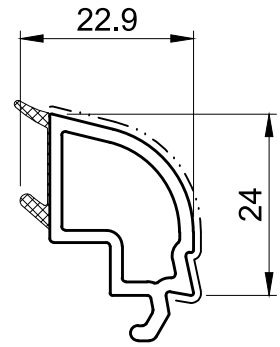
24 mm



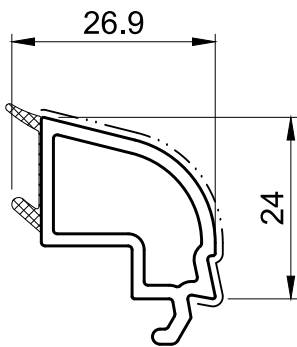
413103



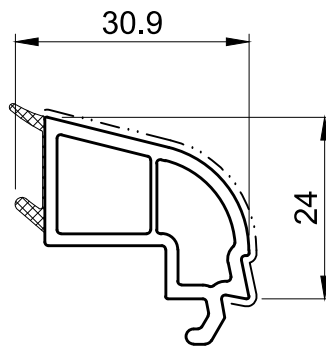
413105



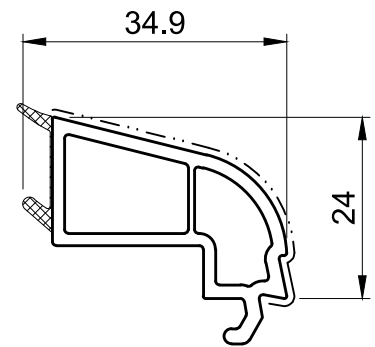
413107



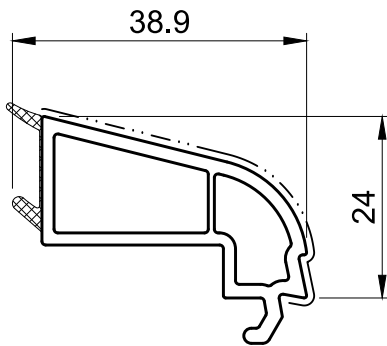
413109



413111



413113



413115

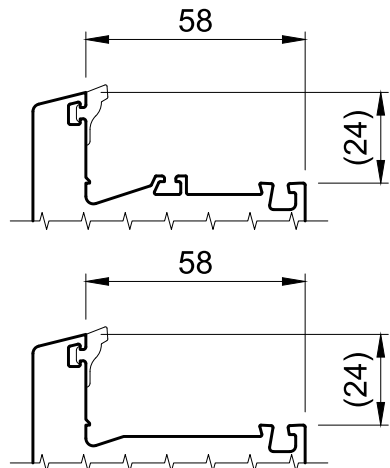
Dry glazing table

24 mm

Frame / Fixed mullion

Glazing beads 24 mm

This table is based on calculated dimensions. Glass thickness tolerances and profile tolerances have not been taken into consideration. A glazing test must be performed before glazing.



Frames
720003, 720004, 720022, 720023,
720024

Fixed mullions
722005, 722006, 722010

Glass thickness in mm

Glazing beads 24 mm	Glass thickness in mm	
	WD (A) (D)	(E)
 413301	43 - 44 - 45	41 - 42 - 43
 413302	41 - 42 - 43	39 - 40 - 41
 413103	39 - 40 - 41	37 - 38 - 39
 413303	39 - 40 - 41	37 - 38 - 39
 413304	37 - 38 - 39	35 - 36 - 37
 413105	35 - 36 - 37	33 - 34 - 35
 413305	35 - 36 - 37	33 - 34 - 35
 413306	33 - 34 - 35	31 - 32 - 33
 413107	31 - 32 - 33	29 - 30 - 31
 413307	31 - 32 - 33	29 - 30 - 31
 413308	29 - 30 - 31	27 - 28 - 29

- (WD) = Gasket fitted ex-works
- (A) = 464100 PVC-P
- (D) = 414566 EPDM
- (E) = 414573 EPDM

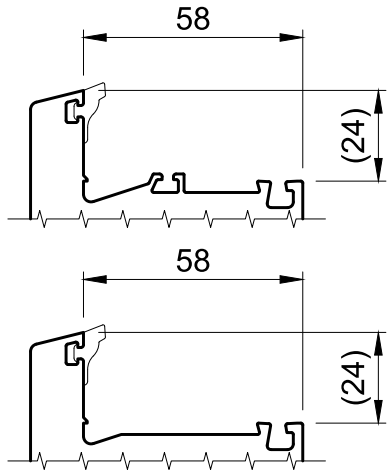
Dry glazing table

24 mm

Frame / Fixed mullion

Glazing beads 24 mm





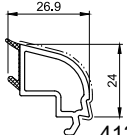
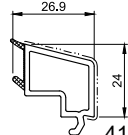
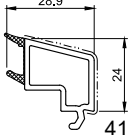
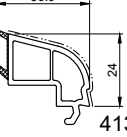
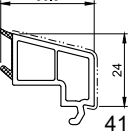
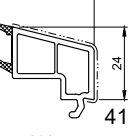
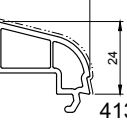
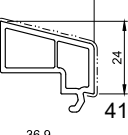
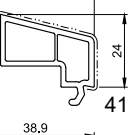
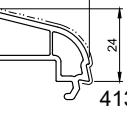
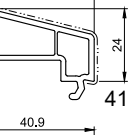
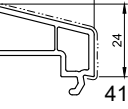
This table is based on calculated dimensions. Glass thickness tolerances and profile tolerances have not been taken into consideration. A glazing test must be performed before glazing.



Frames
720003, 720004, 720022, 720023,
720024

Fixed mullions
722005, 722006, 722010

Glass thickness in mm

Glazing beads 24 mm		   (WD) (A) (D)	 (E)
 413109	 413309	27 - 28 - 29	25 - 26 - 27
	 413310	25 - 26 - 27	23 - 24 - 25
 413111	 413311	23 - 24 - 25	21 - 22 - 23
	 413312	21 - 22 - 23	19 - 20 - 21
 413113	 413313	19 - 20 - 21	17 - 18 - 19
	 413314	17 - 18 - 19	15 - 16 - 17
 413115	 413315	15 - 16 - 17	13 - 14 - 15
	 413316	13 - 14 - 15	11 - 12 - 13

(WD) = Gasket
fitted ex-works

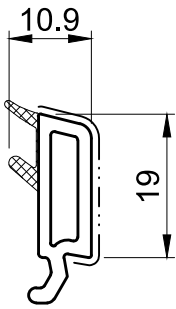
(A) = 464100 PVC-P

(D) = 414566 EPDM

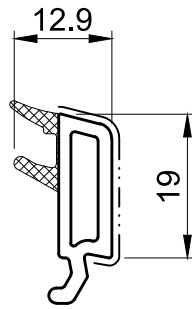
(E) = 414573 EPDM

Glazing beads

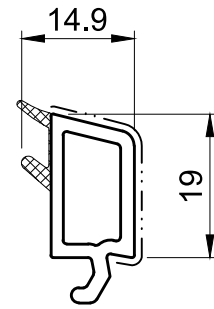
19 mm



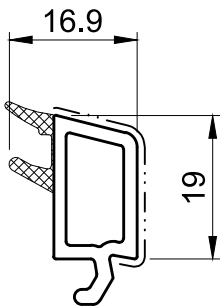
413001



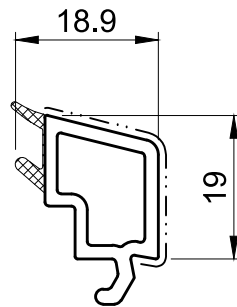
413002



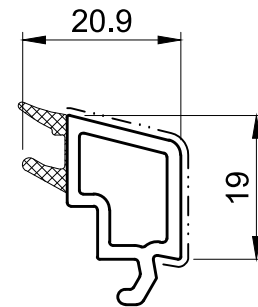
413003



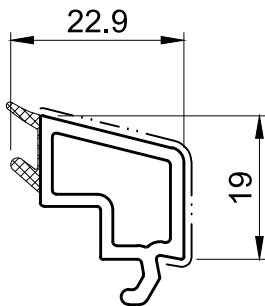
413004



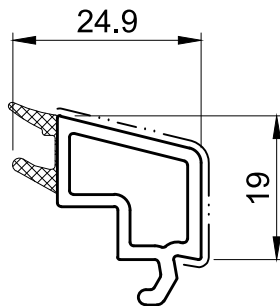
413005



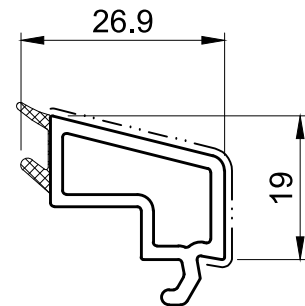
413006



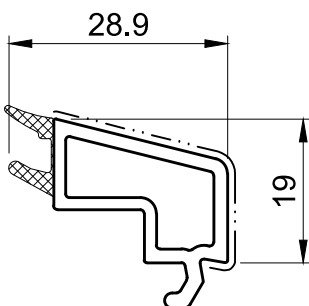
413007



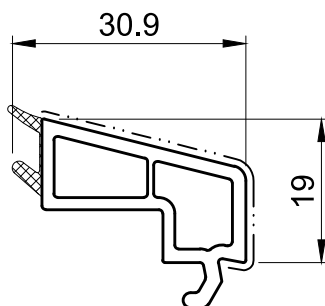
413008



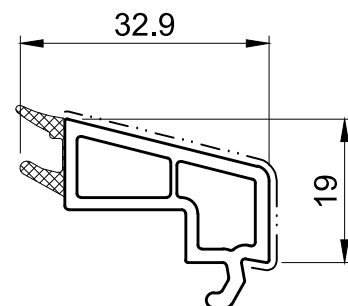
413009



413010



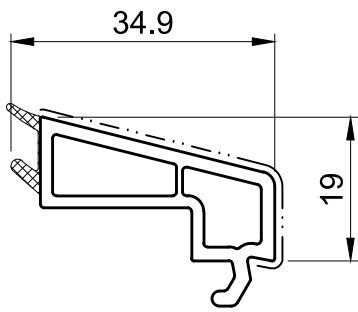
413011



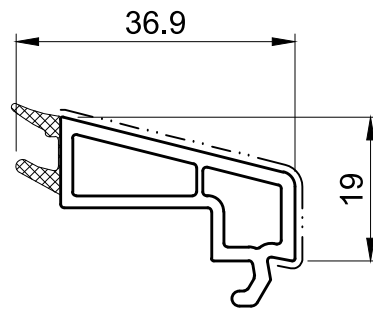
413012

Glazing beads

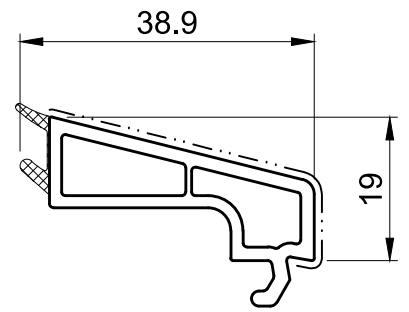
19 mm



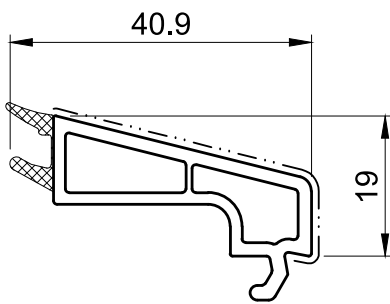
413013



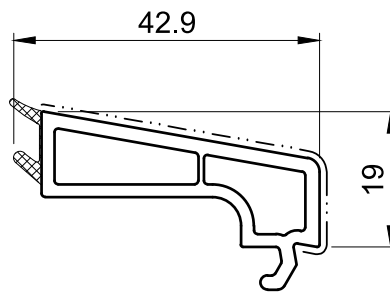
413014



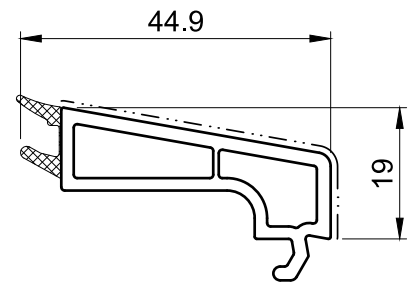
413015



413016



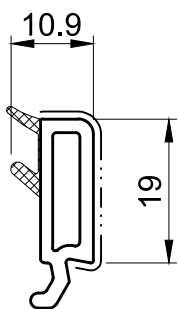
413017



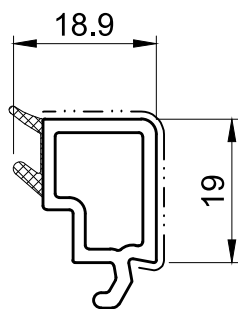
413018

Glazing beads box

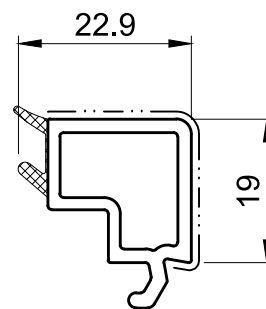
19 mm



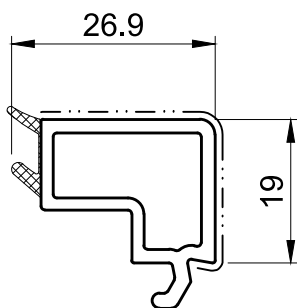
413201



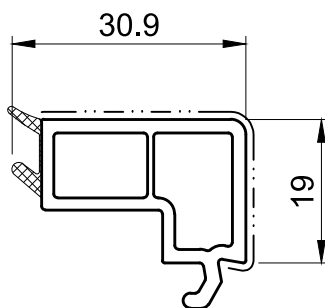
413205



413207



413209



413211

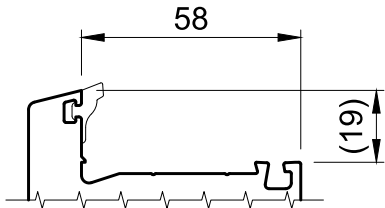
Dry glazing tables

19 mm

Sash 58 mm rebate

Glazing-beads 19 mm

This table is based on calculated dimensions. Glass thickness tolerances and profile tolerances have not been taken into consideration. A glazing test must be performed before glazing.



Sashes
721001, 721008, 721009, 721014,
721015

Mullion
722000

Glass thickness in mm

Glazing beads 19 mm		 (WD) (A) (D)	 (E)
 413201	 413001	43 - 44 - 45	41 - 42 - 43
	 413002	41 - 42 - 43	39 - 40 - 41
	 413003	39 - 40 - 41	37 - 38 - 39
	 413004	37 - 38 - 39	35 - 36 - 37
 413205	 413005	35 - 36 - 37	33 - 34 - 35
	 413006	33 - 34 - 35	31 - 32 - 33
 413207	 413007	31 - 32 - 33	29 - 30 - 31
	 413008	29 - 30 - 31	27 - 28 - 29
 413209	 413009	27 - 28 - 29	25 - 26 - 27

- (WD) = Gasket fitted ex-works
- (A) = 464100 PVC-P
- (D) = 414566 EPDM
- (E) = 414573 EPDM

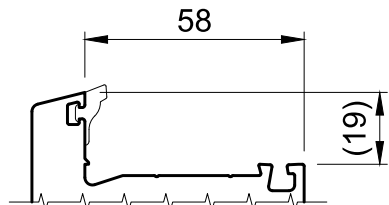
Dry glazing tables

19 mm

Sash 58 mm rebate

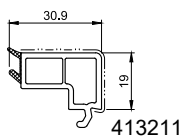
Glazing-beads 19 mm



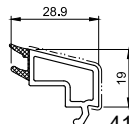
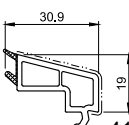
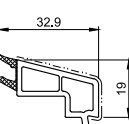
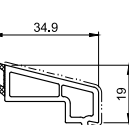
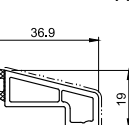
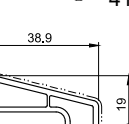
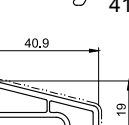
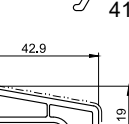
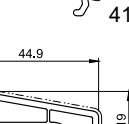
This table is based on calculated dimensions. Glass thickness tolerances and profile tolerances have not been taken into consideration. A glazing test must be performed before glazing.



Sashes
721001, 721008, 721009, 721014,
721015

Mullion
722000



Glazing beads 19 mm	Glass thickness in mm	
	 (WD) (A) (D)	 (E)
 413010	25 - 26 - 27	23 - 24 - 25
 413011	23 - 24 - 25	21 - 22 - 23
 413012	21 - 22 - 23	19 - 20 - 21
 413013	19 - 20 - 21	17 - 18 - 19
 413014	17 - 18 - 19	15 - 16 - 17
 413015	15 - 16 - 17	13 - 14 - 15
 413016	13 - 14 - 15	11 - 12 - 13
 413017	11 - 12 - 13	9 - 10 - 11
 413018	9 - 10 - 11	7 - 8 - 9

- (WD) = Gasket fitted ex-works
- (A) = 464100 PVC-P
- (D) = 414566 EPDM
- (E) = 414573 EPDM

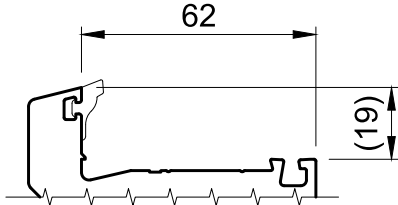
Dry glazing tables

19 mm

Sash 62 mm rebate

Glazing-beads 19 mm

This table is based on calculated dimensions. Glass thickness tolerances and profile tolerances have not been taken into consideration. A glazing test must be performed before glazing.



Sash
721005

Glass thickness in mm

Glazing beads 19 mm		 (WD) (A) (D)	 (E)
 413201	 413001	47 - 48 - 49	45 - 46 - 47
	 413002	45 - 46 - 47	43 - 44 - 45
	 413003	43 - 44 - 45	41 - 42 - 43
	 413004	41 - 42 - 43	39 - 40 - 41
 413205	 413005	39 - 40 - 41	37 - 38 - 39
	 413006	37 - 38 - 39	35 - 36 - 37
 413207	 413007	35 - 36 - 37	33 - 34 - 35
	 413008	33 - 34 - 35	31 - 32 - 33
 413209	 413009	31 - 32 - 33	29 - 30 - 31

- (WD) = Gasket fitted ex-works
- (A) = 464100 PVC-P
- (D) = 414566 EPDM
- (E) = 414573 EPDM

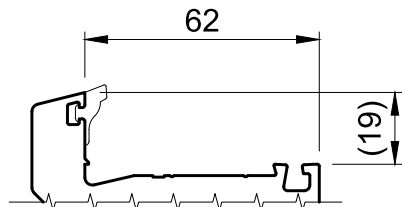
Dry glazing tables

19 mm

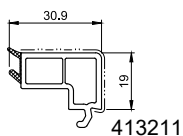
Sash 62 mm rebate



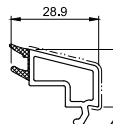
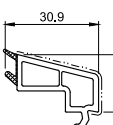
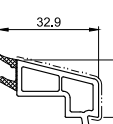
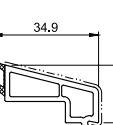
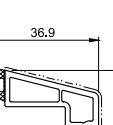
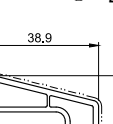
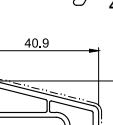
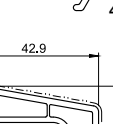
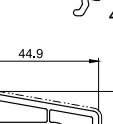
Glazing-beads 19 mm

This table is based on calculated dimensions. Glass thickness tolerances and profile tolerances have not been taken into consideration. A glazing test must be performed before glazing.



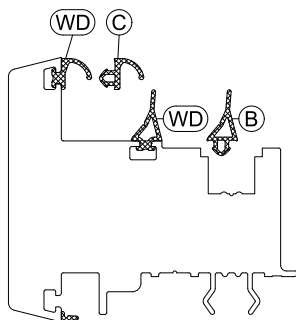
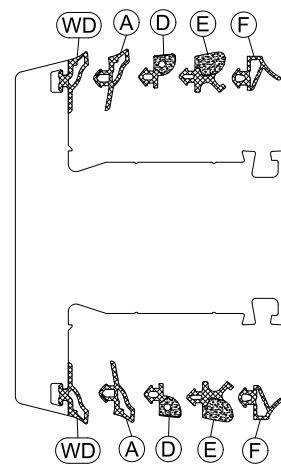
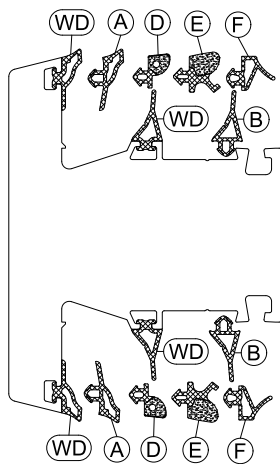
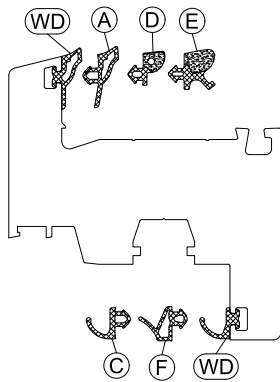
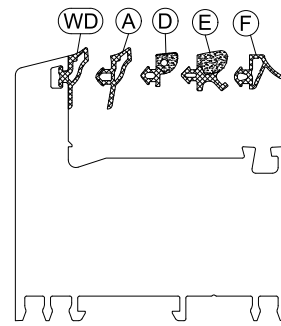
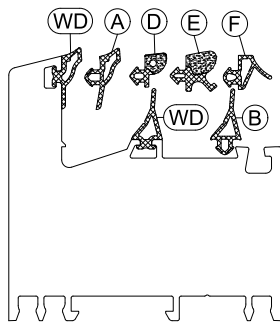
Sash
721005



Glazing beads 19 mm	Glass thickness in mm	
	 (WD) (A) (D)	 (E)
 413010	29 - 30 - 31	27 - 28 - 29
 413011	27 - 28 - 29	25 - 26 - 27
 413012	25 - 26 - 27	23 - 24 - 25
 413013	23 - 24 - 25	21 - 22 - 23
 413014	21 - 22 - 23	19 - 20 - 21
 413015	19 - 20 - 21	17 - 18 - 19
 413016	17 - 18 - 19	15 - 16 - 17
 413017	15 - 16 - 17	13 - 14 - 15
 413018	13 - 14 - 15	11 - 12 - 13

- (WD) = Gasket fitted ex-works
- (A) = 464100 PVC-P
- (D) = 414566 EPDM
- (E) = 414573 EPDM

Seal/gasket overview, main profiles



ⓈWD = ex-works gasket

ⓈA = 464100 (PVC-P)

ⓈB = 464102 (PVC-P)

ⓈC = 464101 (PVC-P)

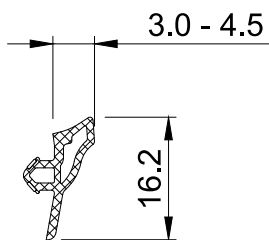
ⓈD = 414566 (EPDM)

ⓈE = 414573 (EPDM)

ⓈF = 464203 (EPDM)

Gaskets

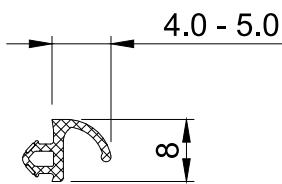
PVC-P



464100

Combination gasket
for frame, sash, glazing bar, fixed
mullion

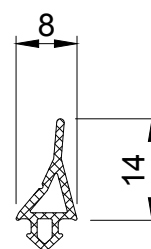
Colour: black, grey



464101

Stopper gasket
for sashes, faceplate

Colour: black, grey

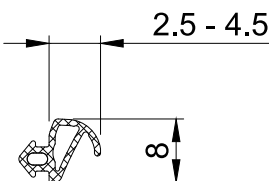


464102

Central gasket
for frame, fixed mullion, faceplate

Colour: black, grey

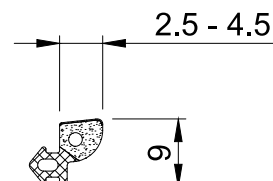
EPDM



414025

Gasket additional profiles

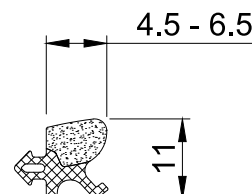
Colour: black, grey



414566

Glazing gasket
for frames, sashes, fixed mullions

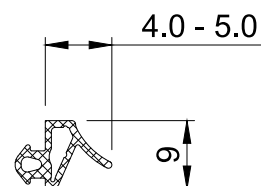
Colour: black, grey



414573

Glazing gasket
for frame, sash, glazing bar, fixed
mullion

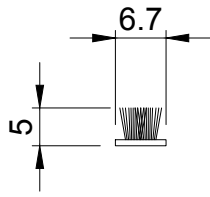
Colour: black, grey



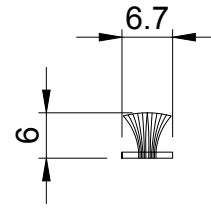
464203

Stopper gasket
for frames, sashes, fixed mullions

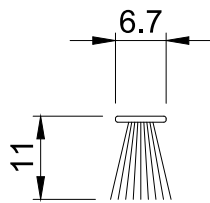
Colour: black, grey



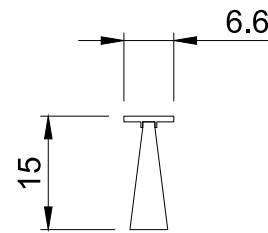
404930
Brush seal
for roller shutter guide
Colour: black, grey



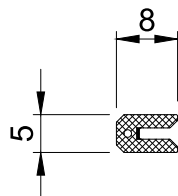
404935
Brush seal
for roller shutter guide
Colour: black, grey



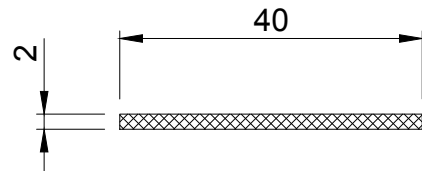
DP7010
Brush seal
for weather profile strip door threshold
Colour: grey



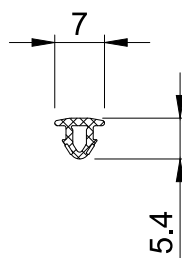
414971
Brush seal
for weather profile strip door threshold
Colour: grey



414910
Gasket, self-adhesive
for static couplings
Colour: black



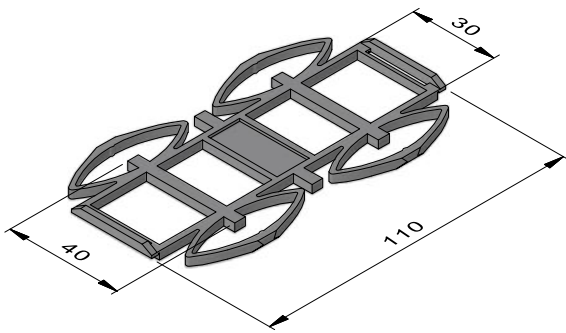
417740
Silicone sealing tape, self-adhesive
for roller shutter guide
Colour: black, grey



464103
Groove cover gasket MD
for old building frames
Colour: black, white

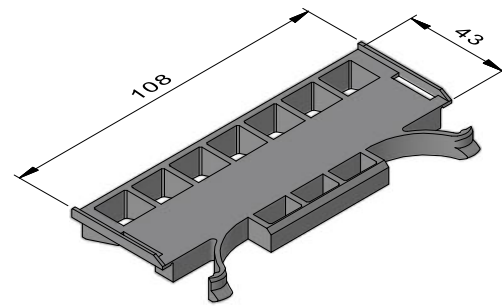
Block bridge
417000, 417003

Glass blocks
417212 - 417265



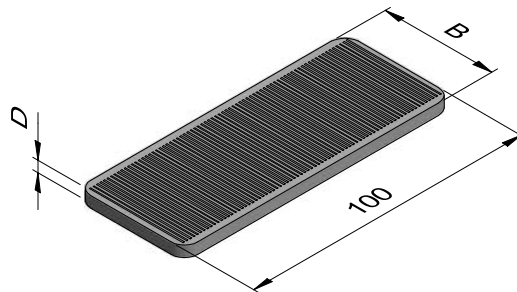
417000

for leaf/casement, AD frame, AD glazing bars, AD fixed mullion



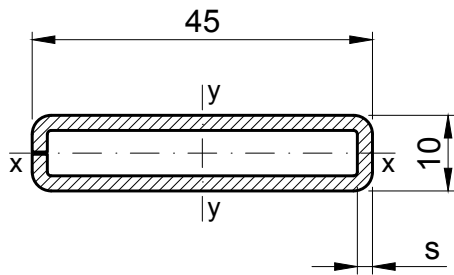
417003

for MD frame, MD fixed mullion



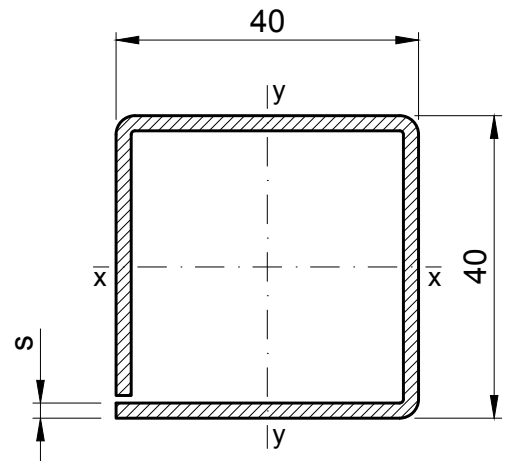
Article no.	Width B	Thickness D
417212 – 417216	30 mm	2 - 6 mm
417222 – 417226	34 mm	2 - 6 mm
417232 – 417235	40 mm	2 - 5 mm
417242 – 417245	48 mm	2 - 5 mm
417252 – 417255	50 mm	2 - 5 mm
417262 – 417265	52 mm	2 - 5 mm

Reinforcements



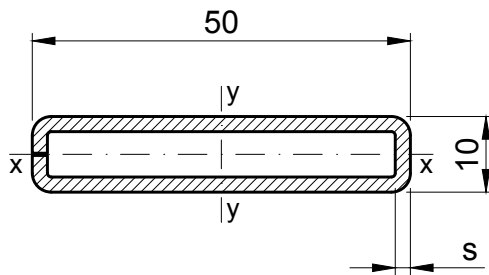
405012

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	0.29	3.87	Approx. 1556
Application	416055			



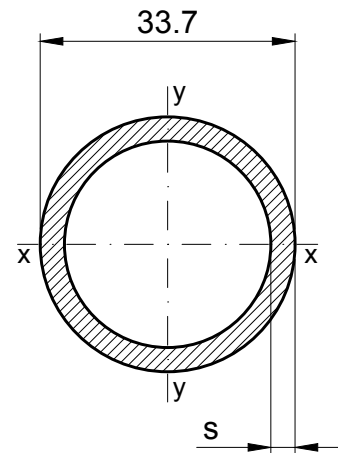
405060

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	5.61	5.61	Approx. 1791
74	2.0	7.17	7.17	Approx. 2351
Application	416210, 722010			



405015

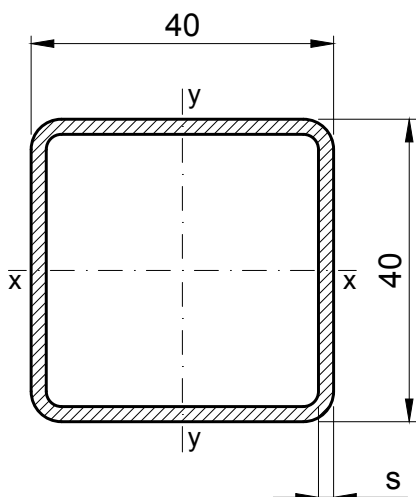
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	0.27	4.06	Approx. 1303
74	2.0	0.32	5.20	Approx. 1713
Application	426200			



415016

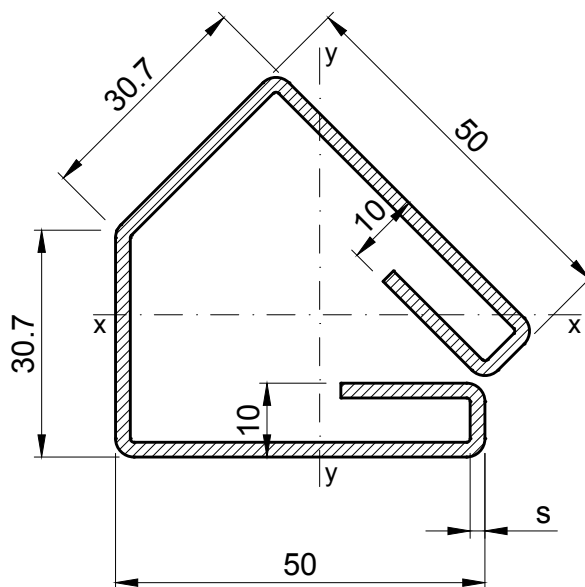
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
	3.2	3.60	3.60	Approx. 1992
Application	416250			

Reinforcements



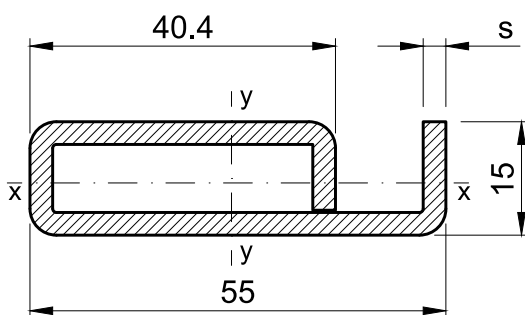
415040

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	6.94	6.94	Approx. 2306
Application	722010			



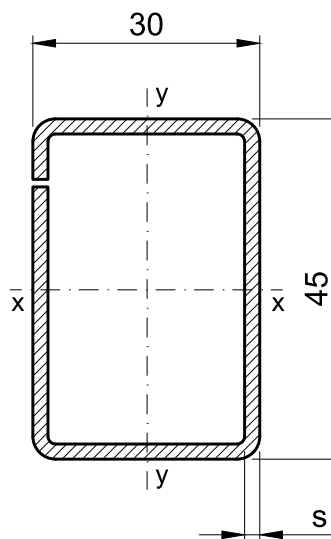
415140

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	10.11	12.78	Approx. 3197
Application	416240			



415136

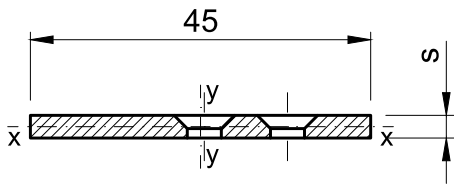
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
76	3.0	1.08	10.44	Approx. 2865
Application	726003, 726004			



425002

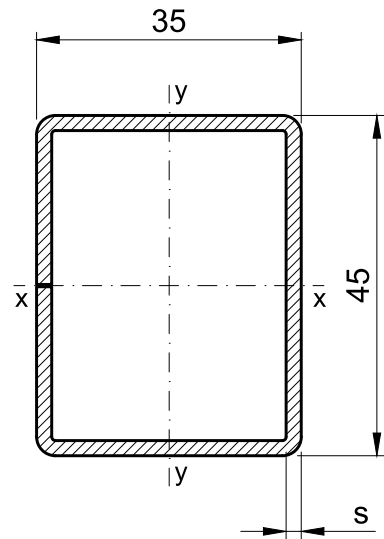
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	7.48	3.94	Approx. 2160
Application	720023			

Reinforcements



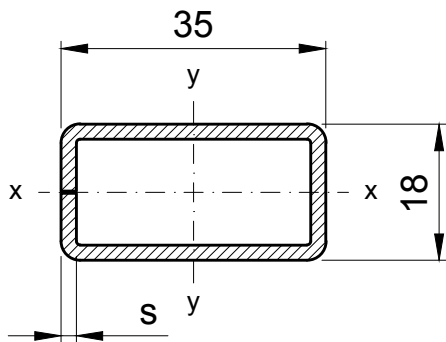
425022

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
76	3.0	0.01	2.28	Approx. 4751
Application	721001, 721005, 721008, 721009			



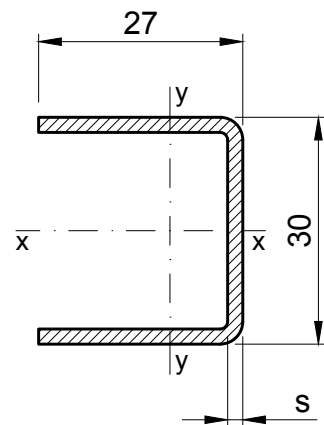
445040

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	6.60	4.46	Approx. 1774
74	2.0	8.52	5.73	Approx. 2341
Application	426151			



445020

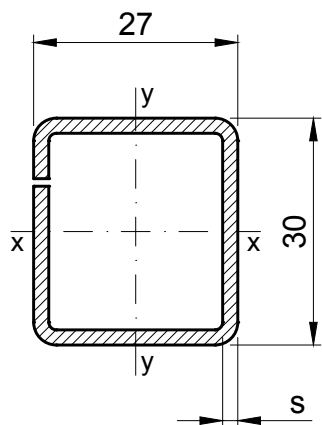
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	0.77	2.19	Approx. 1139
74	2.0	0.95	2.79	Approx. 1493
Application	720022, 720024			



465001

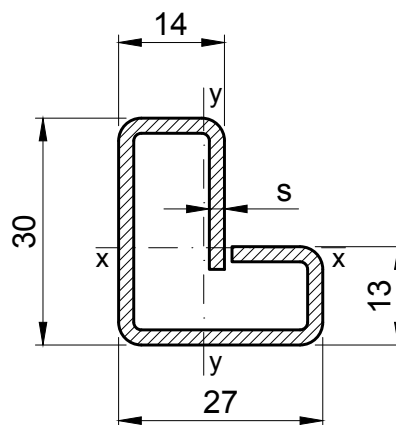
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	1.84	0.91	Approx. 936
74	2.0	2.34	1.18	Approx. 1229
Application	720003, 720004, 721001, 721005			

Reinforcements



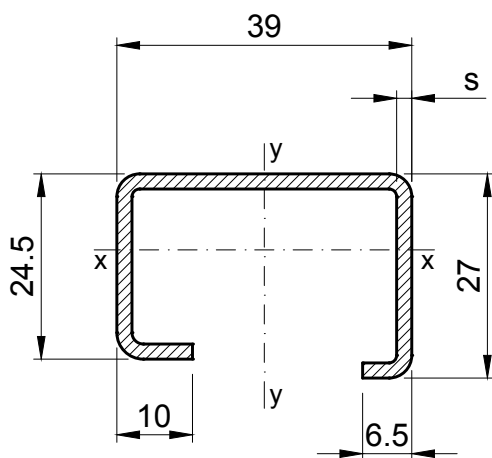
465002

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	2.04	1.71	Approx. 1225
74	2.0	2.55	2.14	Approx. 1595
Application	720003, 720004			



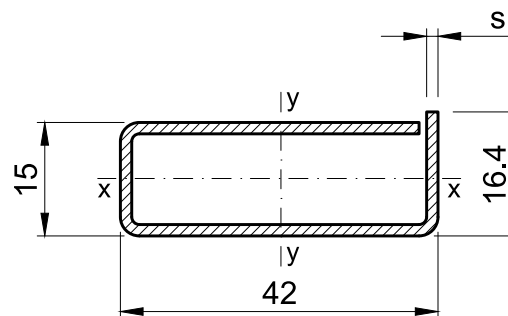
465011

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	1.98	1.54	Approx. 1597
Application	720003, 720004			



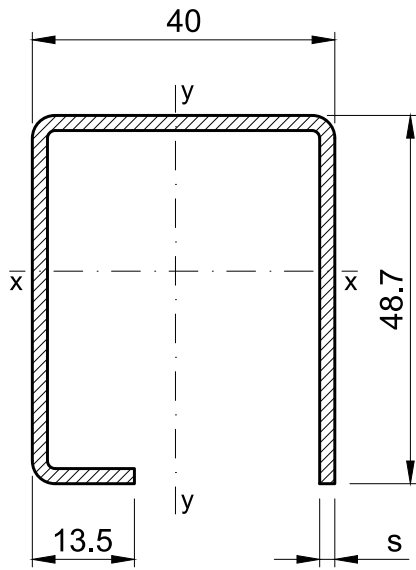
465006

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	1.31	3.54	Approx. 1149
74	2.0	1.64	4.49	Approx. 1497
75	2.5	1.91	5.33	Approx. 1828
Application	721001, 721005			



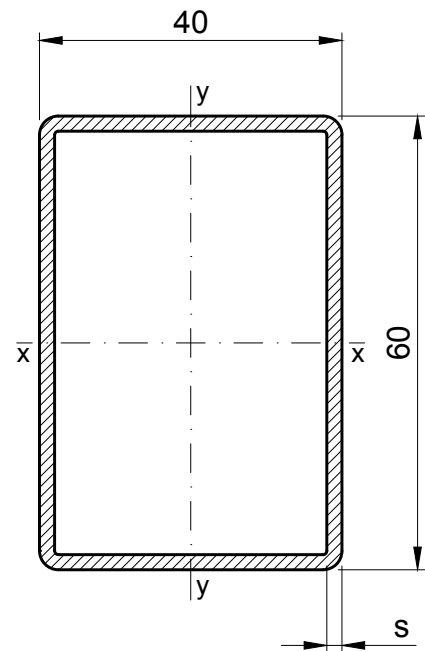
465013

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	0.61	3.22	Approx. 1250
Application	726003, 726004			



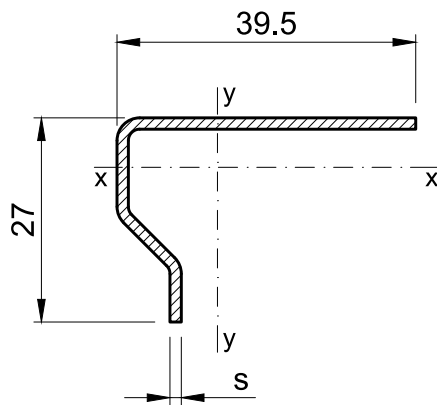
465017

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	6.45	6.21	Approx. 1697
74	2.0	8.31	7.97	Approx. 2235
Application	721008, 721009			



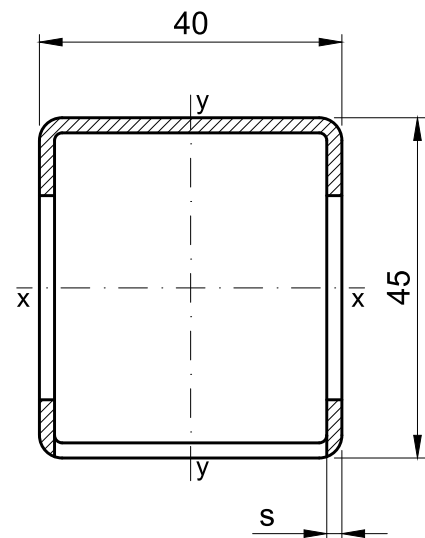
AR4630

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	18.87	10.03	Approx. 2972
Application	416269, 721014, 721015			



465026

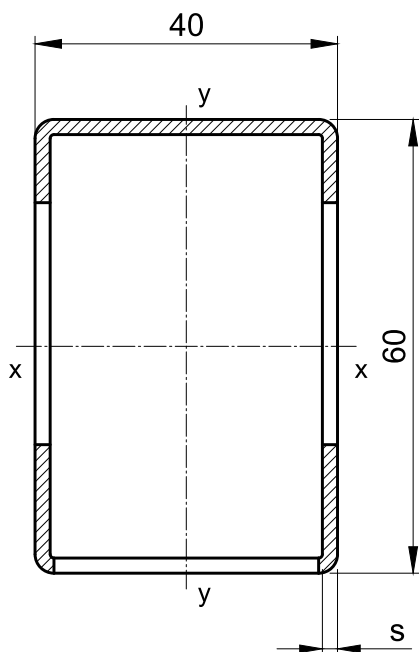
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	0.67	1.42	Approx. 786
Application	721001, 721005			



MT8531

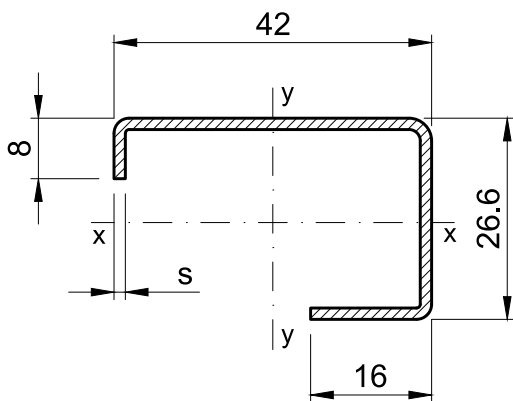
Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	8.59	7.84	Approx. 2489
Application	721008, 721009			

Reinforcements



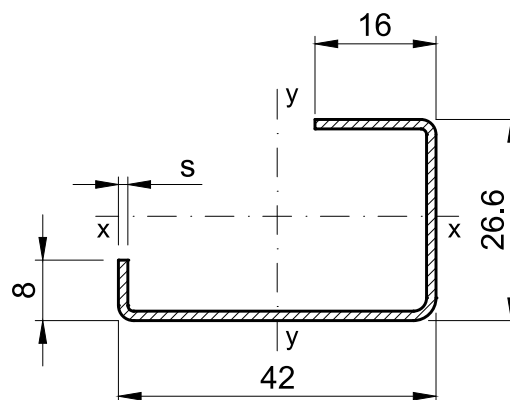
MT8551

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	18.86	10.03	Approx. 2916
Application	721014, 721015			



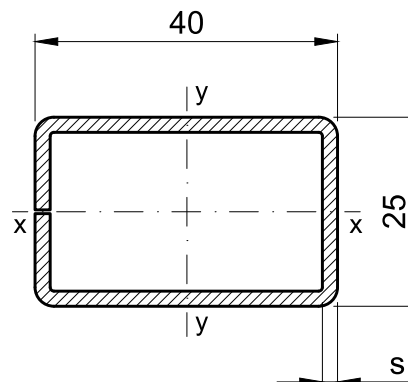
VS1020

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
73	1.5	1.32	2.61	Approx. 1013
Application	426151			



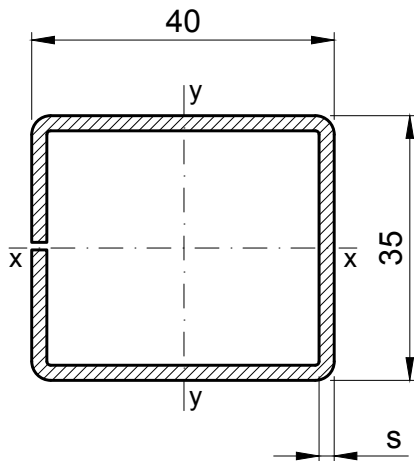
VS1120

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
72	1.25	1.13	2.21	Approx. 850
Application	426151			



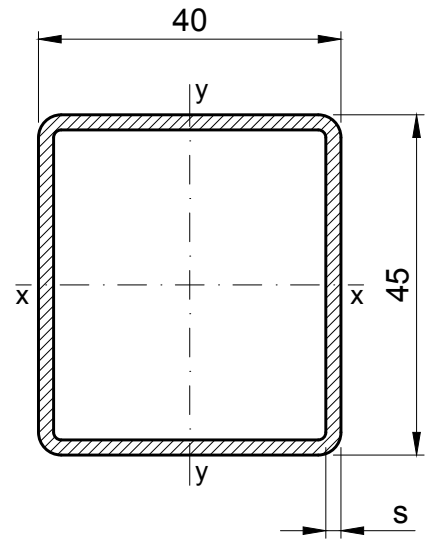
VS3020

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	2.35	4.93	Approx. 1867
Application	722005, 722006			



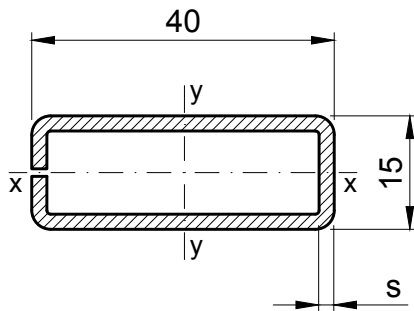
VS3030

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	5.21	6.35	Approx. 2173
Application	722000			



VS8450

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	9.36	7.80	Approx. 2489
Application	721008, 721009			

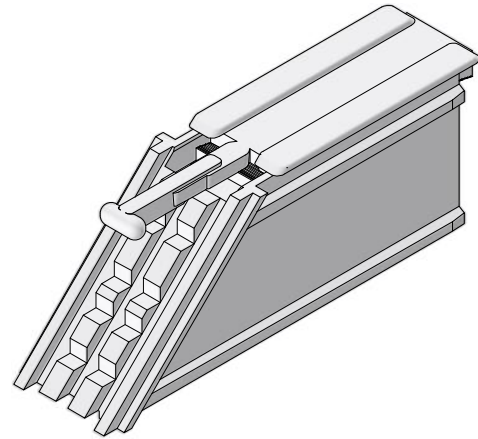
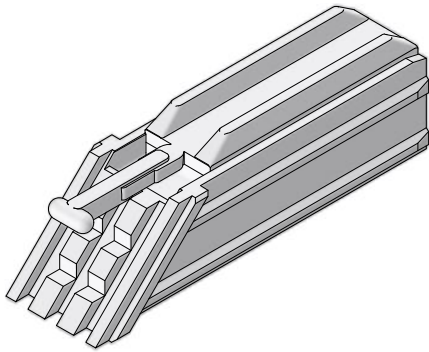


VS4020

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	0.70	3.45	Approx. 1545
Application	426150			

Weldable corner connector
MT8540

Clamp lever
207910

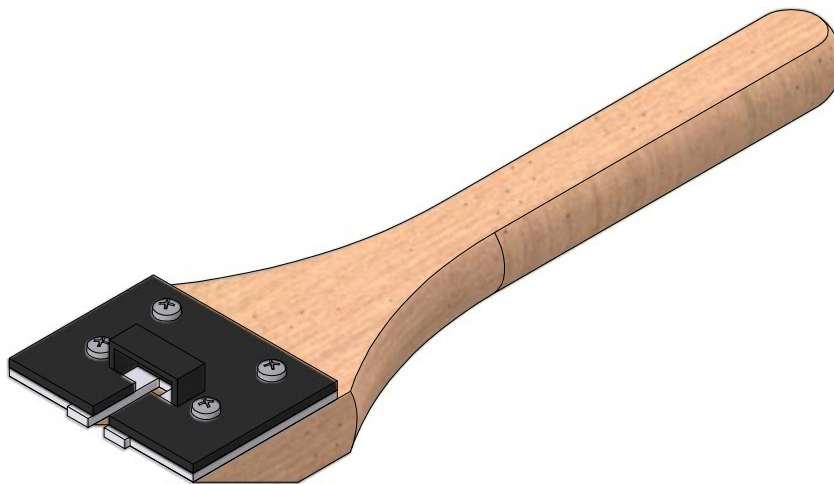


MT8540

Weldable corner connector
for reinforcements VS8450, MT8530

MT4631

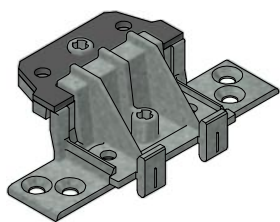
Weldable corner connector
for strengthenings AR4630, MT8551



207910

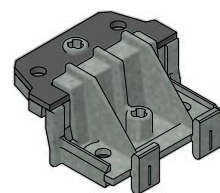
Clamping lever

Fixed-mullion connector, glazing bar connectors



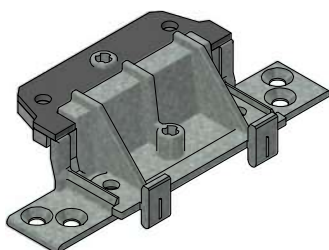
428006

Fixed-mullion cross connector MD
for fixed mullion 722006
Drilling jig 427004 (not depicted)



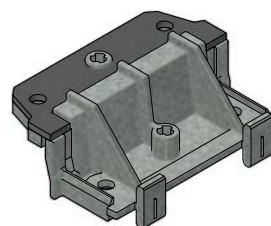
428010

Fixed-mullion connector MD
for fixed mullion 722006
Drilling jig 427004 (not depicted)



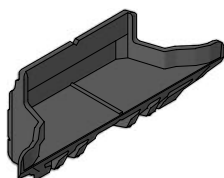
428041

Fixed-mullion cross connector MD
for fixed mullion 722010
Drilling jig 427004 (not depicted)



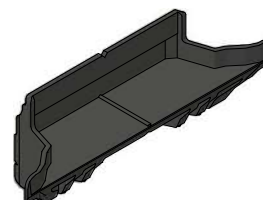
428045

Fixed-mullion connector MD
for fixed mullion 722010
Drilling jig 427004 (not depicted)



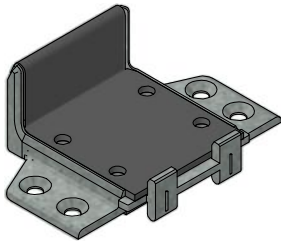
428005

Sealing block MD
for 428006, 428010



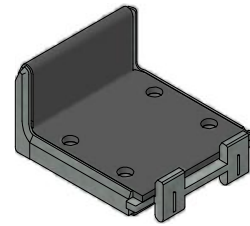
428044

Sealing block MD
for 428041, 428045



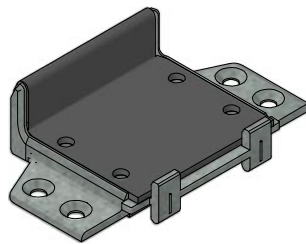
428004

Fixed-mullion cross connector AD
for fixed mullion 722005
Drilling jig 427003 (not depicted)



428009

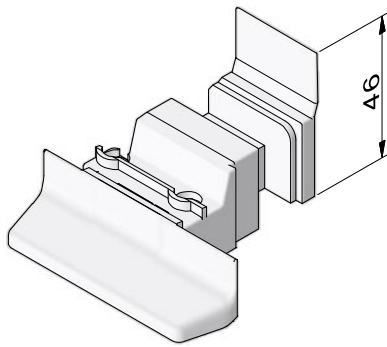
Fixed-mullion connector AD
for fixed mullion 722005
Drilling jig 427003 (not depicted)



428000

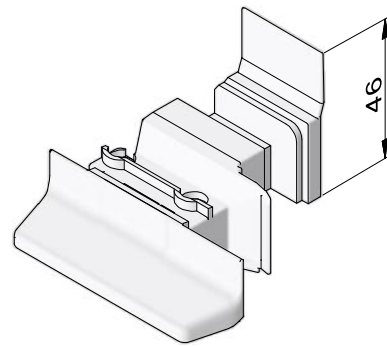
Glazing bar cross connector
for glazing bar 722000
Drilling jig 427002 (not depicted)

Forend caps



427014

Floating-mullion end cover cap set, 2-part AD
for forend 726003

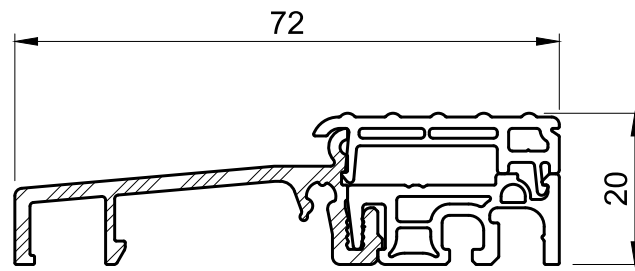


427016

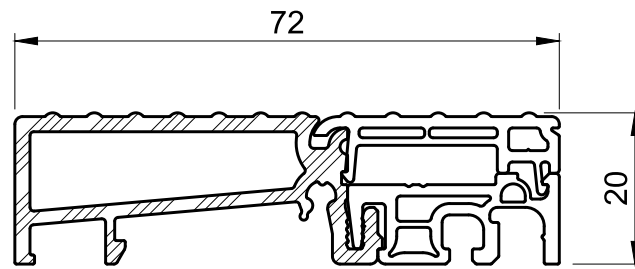
Floating-mullion end cover cap set, 2-part MD
for forend 726004

Thresholds

426000, 426001



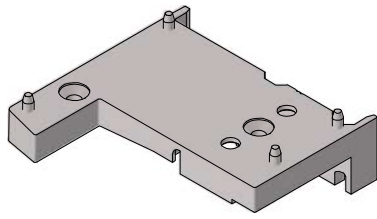
426000



426001

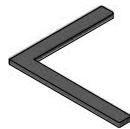
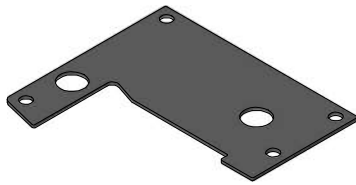
Threshold connector
428013, 428014

Sealing pad set
424300, 424301



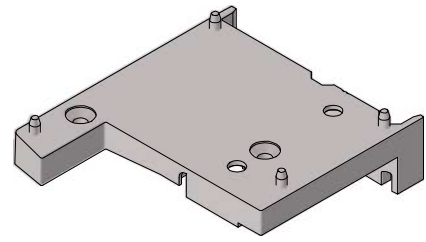
428013

for frames 720003, 720004
Drilling jig 427042 (not depicted)



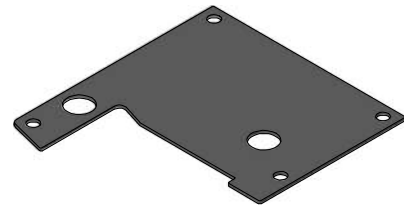
424300

Sealing pad set
for threshold connector 428013



428014

for frame 720023
Drilling jig 427042 (not depicted)

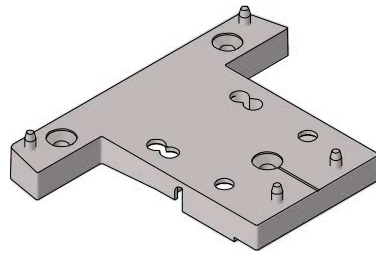


424301

Sealing pad set
for threshold connector 428014

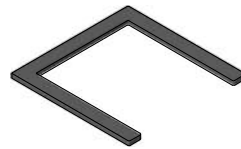
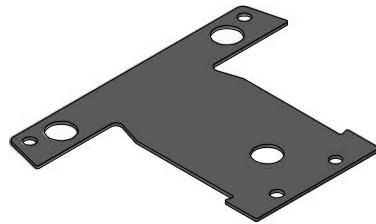
Threshold connector
428030

Sealing pad set
424304



428030

for fixed mullions 722005, 722006
Drilling jig 427041, 427043 (not depicted)

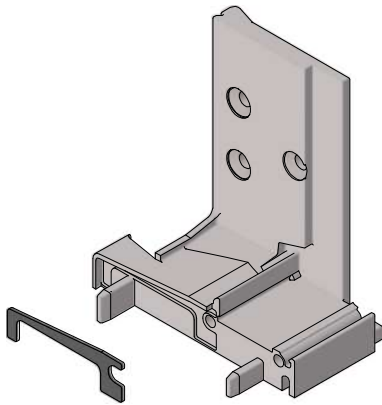


424304

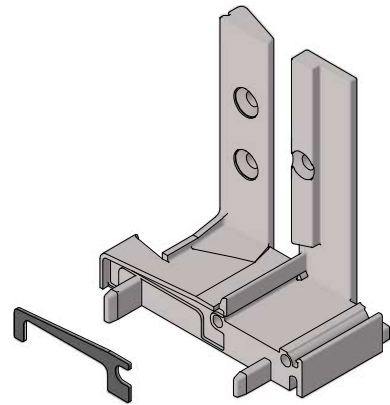
Sealing pad set
for threshold connector 428030

Threshold connector
428026, 428028

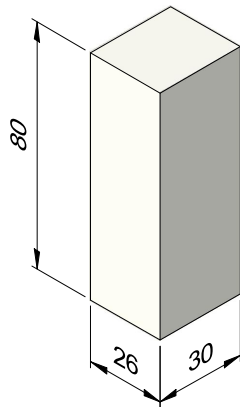
Screw block, bevel connector
MT7131, 418950



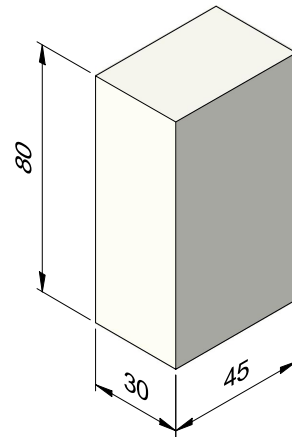
428026
 for frame 720003, 720023



428028
 for frame 720004, 720022



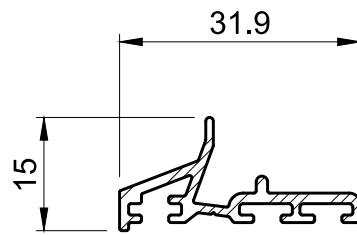
MT7131
 Screw block
 for frame 720003, 720004



418950
 Bevel connector
 for frame 720023

Weather profile seal
429000

Protective caps
427044, 427045, 427046, 427047



429000

Accessories (not to scale)

Brush seal

414971



Brush seal

DP7010



427044

Protective cap
for weather profile strip 429000
Passive sash DIN left



427046

Protective cap
for weather profile strip 429000
Active sash DIN right



427047

Protective cap
for weather profile strip 429000
Active sash DIN left

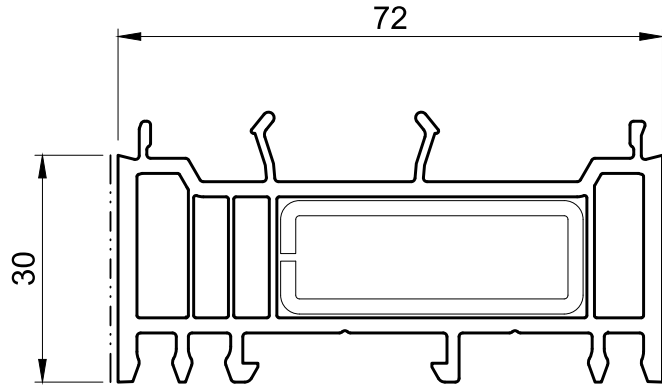
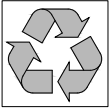


427045

Protective cap
for weather profile strip 429000
Passive sash DIN right

Widenings

426150, 426151

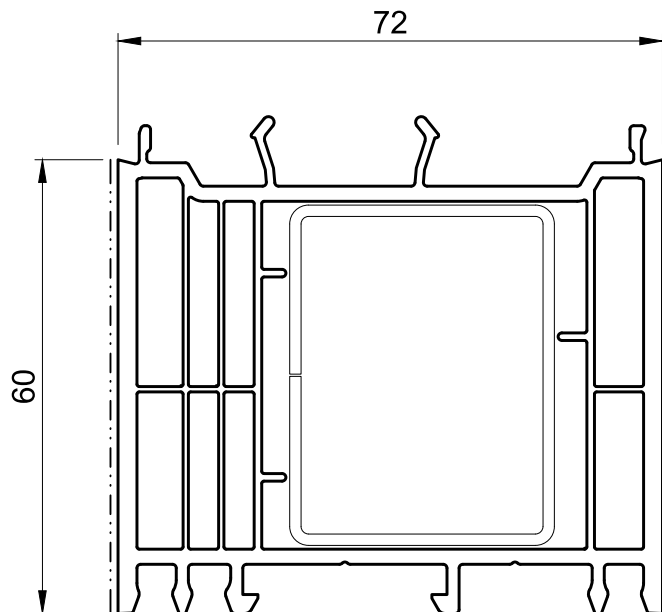


426150

Accessories (not to scale)

Reinforcement

VS4020



426151

Accessories (not to scale)

Reinforcement

VS1020



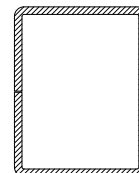
Reinforcement

VS1120



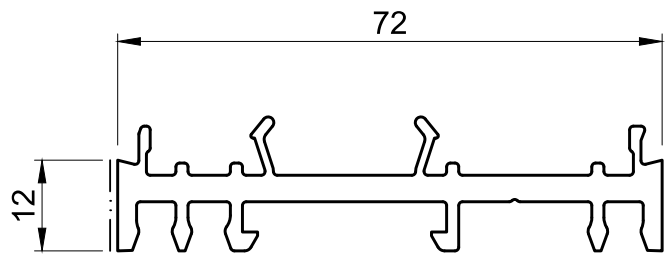
Reinforcement

445040



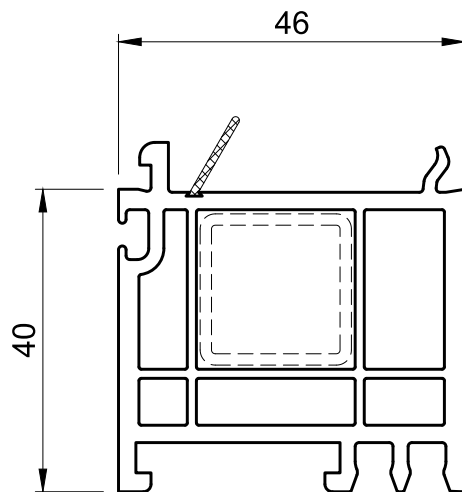
Widening

426152



i INFO

Available from February 2026.

**Accessories** (not to scale)

Reinforcement

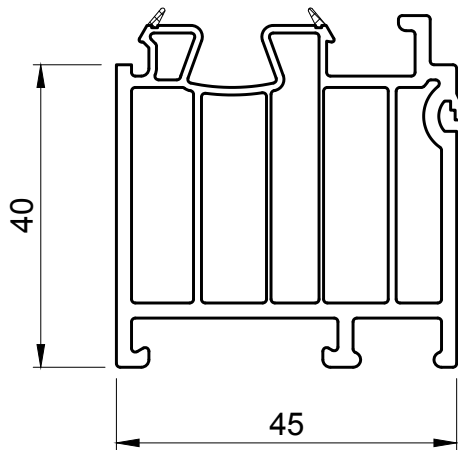
Steel, galvanised

20 x 20 x ... mm.

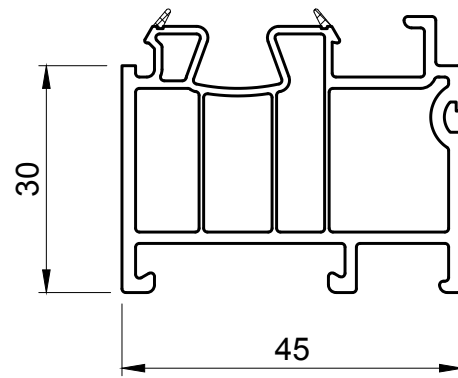
Thickness according to static specifications.

Purchase through steel trade.

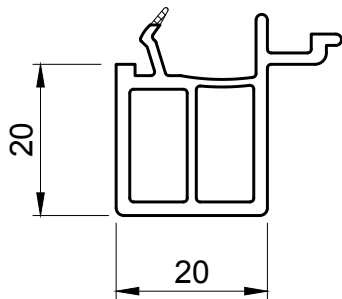
Sill connection



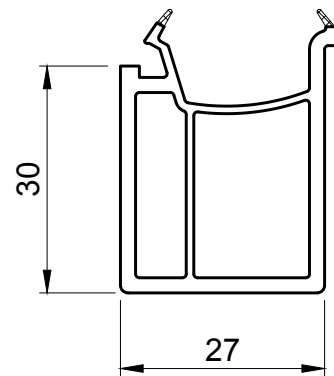
416100



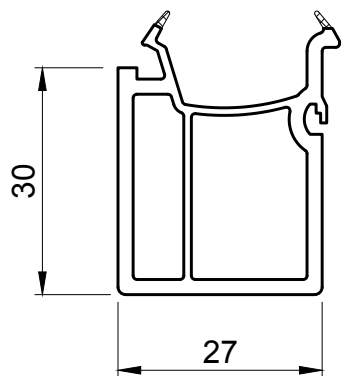
416106



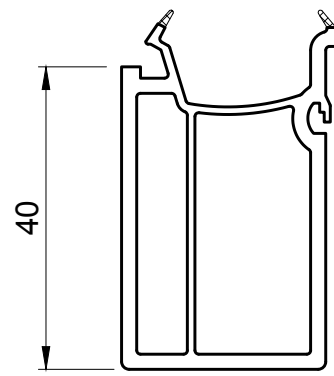
416122



416131



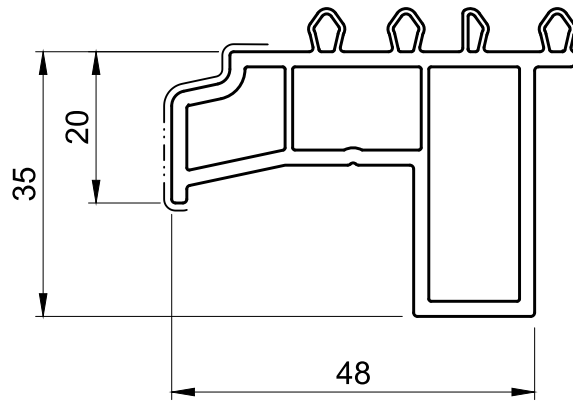
416134



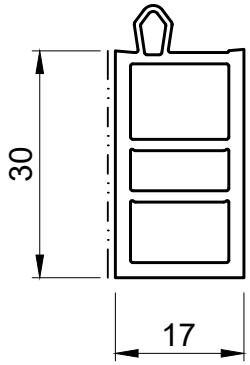
416141

External sill connection
416119

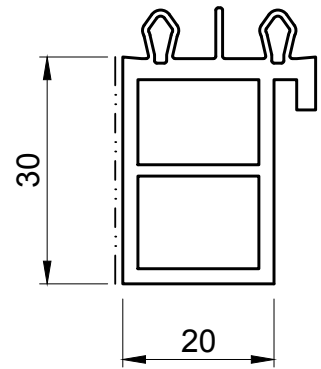
Window sill connections
416107, 416139, 416148, 416147



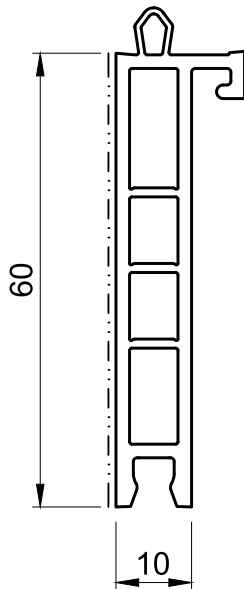
416119



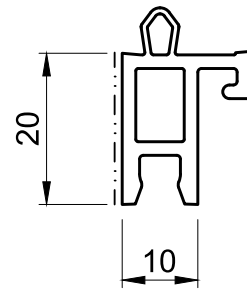
416107



416139



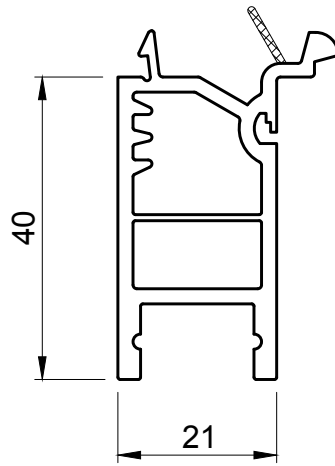
416147



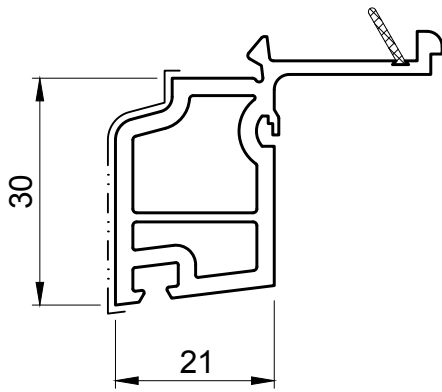
416148

Sill connection
416142

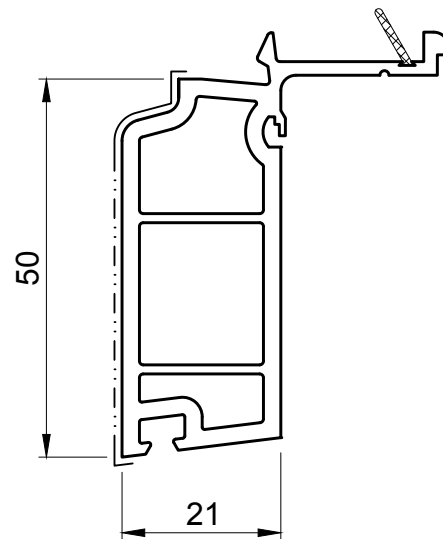
Stone sill connections
416133, 416135



416142



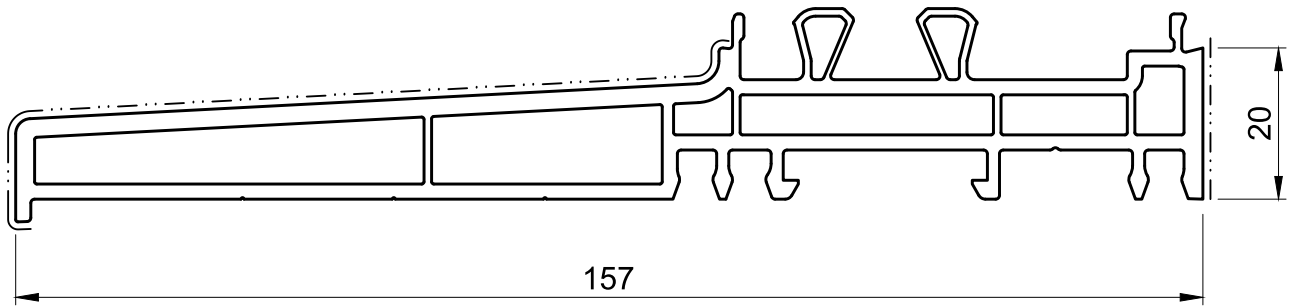
416133



416135

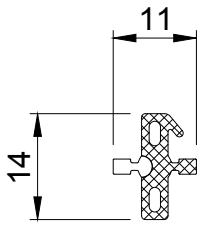
Window sill

426100

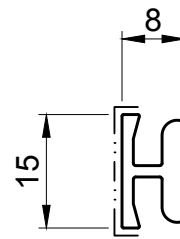


Coupling spring
414915, 406255

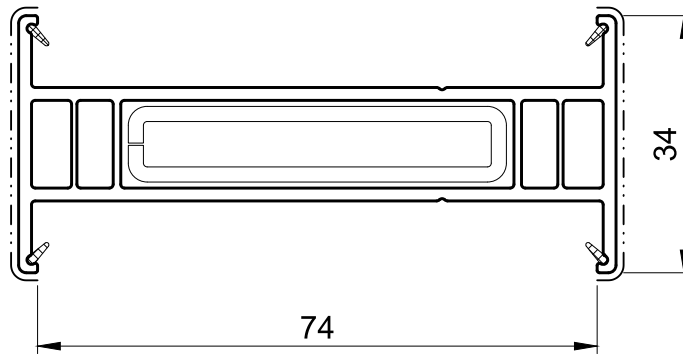
Coupling profile
426200



414915



406255



426200

Accessories (not to scale)

Strengthening
405015



Fixed iron
407570

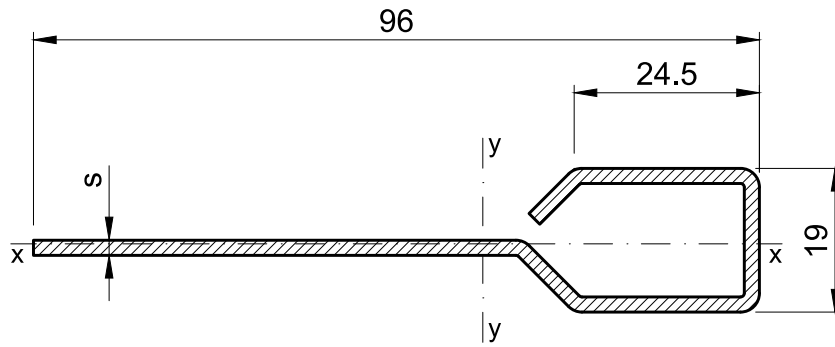


Fixed iron
407571



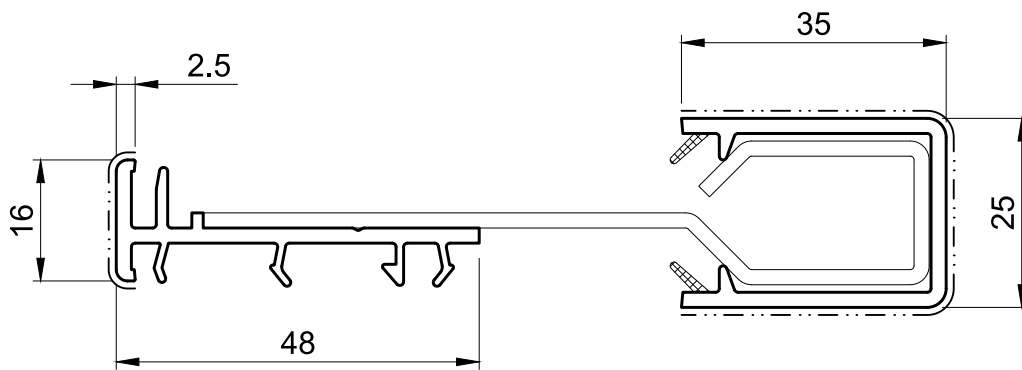
Coupling profiles
VS0150, 416264

Cover profile
ZF2110



VS0150

Key number	Thickness s (mm)	Ix (cm ⁴)	Iy (cm ⁴)	Weight (g/m)
74	2.0	0.86	23.32	Approx. 2257
Application	416264, ZF2110			



416264

ZF2110

Accessories (not to scale)

Spacer
416265

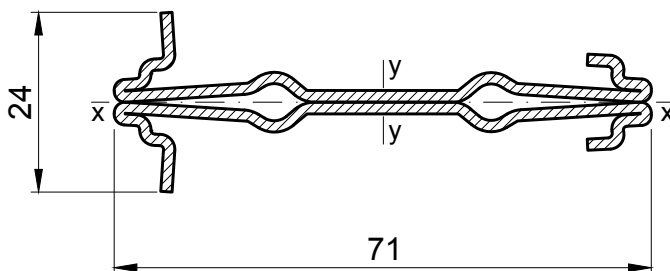
Coupling profile
416267

Spacer
416268



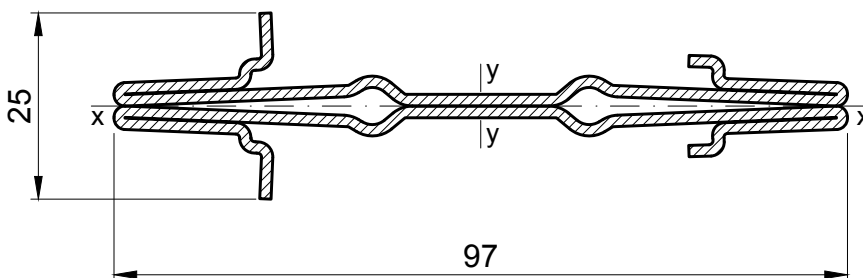
Static couplings

405155, 405165, 405175



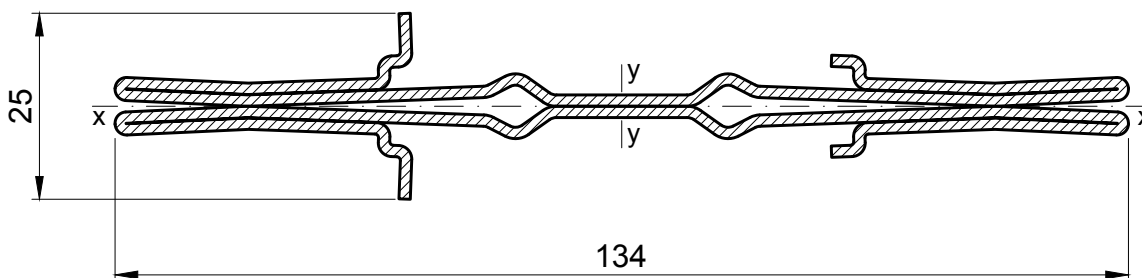
405155

Key number	Thickness s (mm)	I _x (cm ⁴)	I _y (cm ⁴)	Weight (g/m)
	1.5	0.40	15.60	Approx. 2290



405165

Key number	Thickness s (mm)	I _x (cm ⁴)	I _y (cm ⁴)	Weight (g/m)
	1.5	0.40	43.00	Approx. 3513



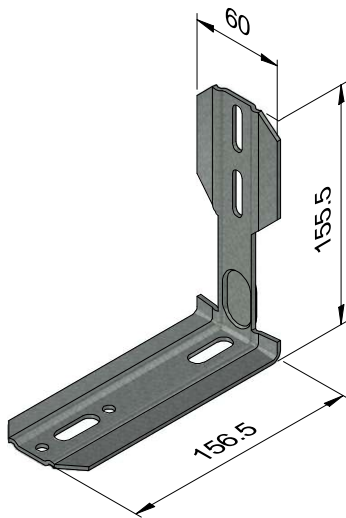
405175

Key number	Thickness s (mm)	I _x (cm ⁴)	I _y (cm ⁴)	Weight (g/m)
	1.5	0.50	117.30	Approx. 6600

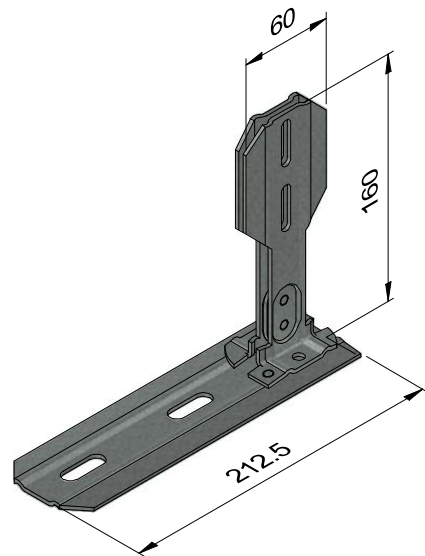
Shear anchor
407540, 407575

Spacer
407055

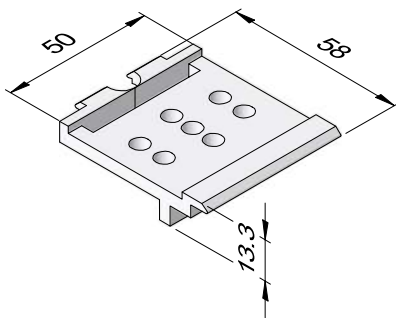
Gasket, self-adhesive
414910



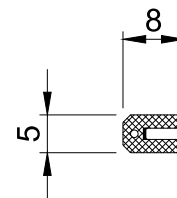
407540



407575



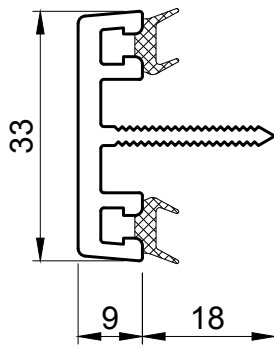
407055



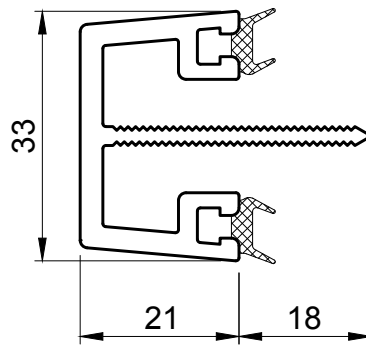
414910

Cover caps with seals

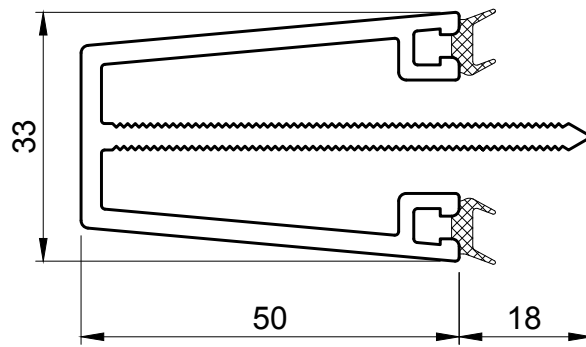
406280, 406285, 406290



406280



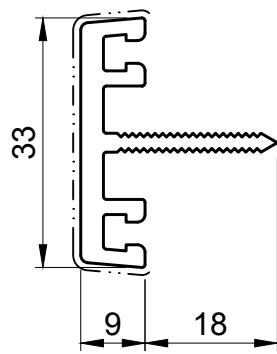
406285



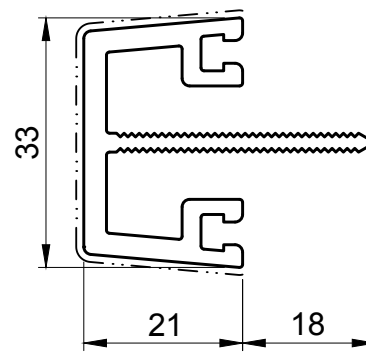
406290

Decor cover caps without seals

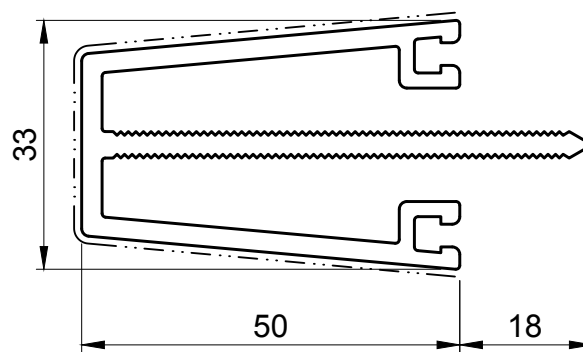
406281, 406286, 406290



406281



406286



406295

Accessories (not to scale)

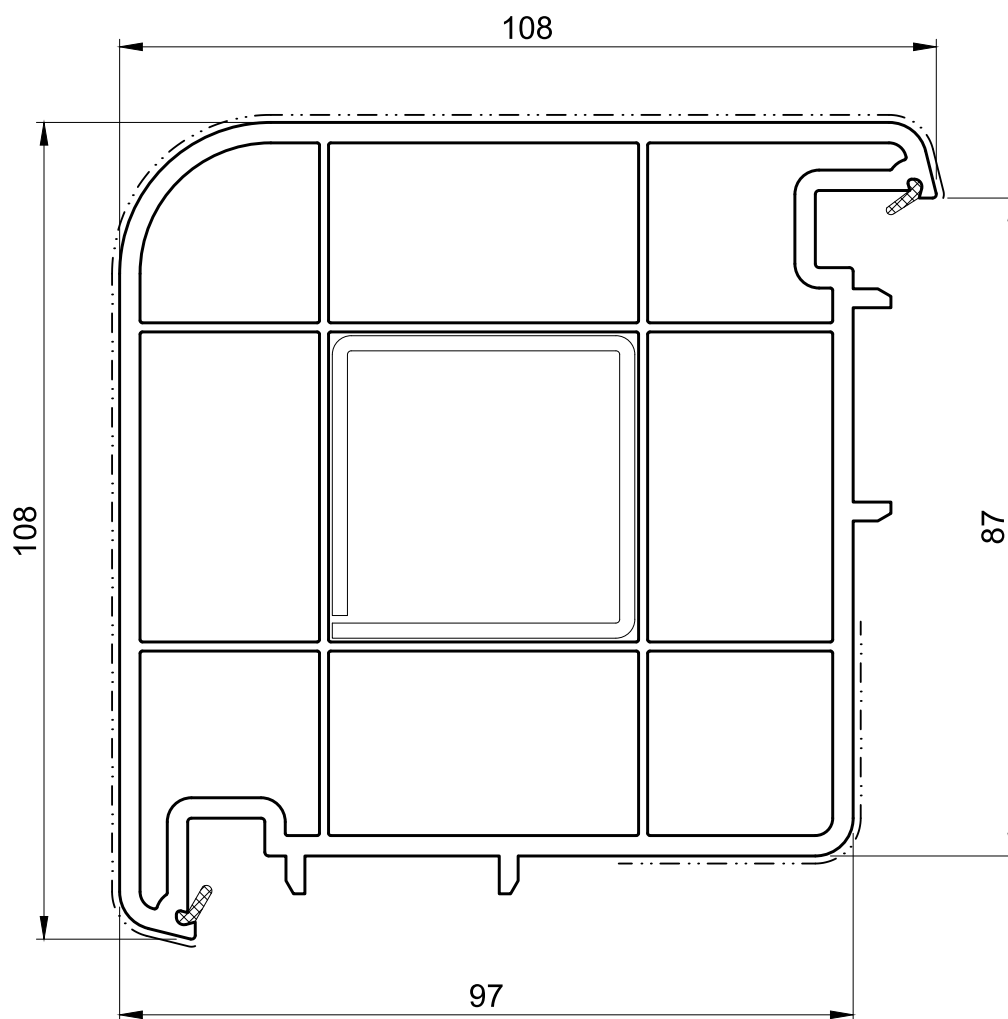
Seal

414025



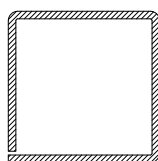
Corner connector, 90°

416210

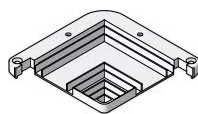


Accessories (not to scale)

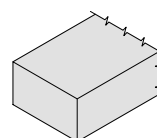
Reinforcement
405060



End cap
417210

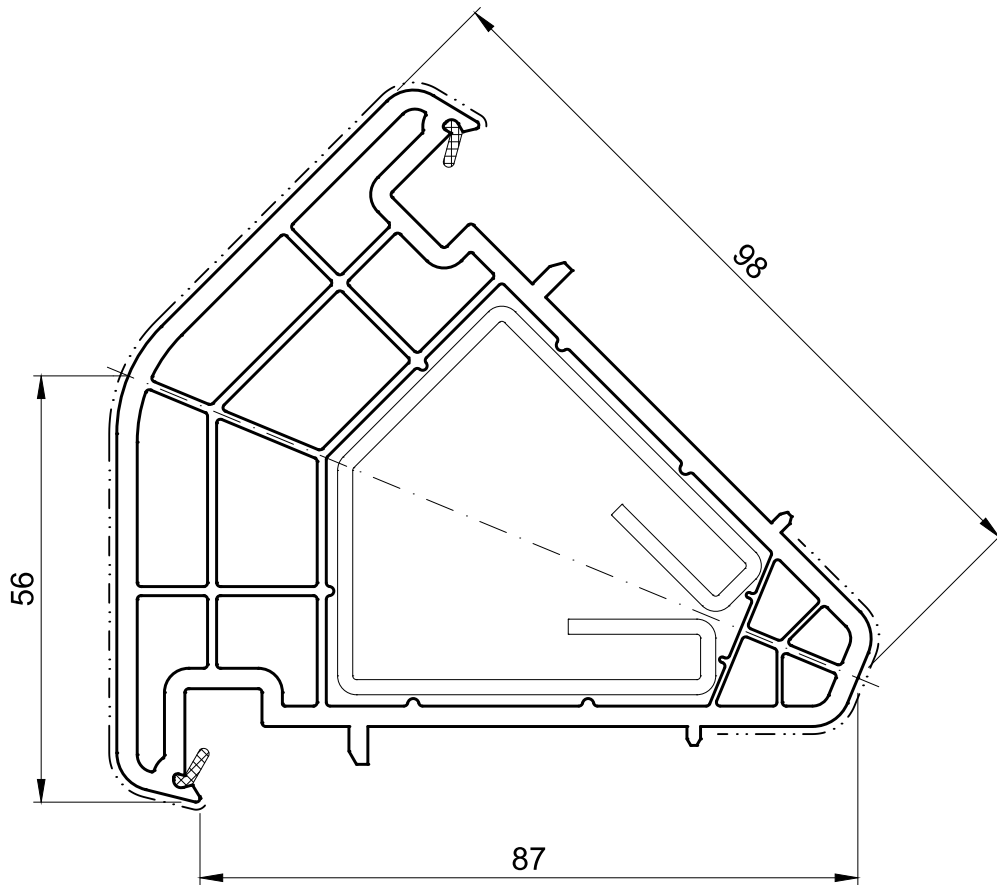


Insulation strip
417810



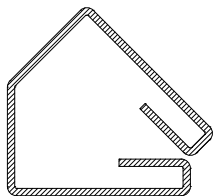
Corner connection, 135°

416240

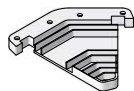


Accessories (not to scale)

Reinforcement
415140



End cap
417240



Fixed iron
407570

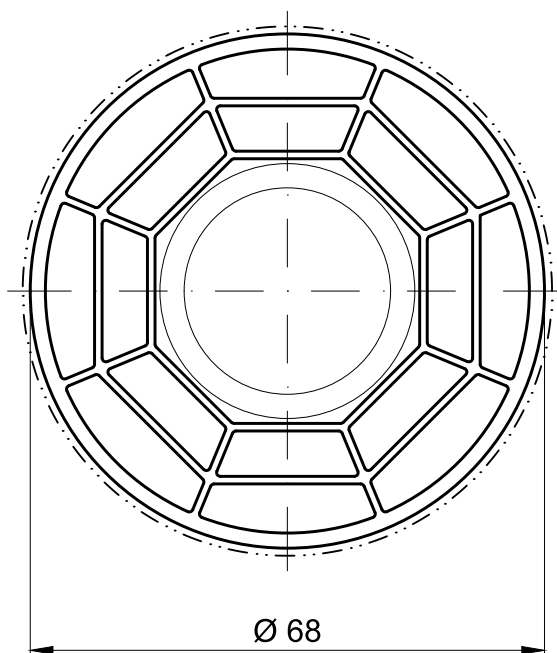


Fixed iron
407571



Corner connector, variable

NP0160, 416251

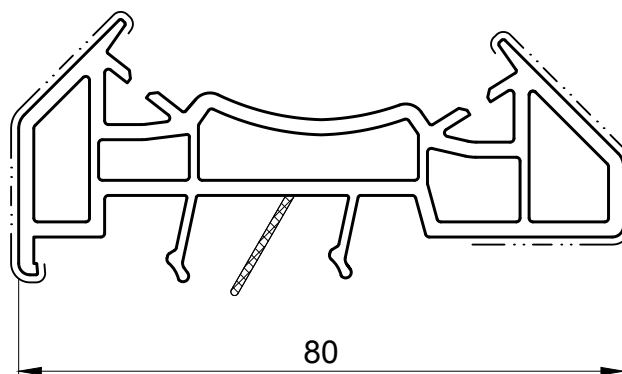
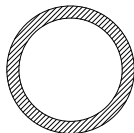


NP0160

Accessories (not to scale)

Reinforcement

415016



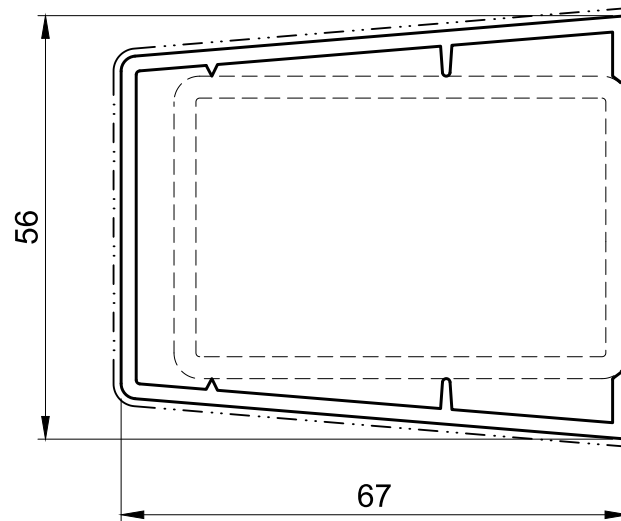
416251

Accessories (not to scale)

Gasket

414566



**Accessories** (not to scale)

Reinforcement

Steel, galvanised

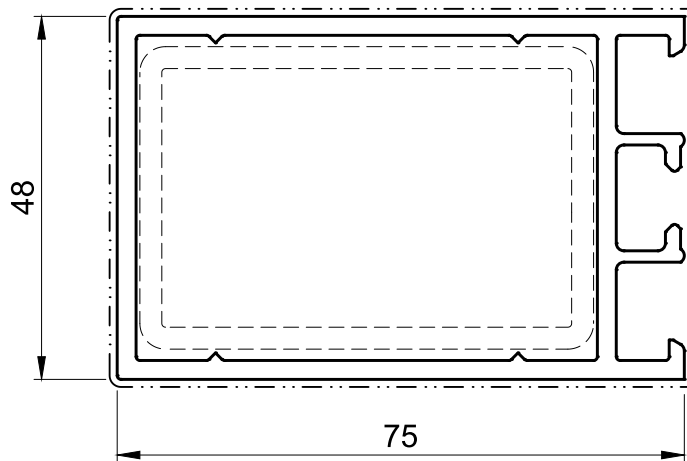
60 x 40 x ... mm.

Thickness according to static specifications.

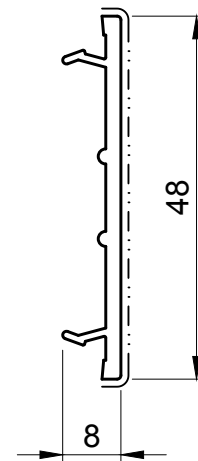
Purchase through steel trade.

Architrave
416269

Cover profile
416311




416269



416311

Accessories (not to scale)

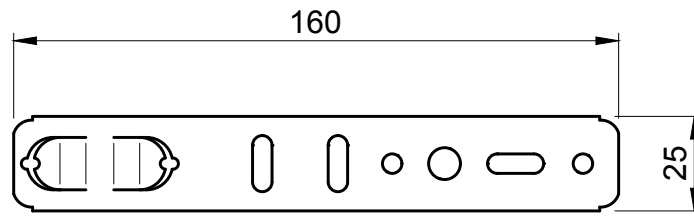
Reinforcing profile	Snap-in head screw
Steel, galvanised	407900
60 x 40 x ... mm.	

Thickness according to static specifications.

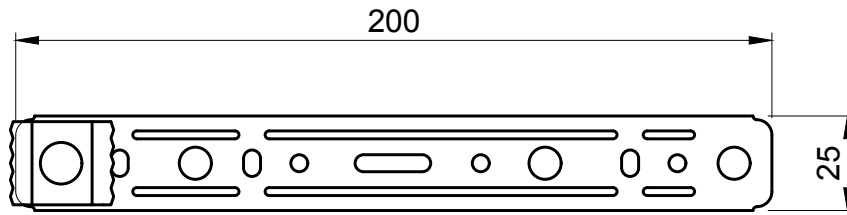
Purchase through steel trade.

Wall anchor

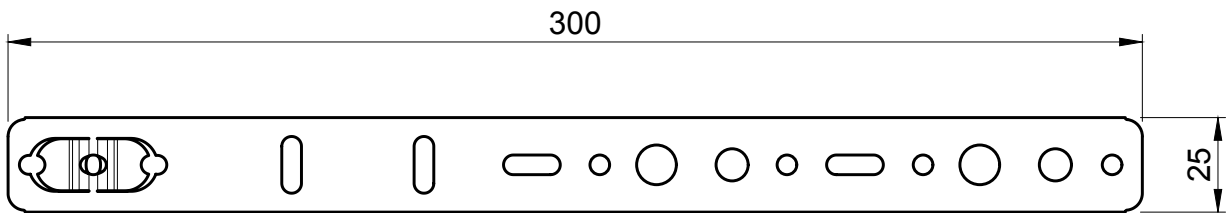
417540, 417545, 417548, 417550



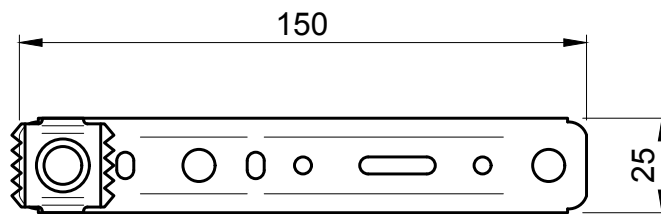
417540



417545



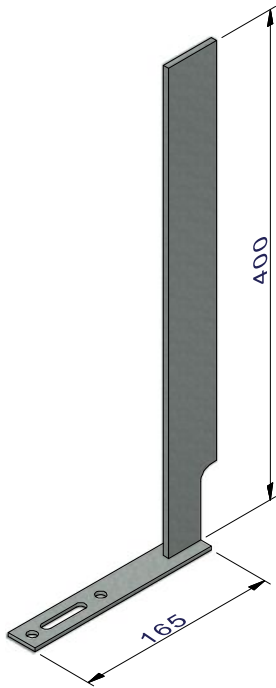
417548



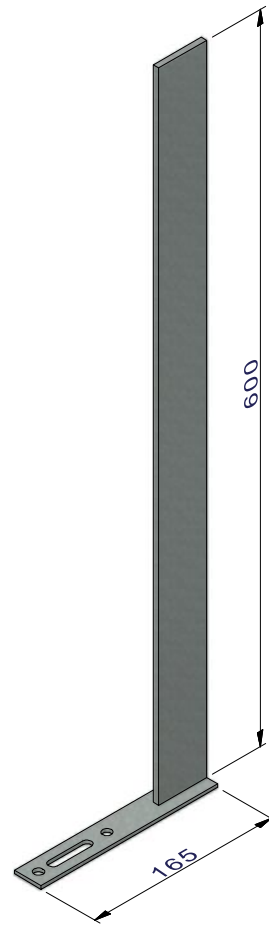
417550

Fixed iron

407570, 407571

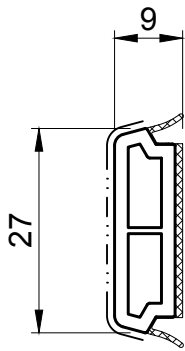


407570

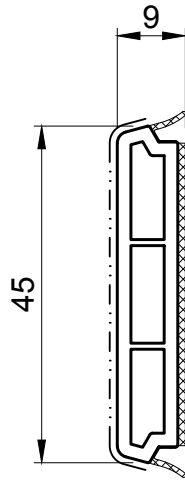


407571

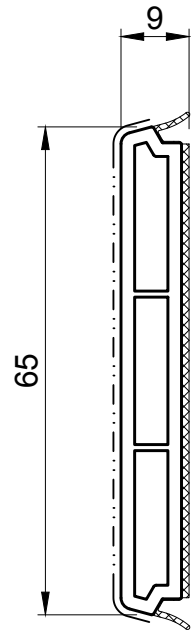
Mullions, self-adhesive



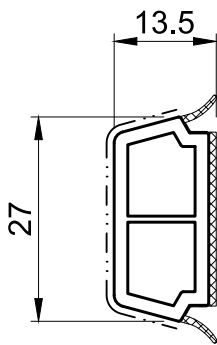
416302



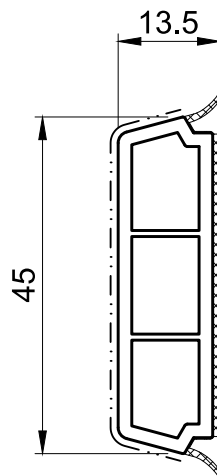
416304



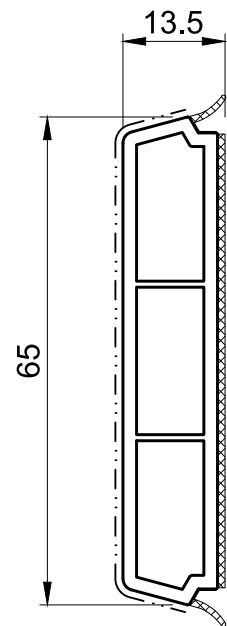
416306



416322



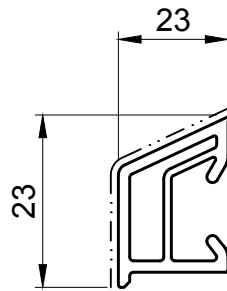
416324



416326

Weather profile strip

NP0220, ZF1940

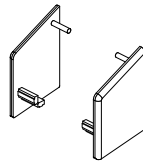


NP0220

Accessories (not to scale)

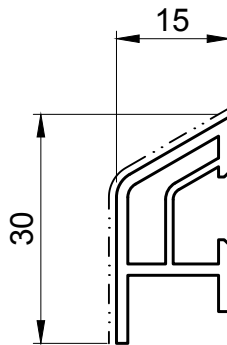
End caps

ES0220



Snap-in head screw

MZ1200

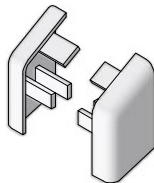


ZF1940

Accessories (not to scale)

End caps

SG1940



Clamping strip

NP1940

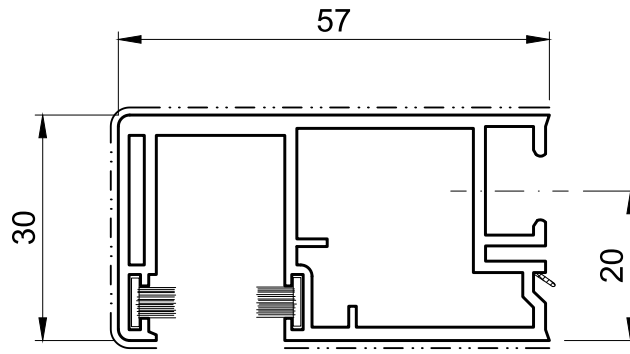


Snap-in head screw

407900



Tapee
416386



Accessories (not to scale)

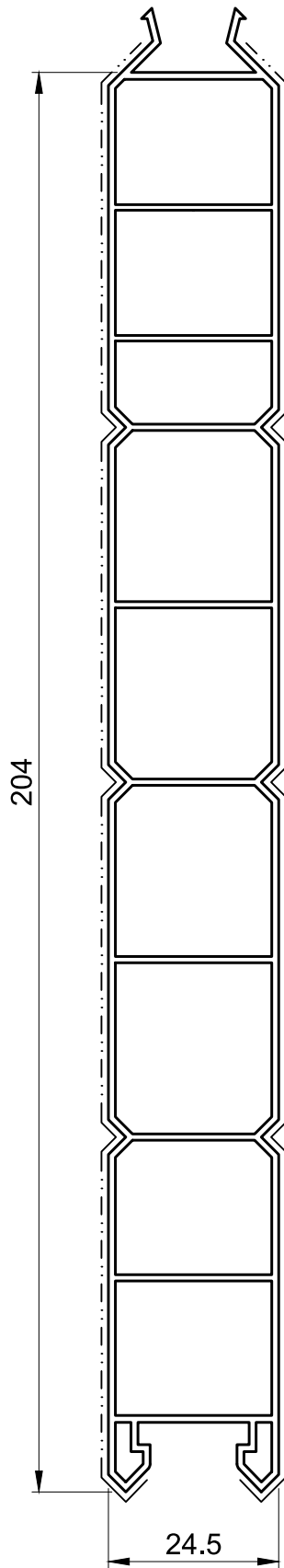
Snap-in head screw

407965

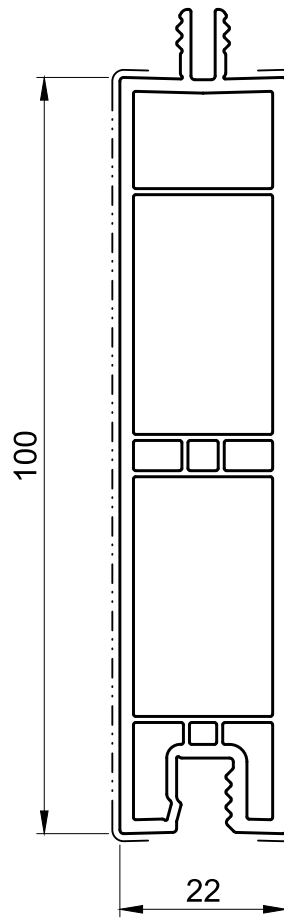


Panel profile
406670

Infill panel
416274



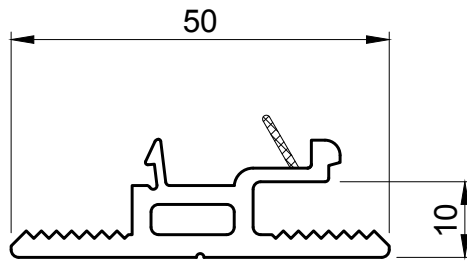
406670



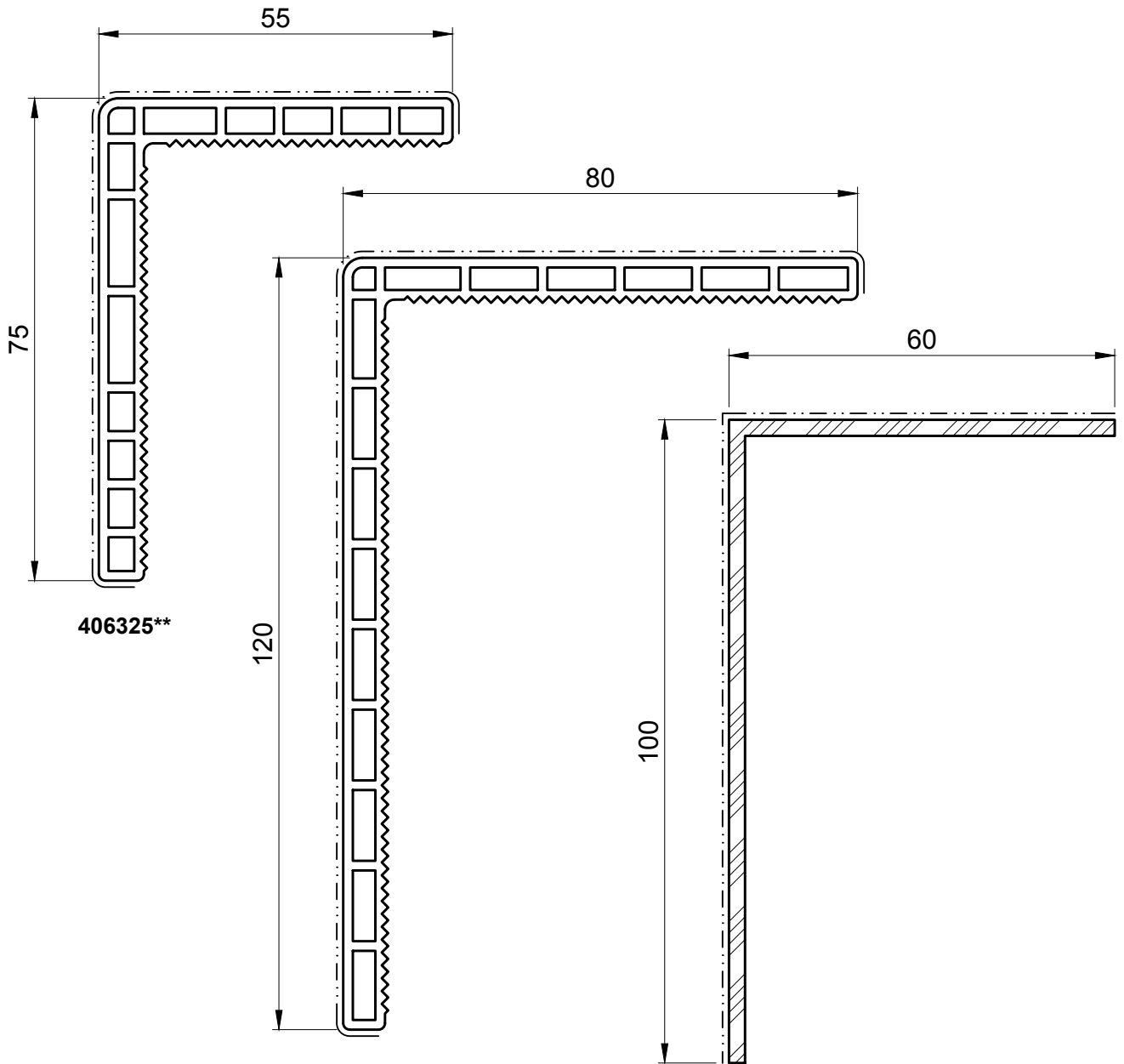
416274

Adapter
416305

Old building angle
406325, 406329, 406660



416305



406325**

406329**

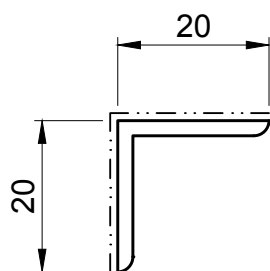
406660
(Aluminium, only in pattern)

i INFO

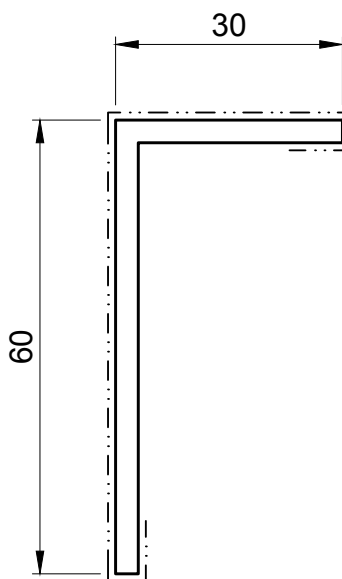
** In decor, use on room side only.

Angle
406319, 406320, 406321

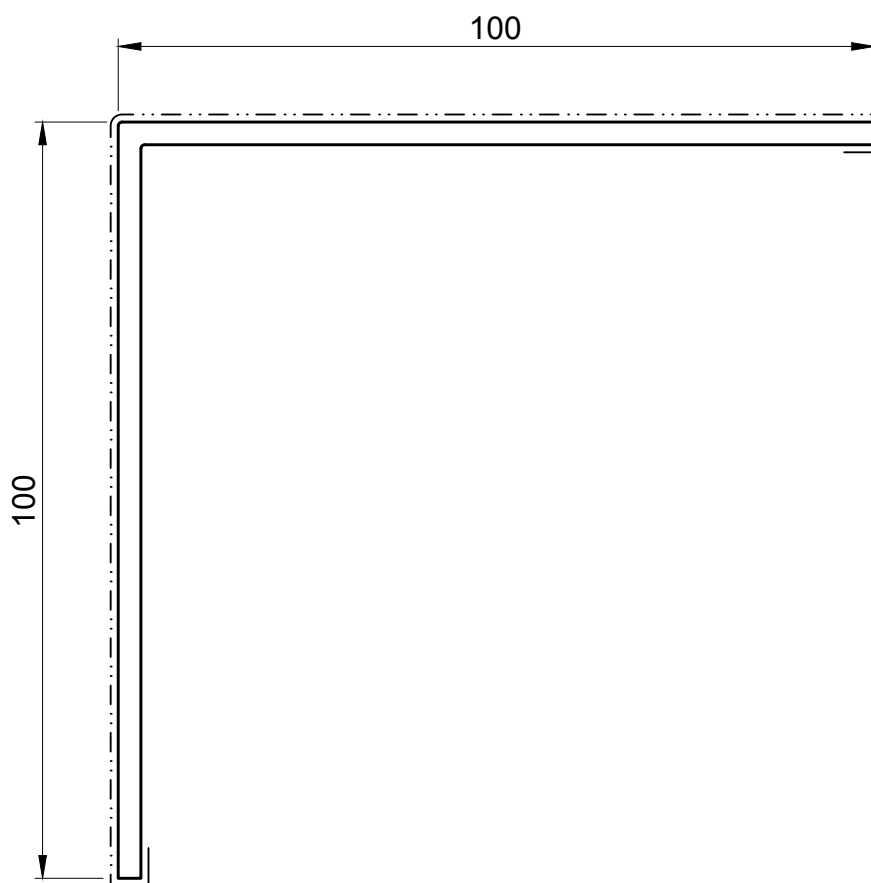
Trim profile
406316



406319



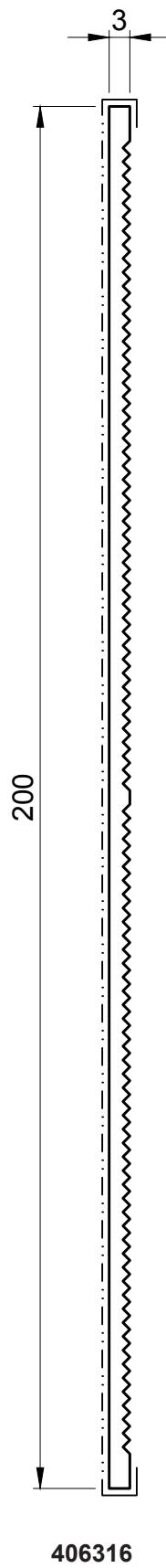
406320



406321

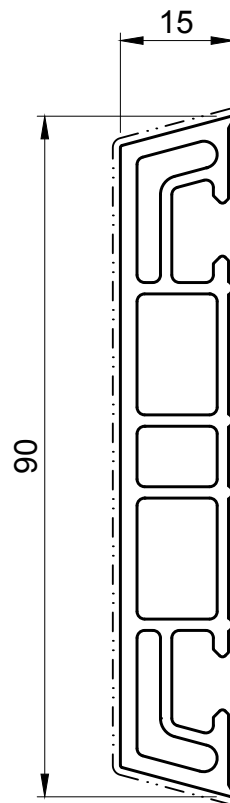
Angle
406319, 406320, 406321

Trim profile
406316



Cover
406340

Snap-on profile
466400



406340

Accessories (not to scale)

Snap-in head screw

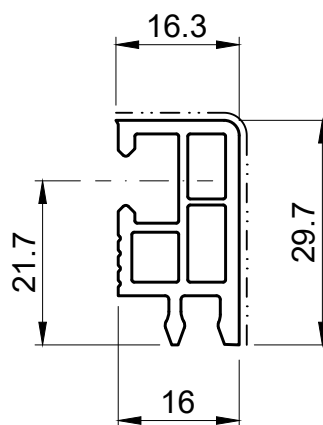
Clamp-strip PVC

Clamp-strip aluminium

407900

406335

406635



466400

Accessories (not to scale)

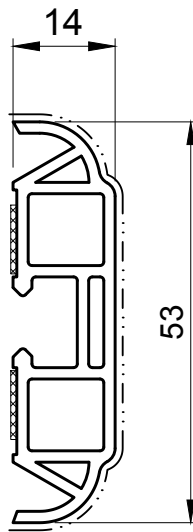
Snap-in head screw

407900



Trim profile, self-adhesive
416312

Inside right-angled profile
NP8250



416312

Accessories (not to scale)

Snap-in head screw

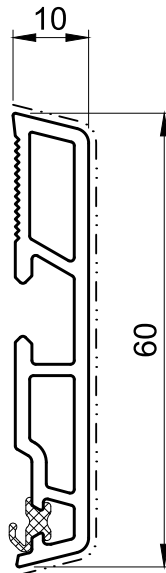
Clamp-strip PVC

Clamp-strip aluminium

407900

406335

406635



NP8250

Accessories (not to scale)

End caps

Snap-in head screw

Clamp-strip PVC

Clamp-strip aluminium

ES8250

407900

406335

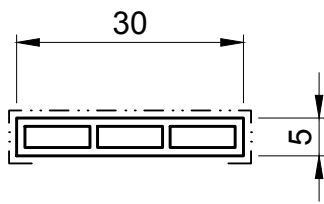
406635



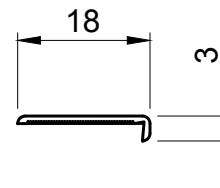
Trim profile
406310, 416331, 416338

Self-adhesive trim profile
406317, 406312, 406315

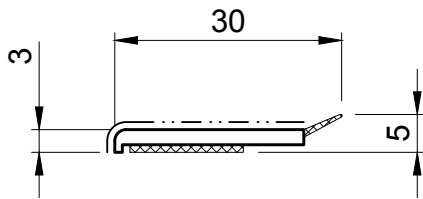
Cover profile
416327, 416337, 416357



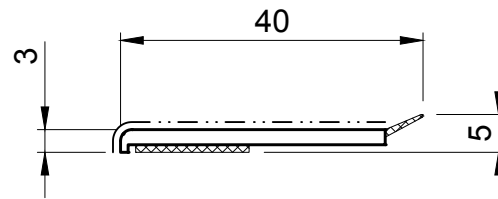
406310**



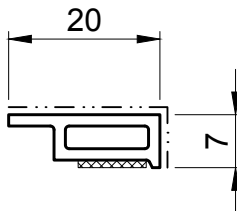
406317**



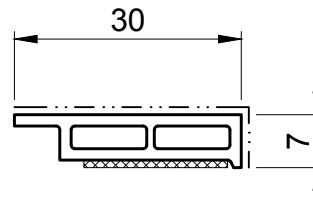
406312**



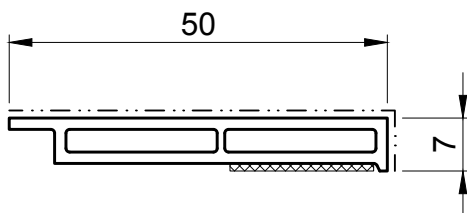
406315**



416327**



416337**



416357**

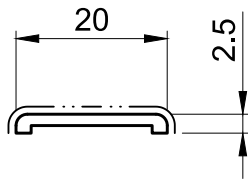
i INFO

** In décor, use on room side only.

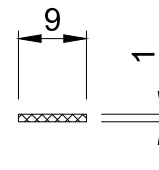
Trim profile
406310, 416331, 416338

Self-adhesive trim profile
406317, 406312, 406315

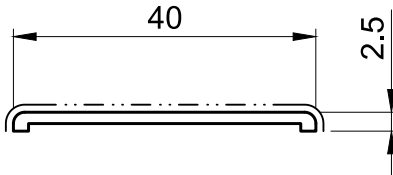
Cover profile
416327, 416337, 416357



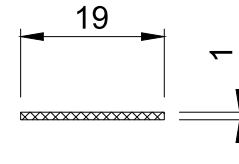
416331**



416332
 for 416331



416338**



416339
 for 416338

i INFO

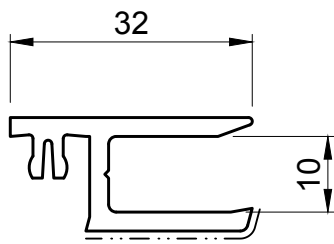
** In décor, use on room side only.

Adapter for cladding
406307

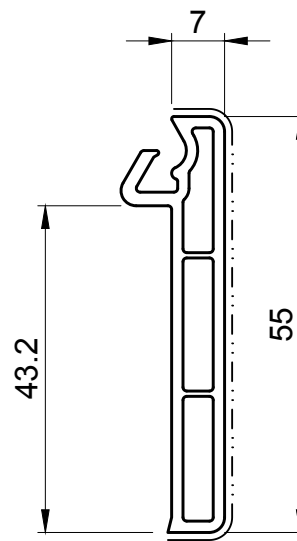
Cover profile
416182

Clip profile
406391

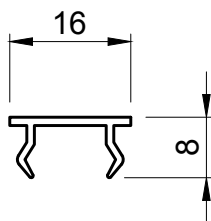
Edge trim
406410, NP0060, NP8000



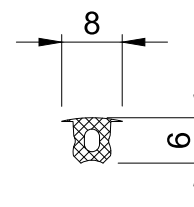
406307



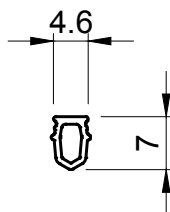
416182



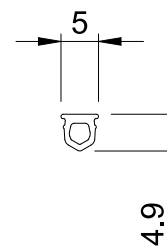
406391



406410



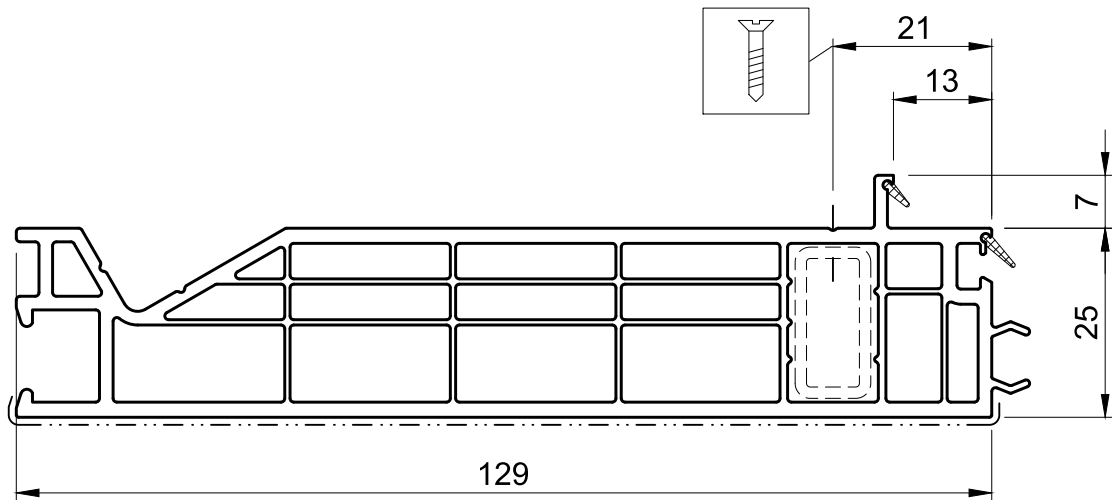
NP0060



NP8000

Cladding
550800, 550801

Panel strip
553424



550800

Accessories

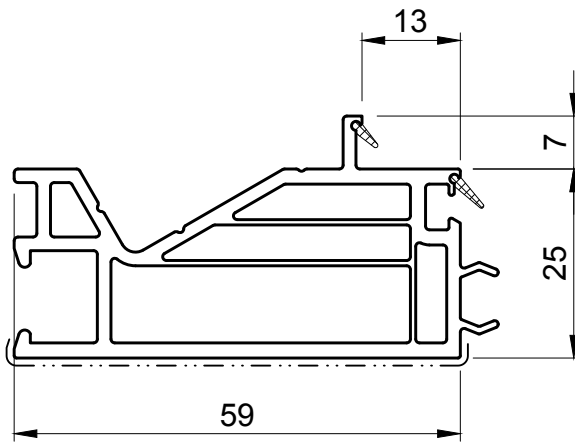
Reinforcement

Steel, galvanised

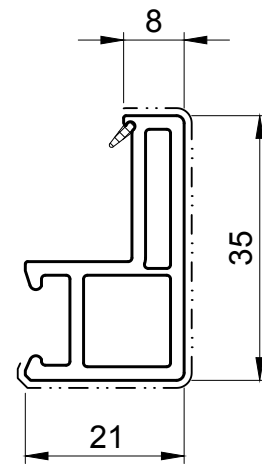
10 x 20 x ... mm.

Thickness according to static guidelines.

Purchase through steel trade.



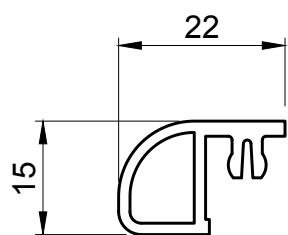
550801



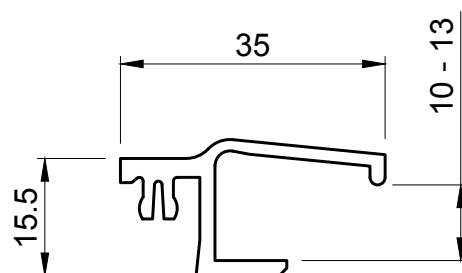
553424

Roller shutter crossbar
406051, 416056

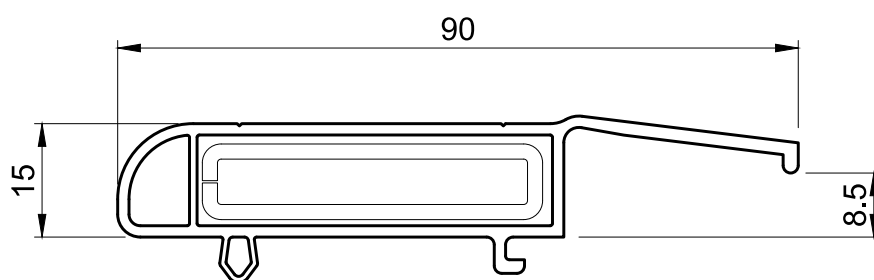
Cover connection
406053



406051



406053

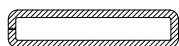


416056

Accessories (not to scale)

Reinforcement

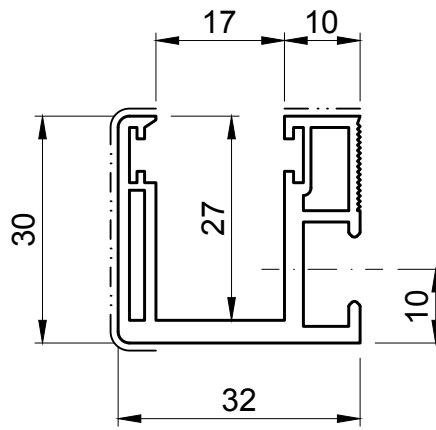
405012



Roller shutter guide
406065

Reinforcement
406066

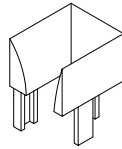
Roll-off profile
406050



406065

Accessories (not to scale)

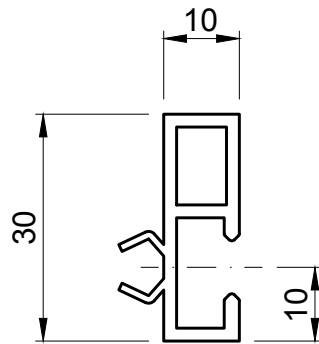
Inlet funnel
407065



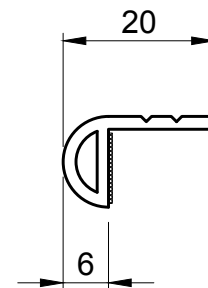
Snap-in head screw
407965



Brush seal
404930



406066 (for 406065)



406050
(for 406065)

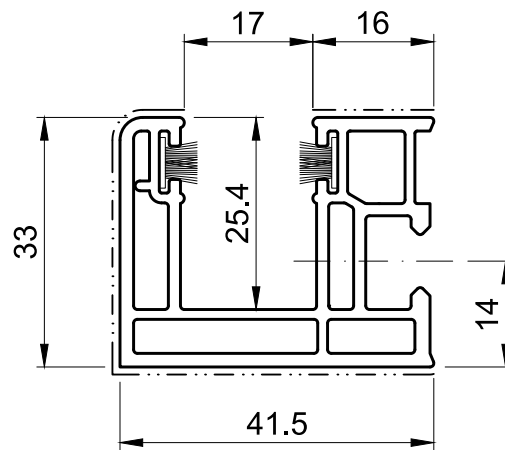
Accessories (not to scale)

Snap-in head screw
407965



Roller shutter guide

406073



Accessories (not to scale)

Inlet funnel

Snap-in head screw

Clamp-strip PVC

Clamp-strip aluminium

Brush seal

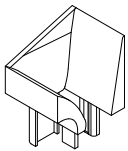
407070

407900

406335

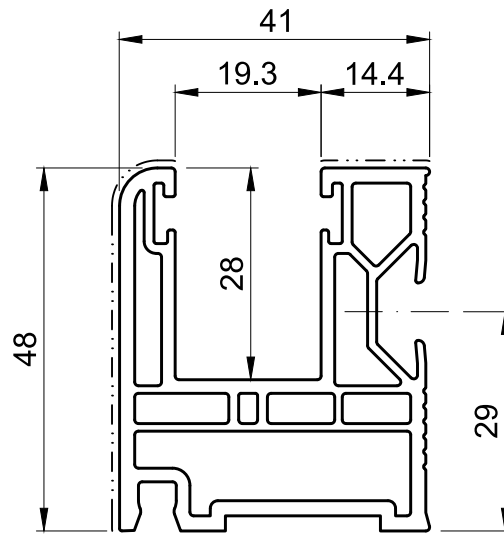
406635

404930



Roller shutter guide
416086

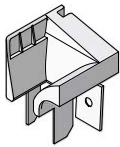
Reinforcement
406081



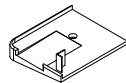
416086

Accessories (not to scale)

Inlet funnel
417082



End cap
417081



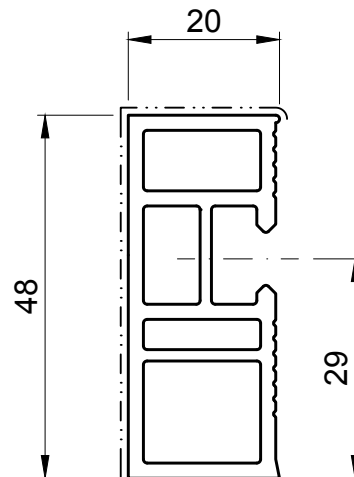
Snap-in head screw
407900



Clamping strip
NP1940



Brush seal
404935



406081

Accessories (not to scale)

Snap-in head screw
407900



Clamping strip PVC
406335

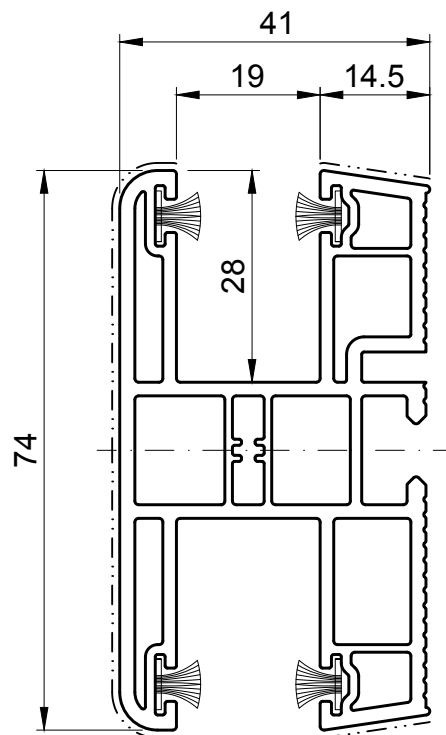


Clamping strip aluminium
406635



Roller shutter guide

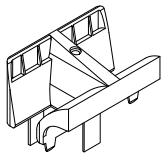
416096



Accessories (not to scale)

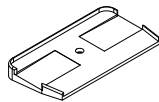
Inlet funnel

417096



End cap

417095



Snap-in head screw

407900



Clamp-strip PVC

406335



Clamp-strip aluminium

406635



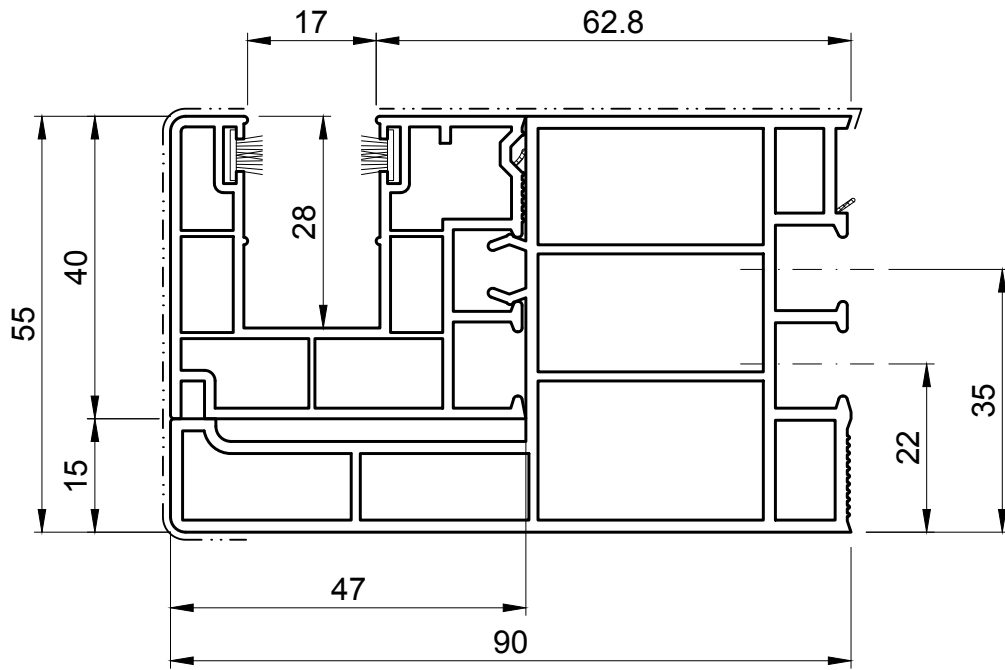
Brush seal

404935



Roller shutter guide
556070

Roll-off profile
556075



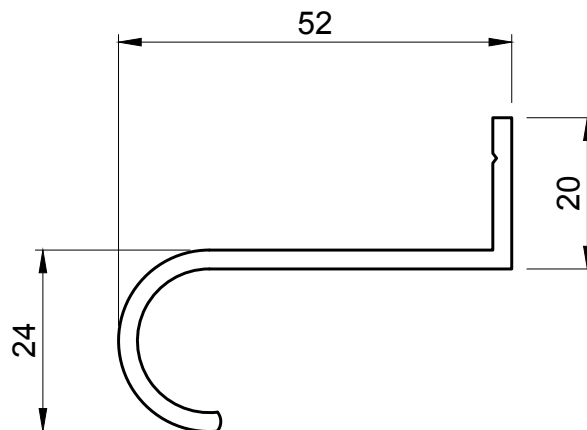
556070

Accessories (not to scale)

Inlet funnel
557170

Snap-in head screw
407965

Brush seal
404930

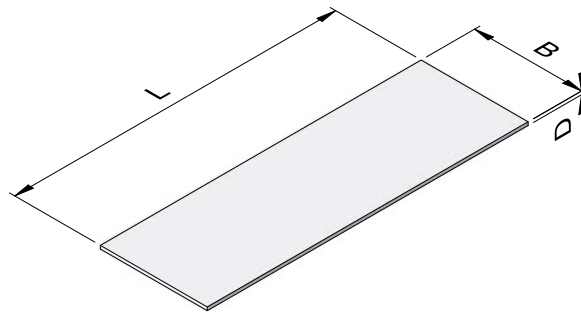


556075

PVC panel
407912

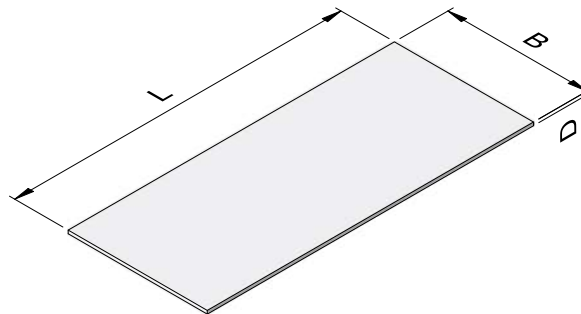
Laminate panel
407914

Sandwich panel
407920



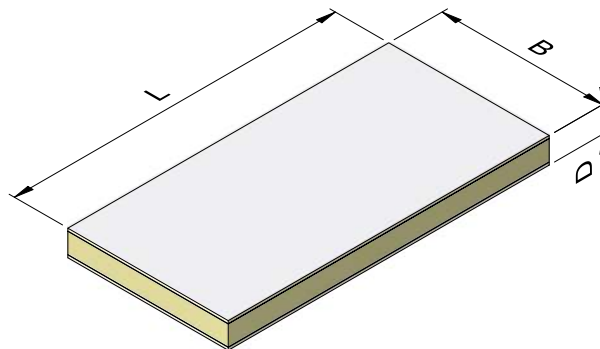
407912

White, L x W: 3000 x 1000 mm
D = 3 mm



407914

Decor, L x W: 3050 x 1300 mm
D = 3 mm

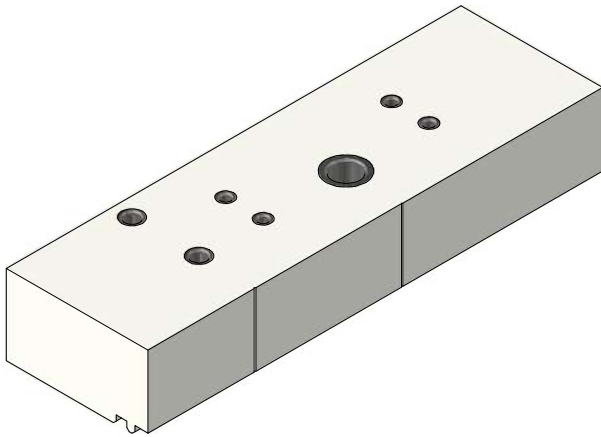


407920

White, L x W: 3000 x 1500 mm
Decor, L x W: 3050 x 1300 mm
D = 24 mm
U-value: 1.348

Drilling jigs

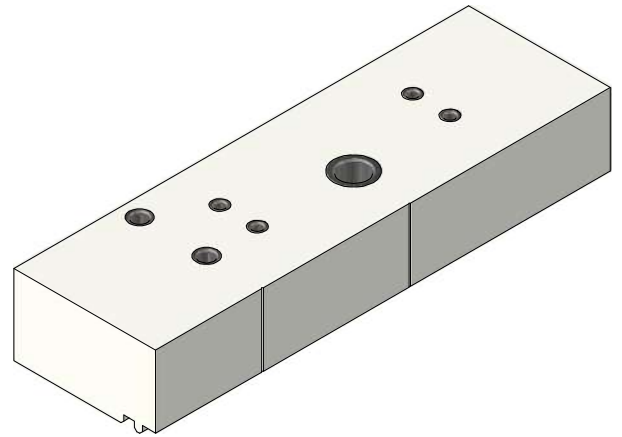
427002, 427003, 427004



427003

Drilling jig

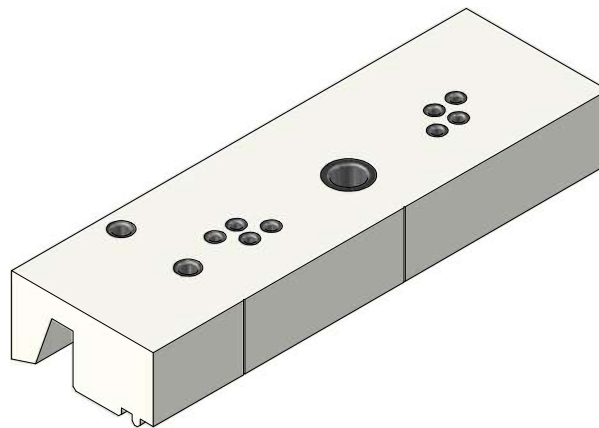
for fixed-mullion connectors 428004, 428009



427002

Drilling jig

for glazing bar connector 428000



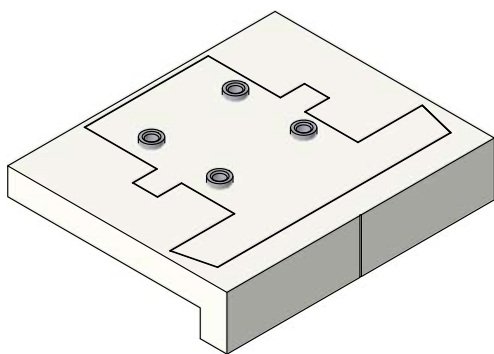
427004

Drilling jig

for fixed-mullion connectors 428006, 428010, 428041, 428045

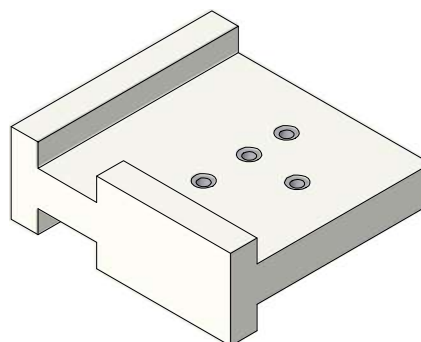
Drilling jig threshold

427041, 427042, 427043



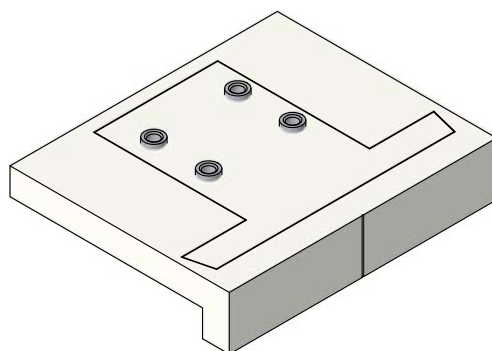
427041

Threshold drilling template
for threshold connector 428030
or
for fixed mullion 722006



427042

Threshold drilling template
for threshold connector 428013, 428014
or
for frame 720003, 720004, 720023

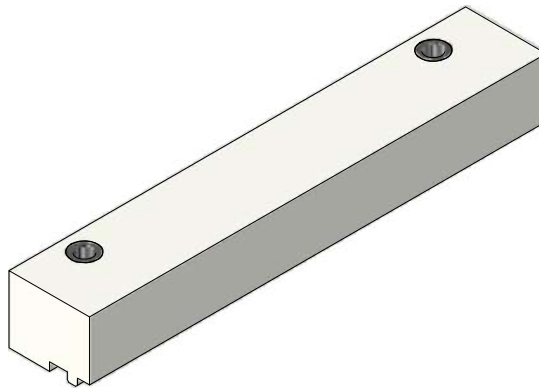


427043

Threshold drilling template
for threshold connector 428030
or
for fixed mullion 722005

Drilling jig for mounting holes

417008



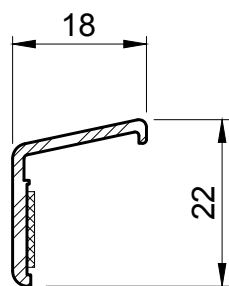
417008
Drilling jig
for mounting holes
Frame MD 720004

Kick plate, self-adhesive

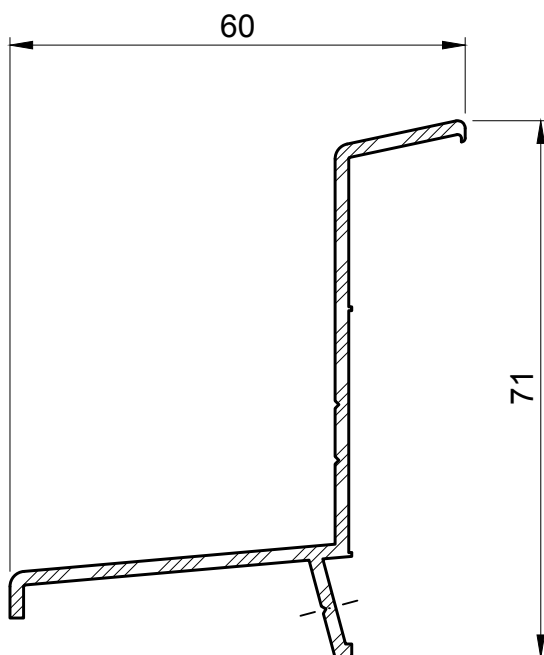
216620

Kick plate

216615



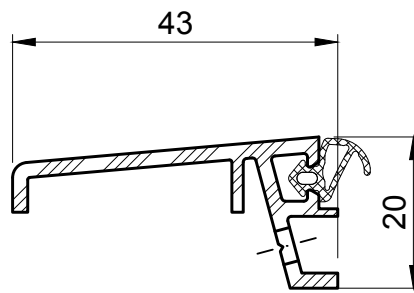
216620



216615

Kick plate

416615, 416616

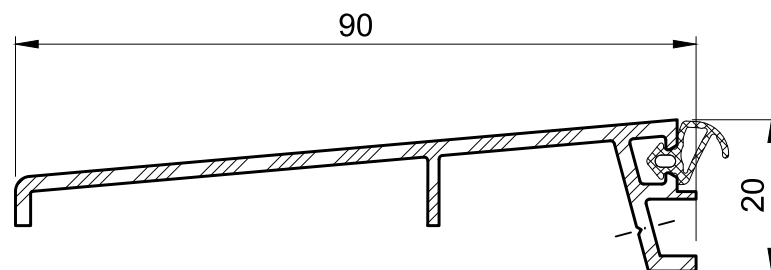


416615

Accessories (not to scale)

Gasket

414025



416616

Accessories (not to scale)

Gasket

414025

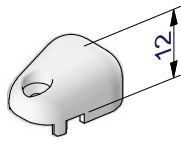


Sash-supporter component (run-up block)
447015

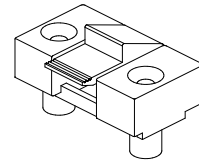
Fixed glazing clip
ES1010

Water slot cap
417025

Cap
407025



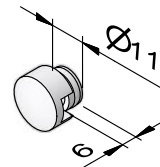
447015
 for frame



ES1010
 for leaf/casement with 16 mm hardware groove



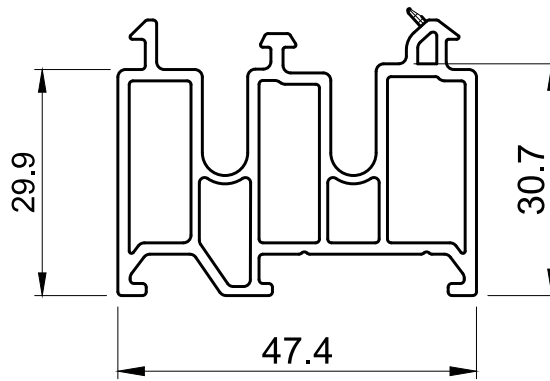
417025



407025

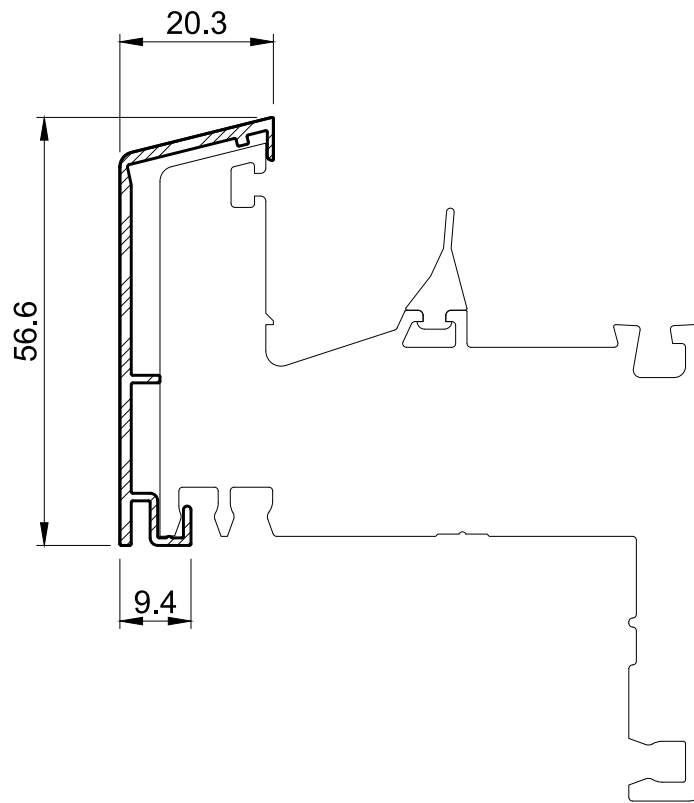
Transport protection profile

416000



Aluminium cover profile Frame

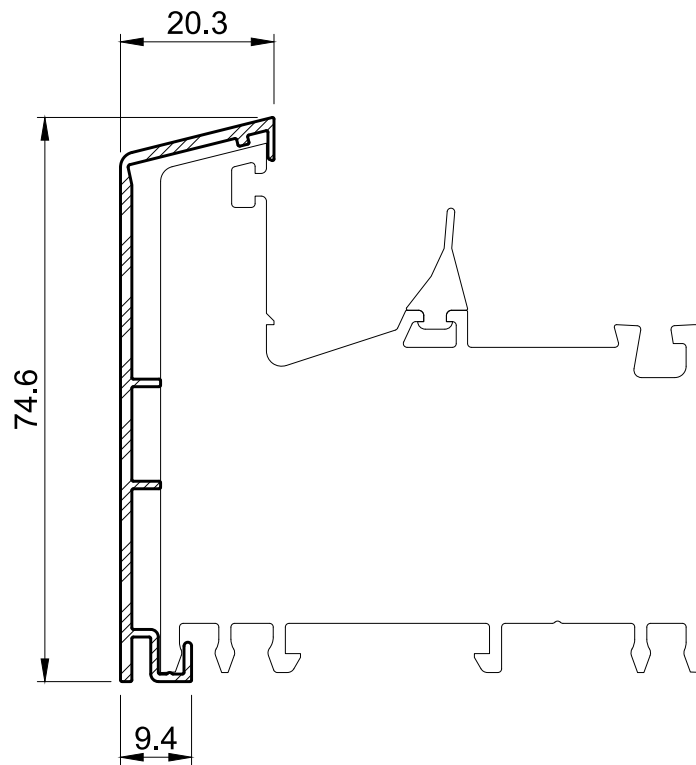
429001



i INFO

Insert 429001 for frames 720022, 720024.

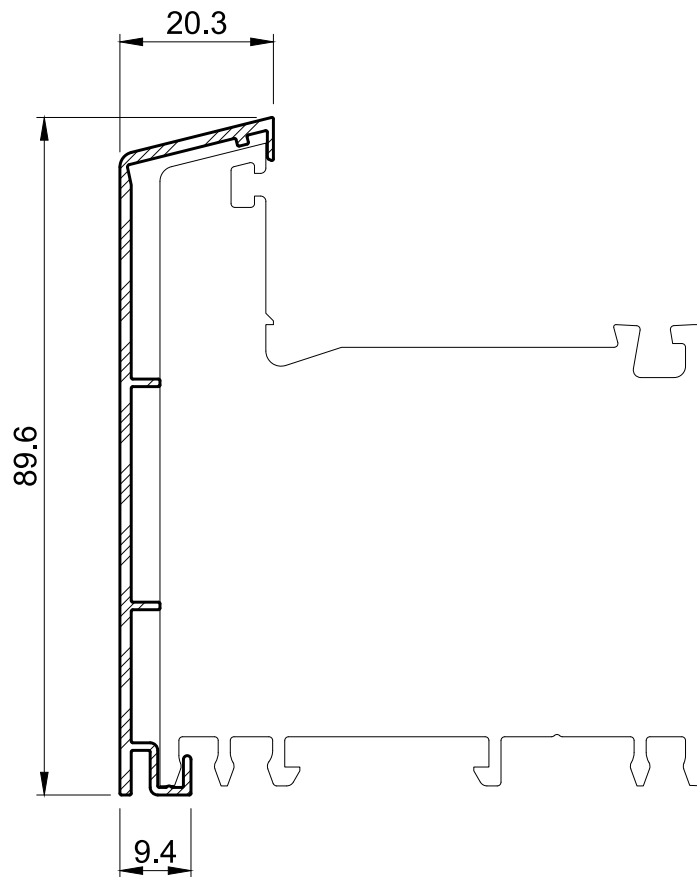
Aluminium cover profile Frame

469001**i** INFO

Insert 469001 for frames 720003, 720004.

Aluminium cover profile Frame

469002

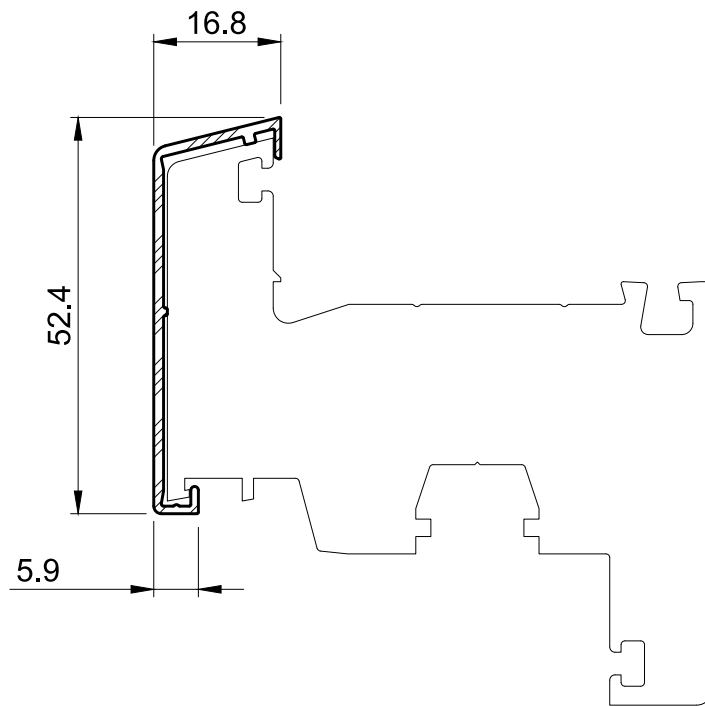


i INFO

Insert 469002 for frame 720023.

Aluminium cover profile Sash

429002

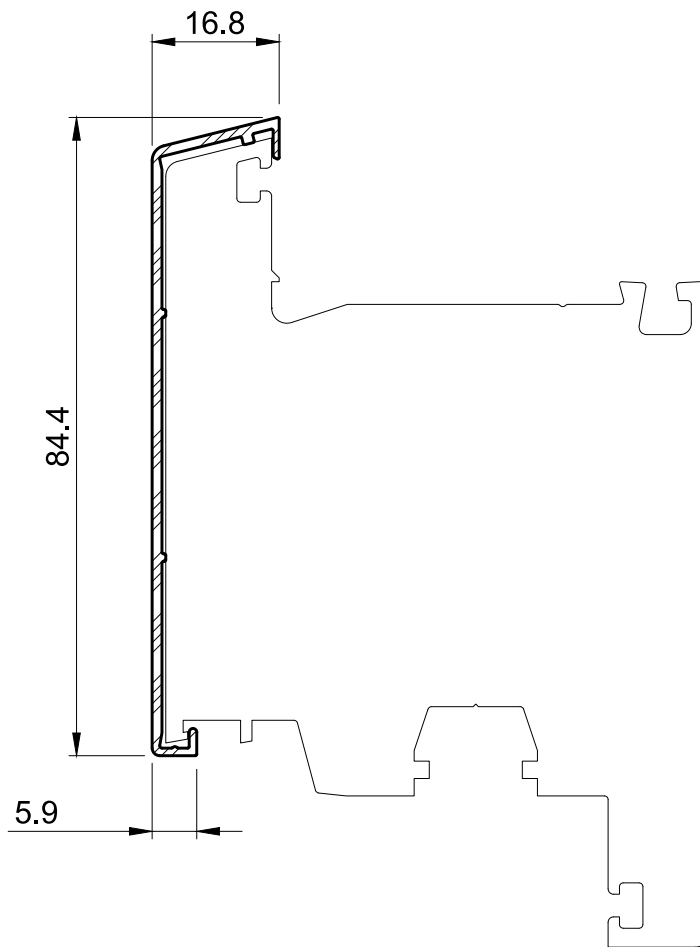


i INFO

Insert 429002 for sash 721001.

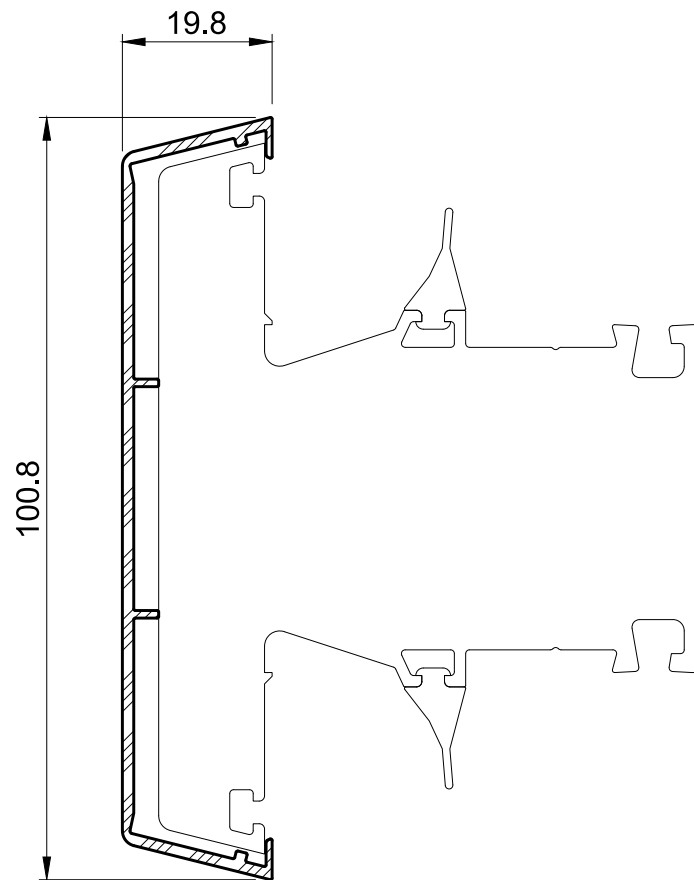
Aluminium cover profile Sash

429003



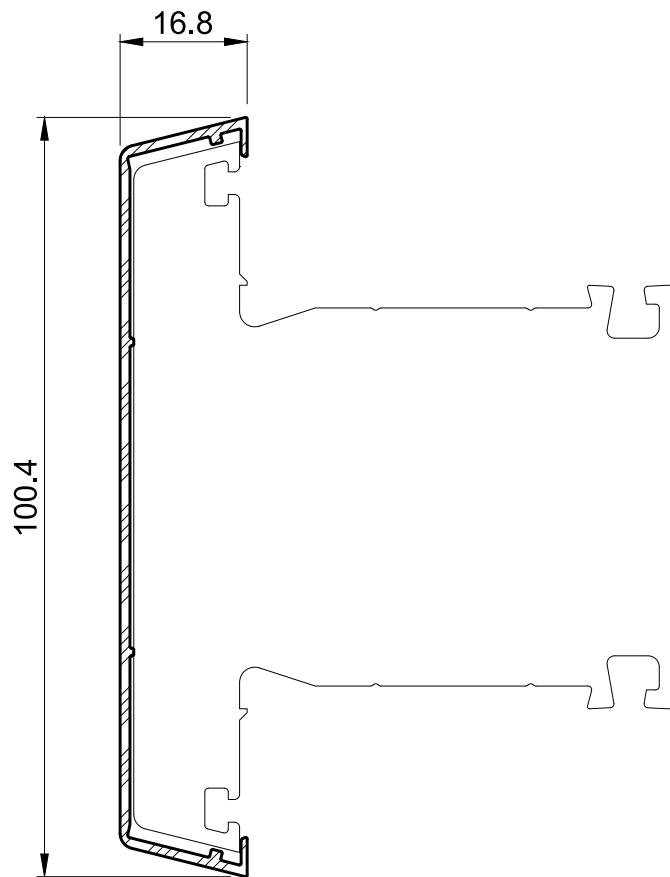
i INFO

Insert 429003 for sash 721008.

Aluminium cover profile Fixed mullion, glazing bar
429004**i** INFO

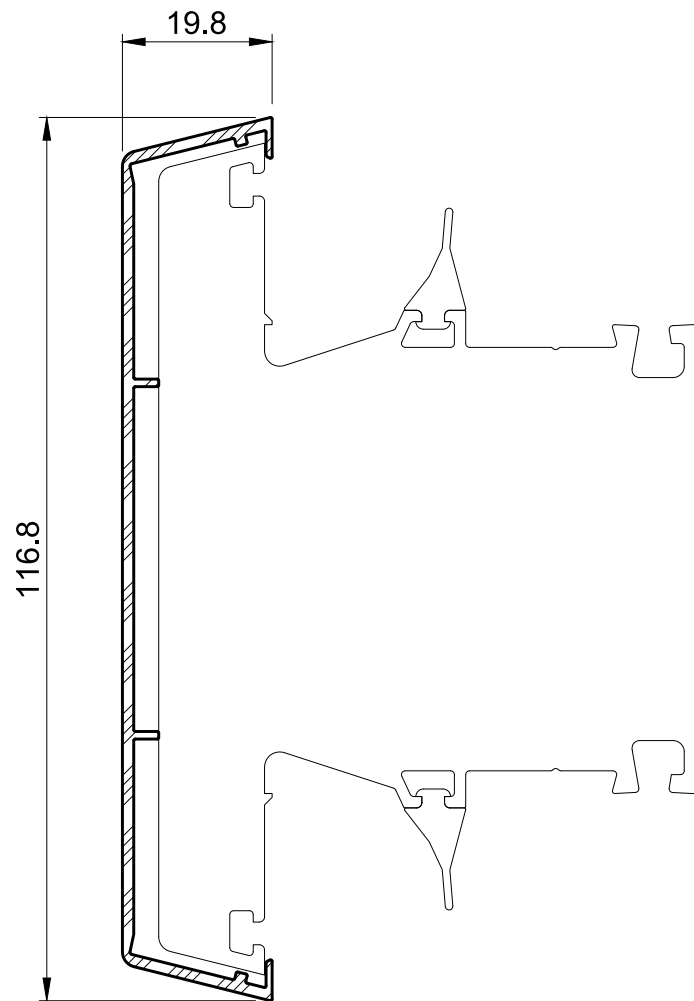
Insert 429004 for fixed mullions 722005, 722006 and glazing bar 722000.
For application as fixed mullion in frame.

Aluminium cover profile Fixed mullion, glazing bar
429005



i INFO

Insert 429005 for glazing bar 722000.
For application as glazing bar in sash.

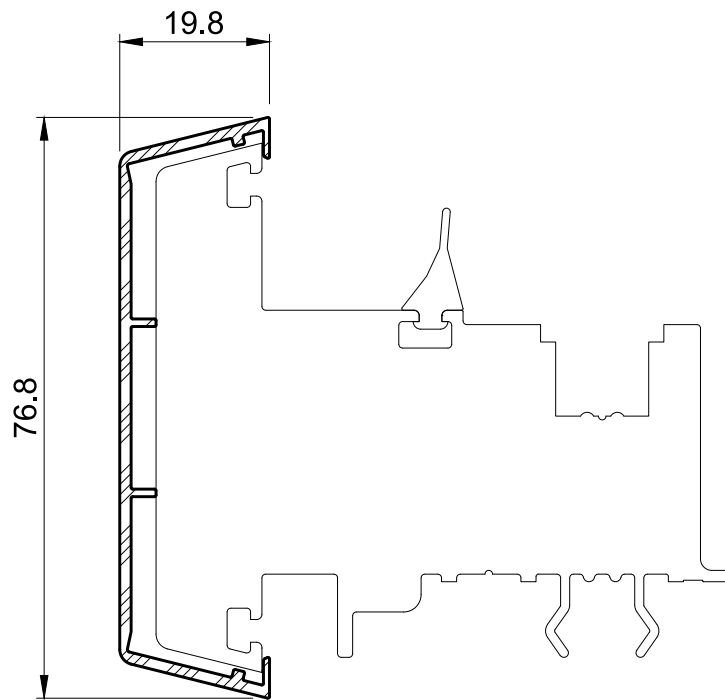
Aluminium cover profile Fixed mullion, glazing bar
469013**i INFO**

Insert 469013 for fixed mullions 722010.

For application as fixed mullion in frame.

Aluminium cover profile Floating mullion

469015



Accessories (not to scale)

Floating-mullion end cover cap

467025



i INFO

Insert 469015 for floating mullions 726003, 726004.

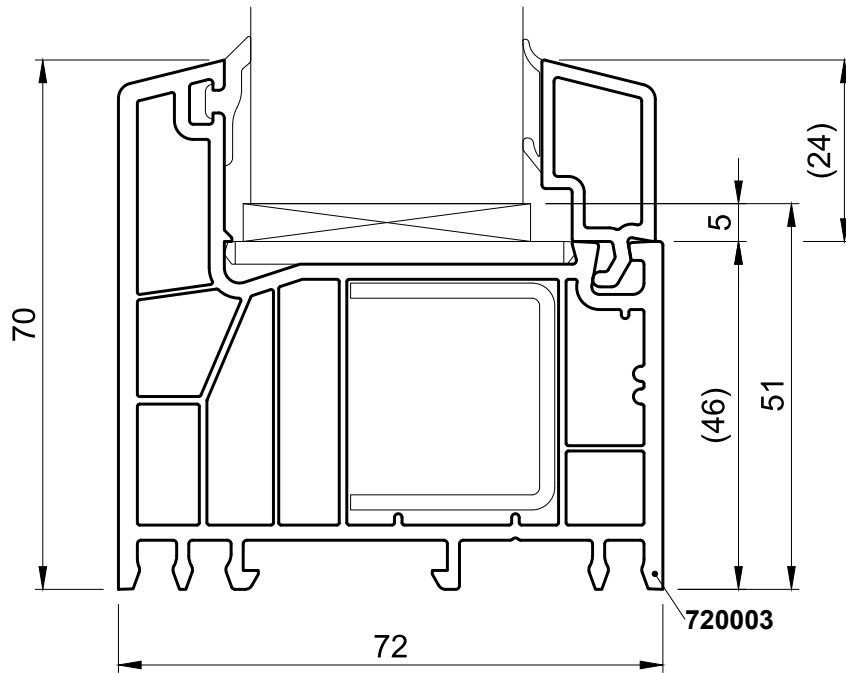
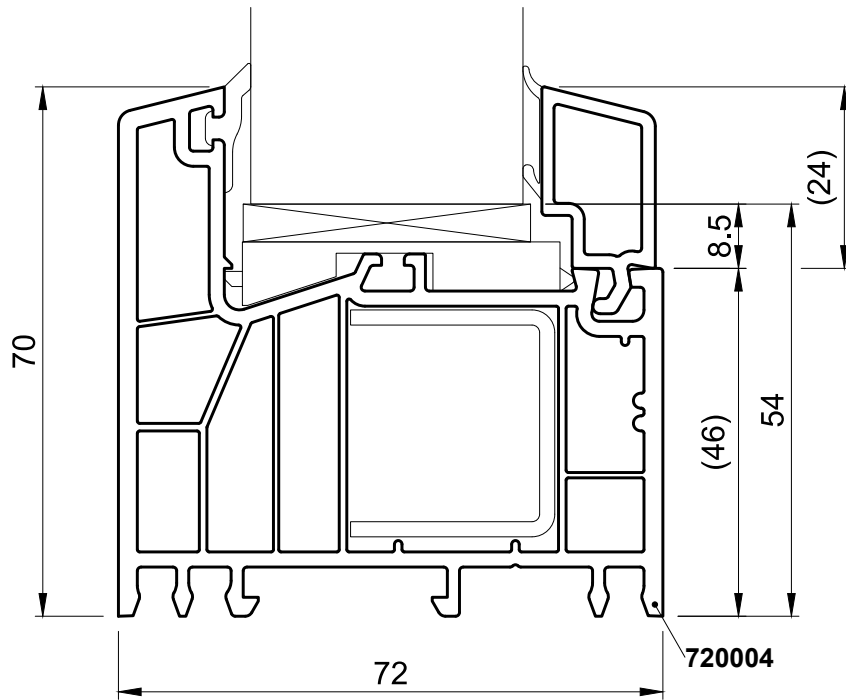
Chapter 4

Profile combinations

Designation	Page
Fixed glazing / fixed light frame	1
Sash - Frame	5
Fixed glazing / fixed light fixed mullion	31
Fixed glazing / fixed light glazing bar / mullion	34
Sash - Fixed mullion	35
Floating mullion / faceplate	65
Groove cover gasket	77
Thresholds	78
Rebate strengthening	83
Widenings	84
Sill connection	86
Window sill	96
Couplings	97
Static couplings	101
Corner connectors	107
Static profiles (pilaster strips)	110
Cladding profiles	112
Roller shutter guide	117
Kick plate	124
Sash-supporter component (run-up block)	127
Transport protection profile	128
Aluminium cover profiles	129

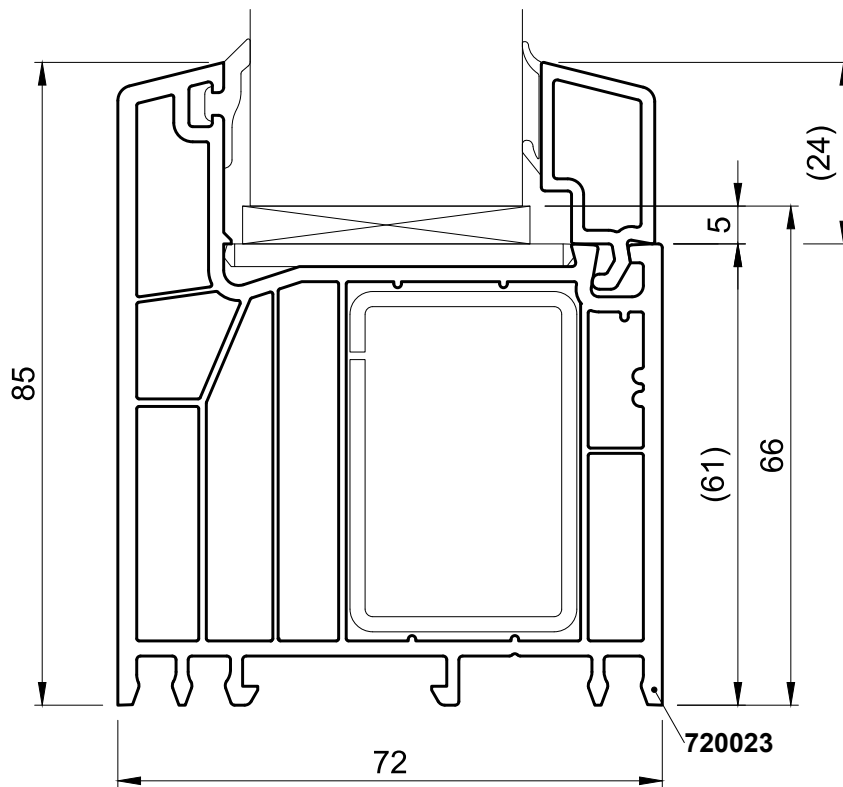
Frames

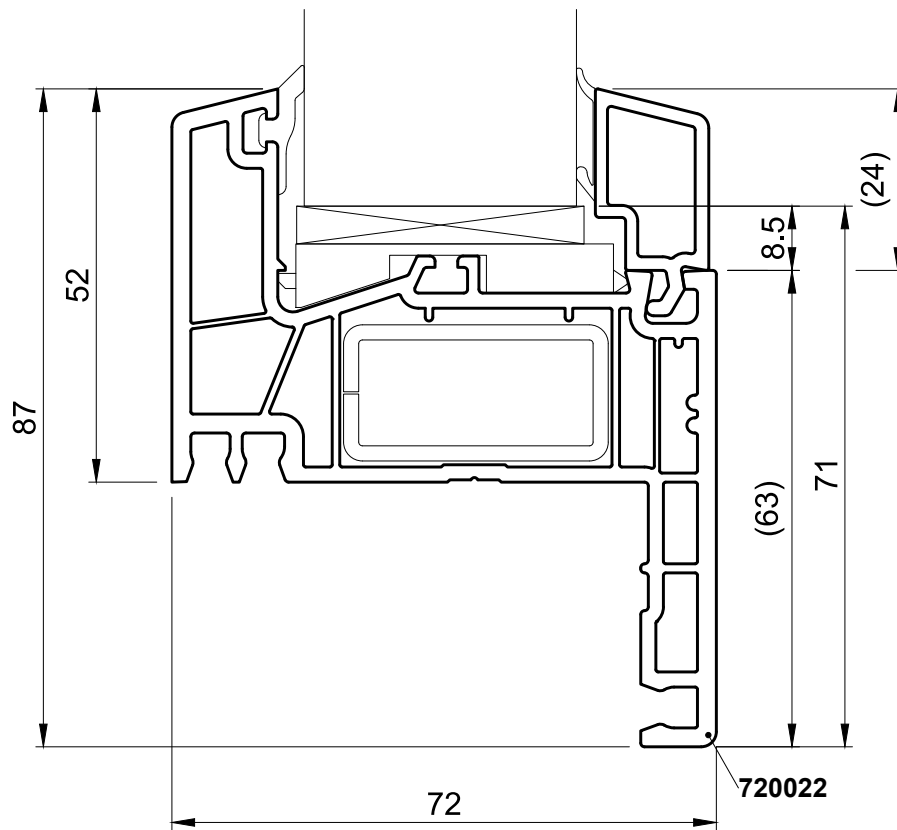
720004, 720003



Frames

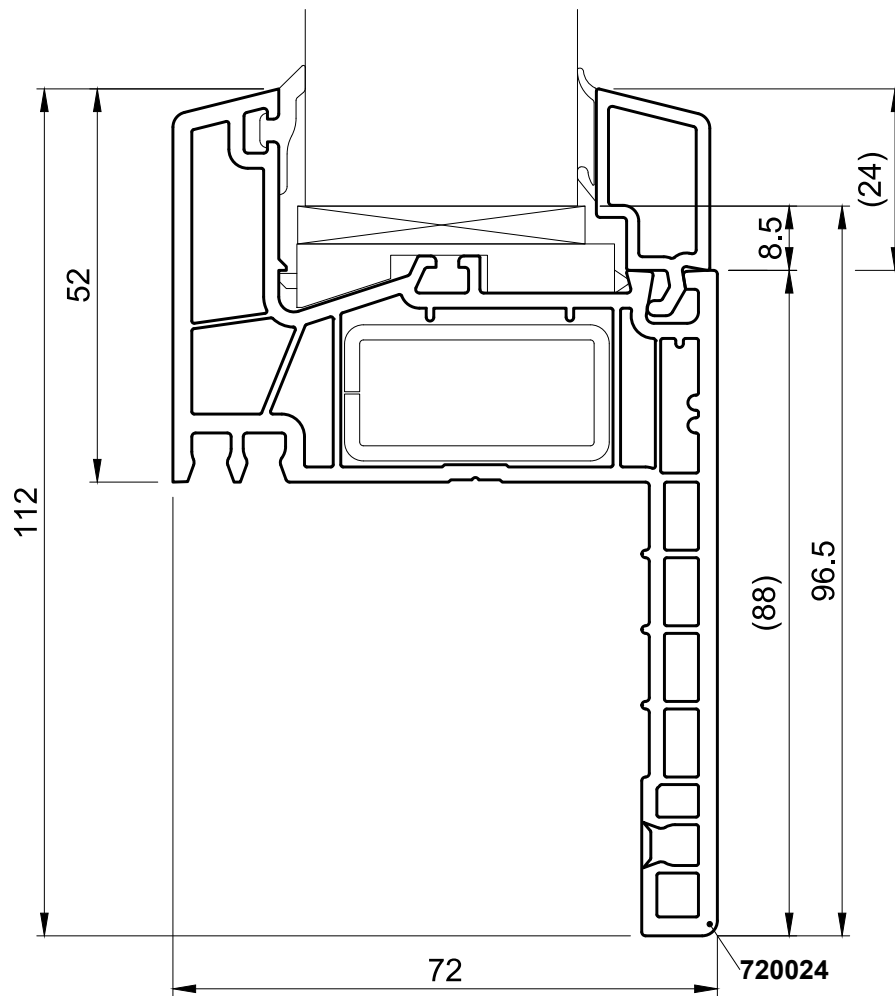
720023





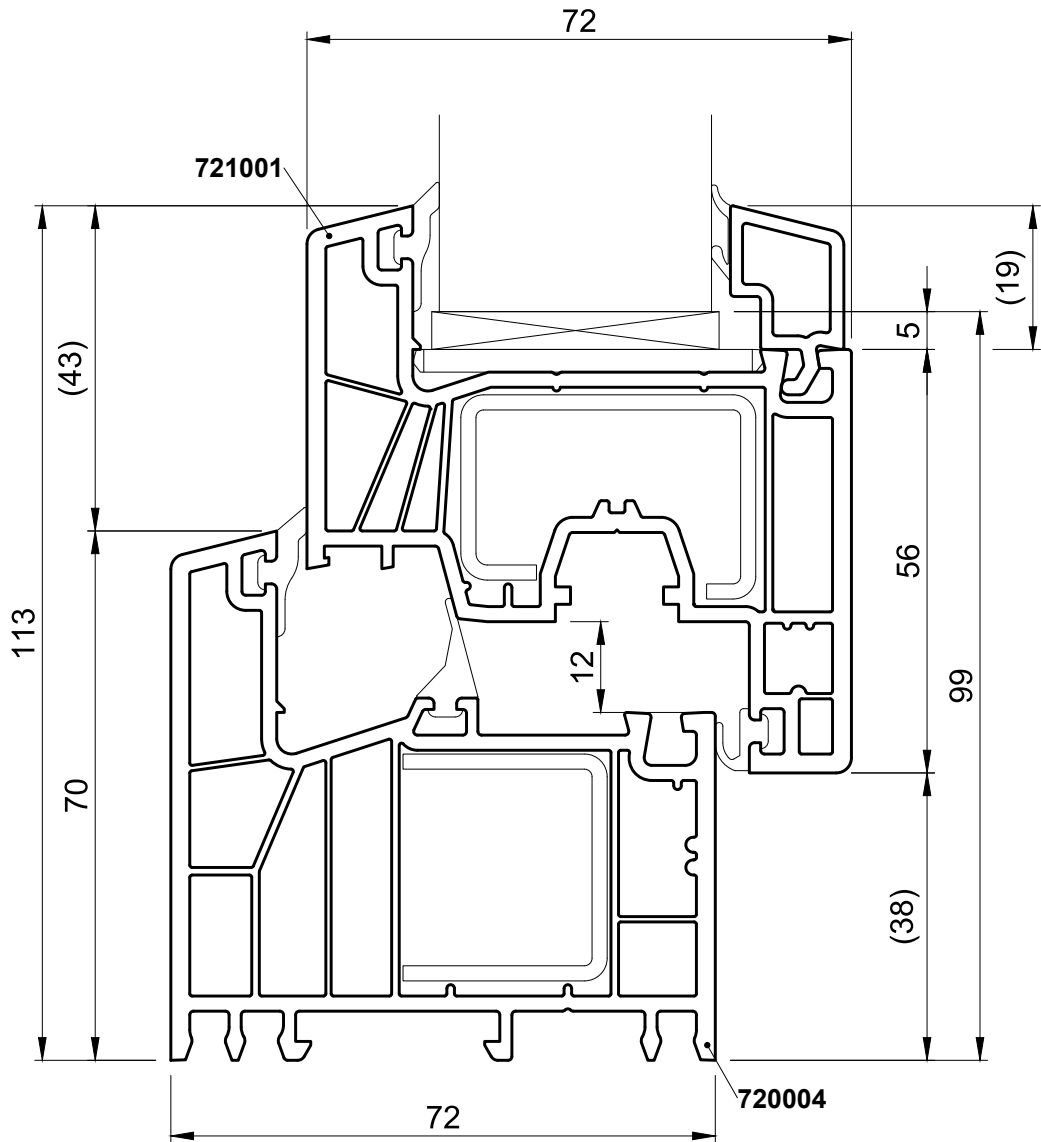
Old building frame

720024



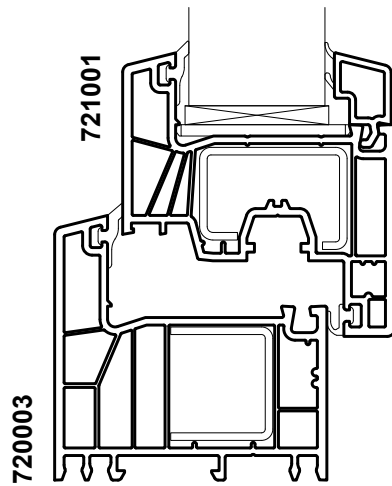
Sash
721001

Frame
720004



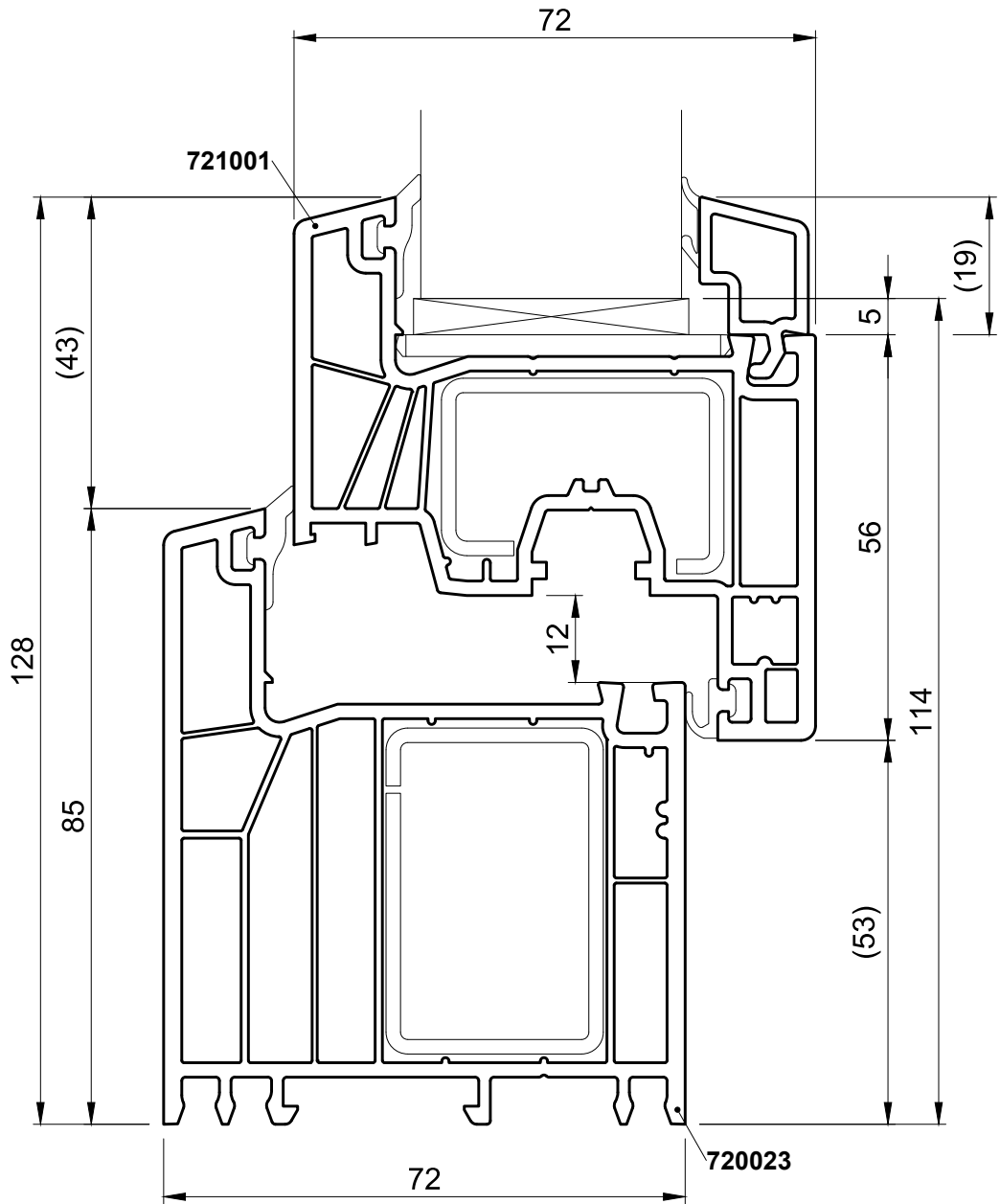
Sash
721001

Frame
720003



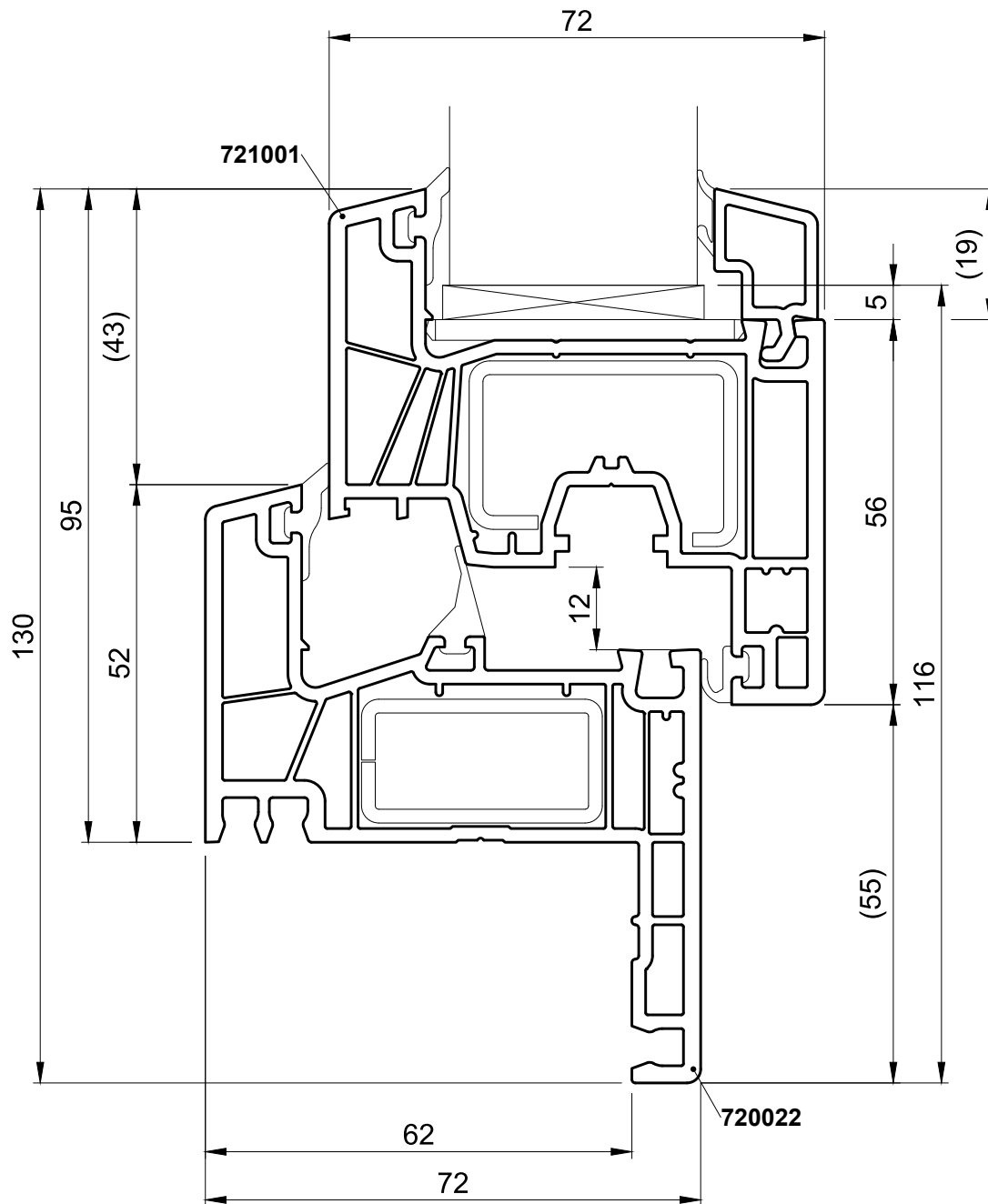
Sash
721001

Frame
720023



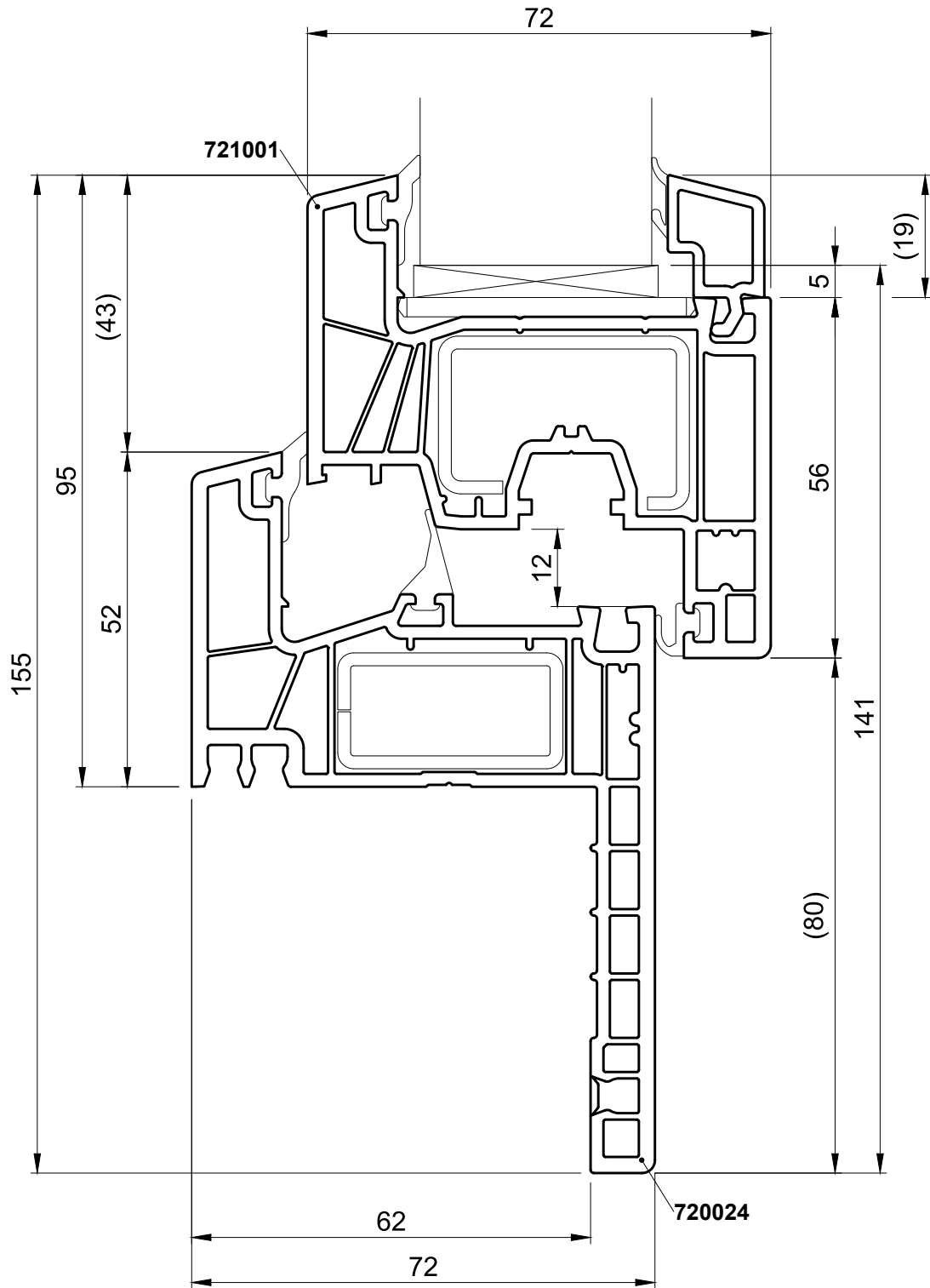
Sash
721001

Old building frame
720022



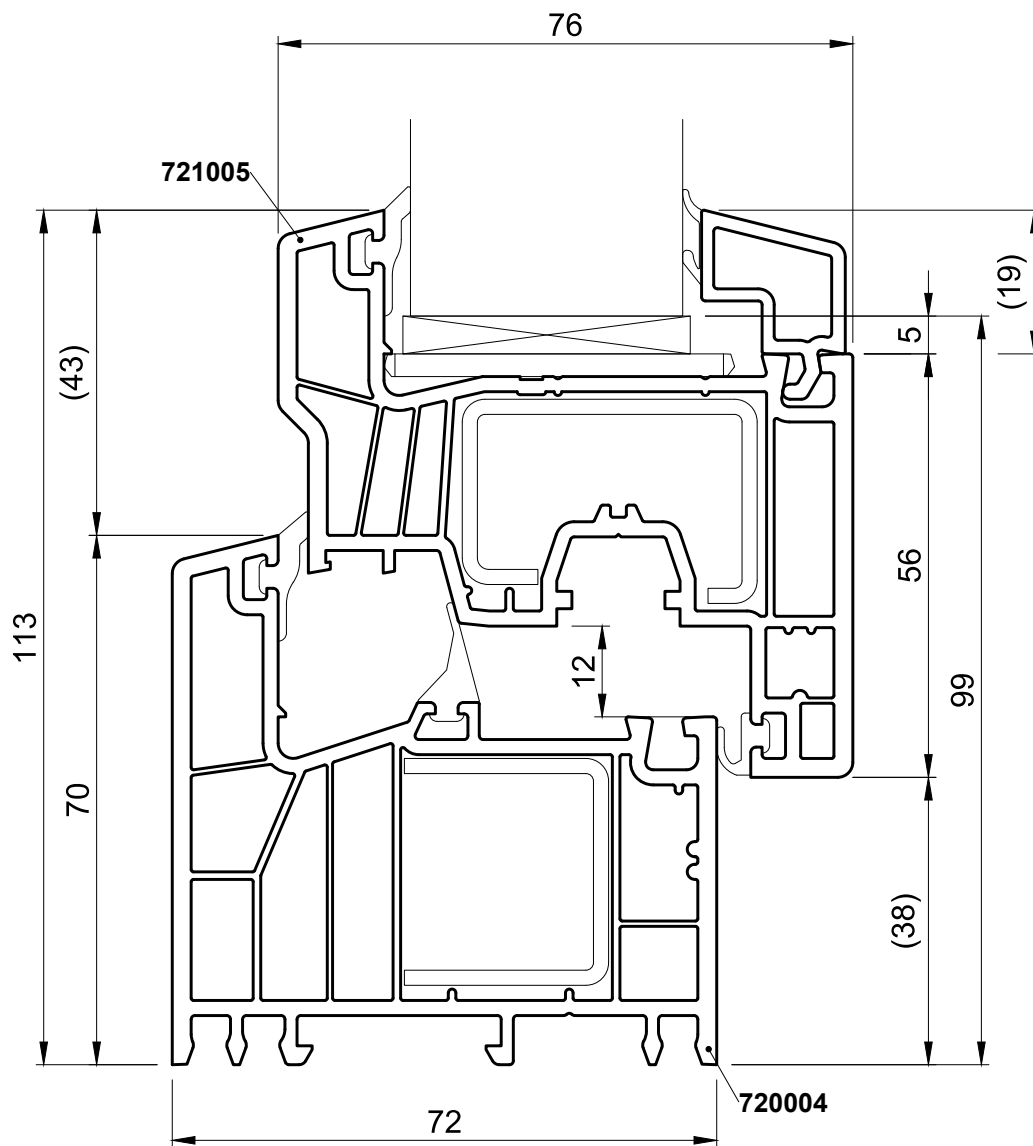
Sash
721001

Old building frame
720024



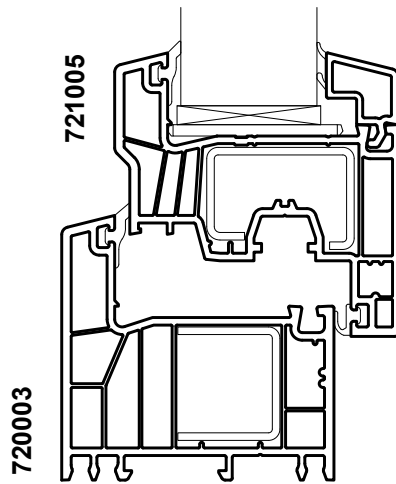
Sash
721005

Frame
720004



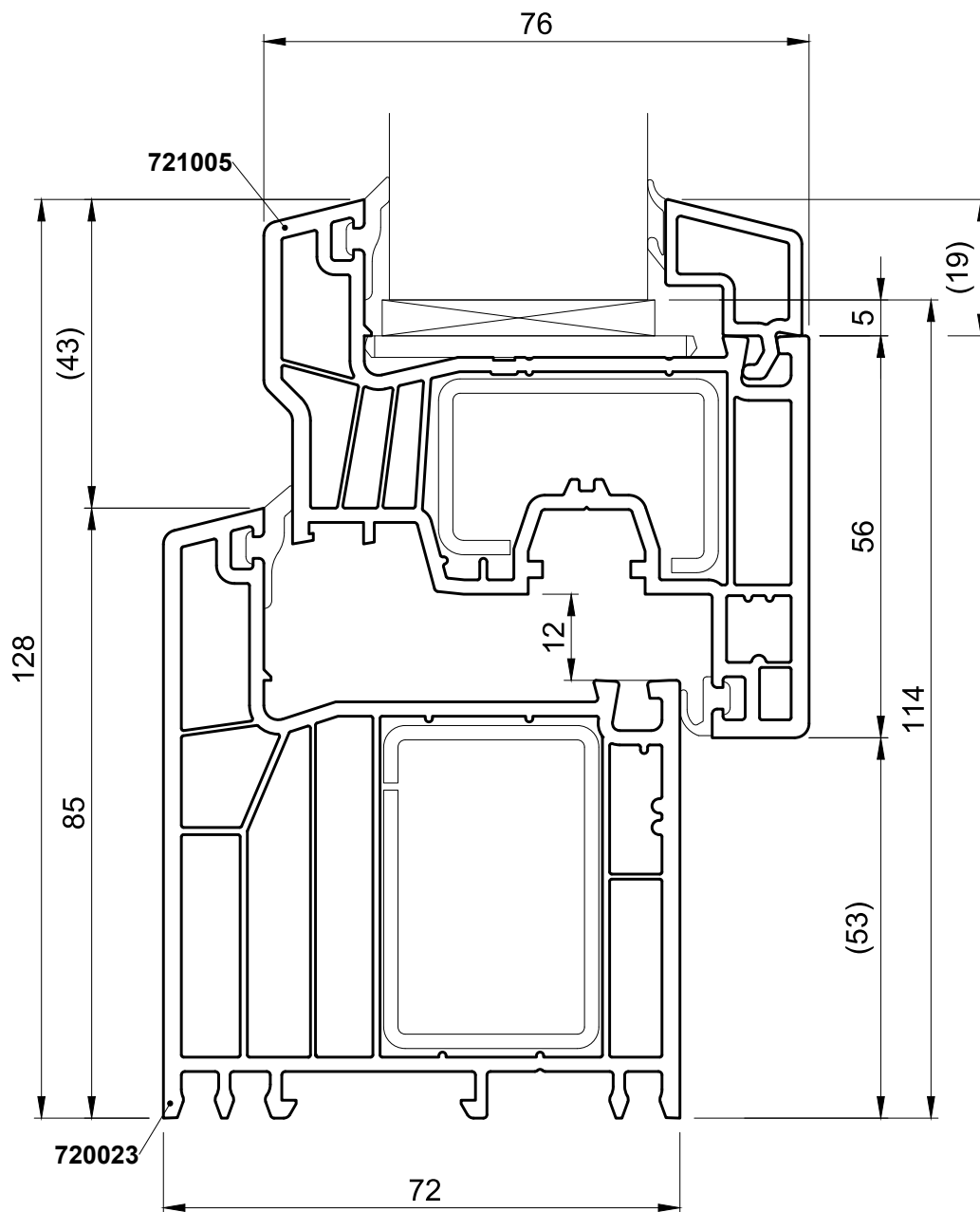
Sash
721005

Frame
720003



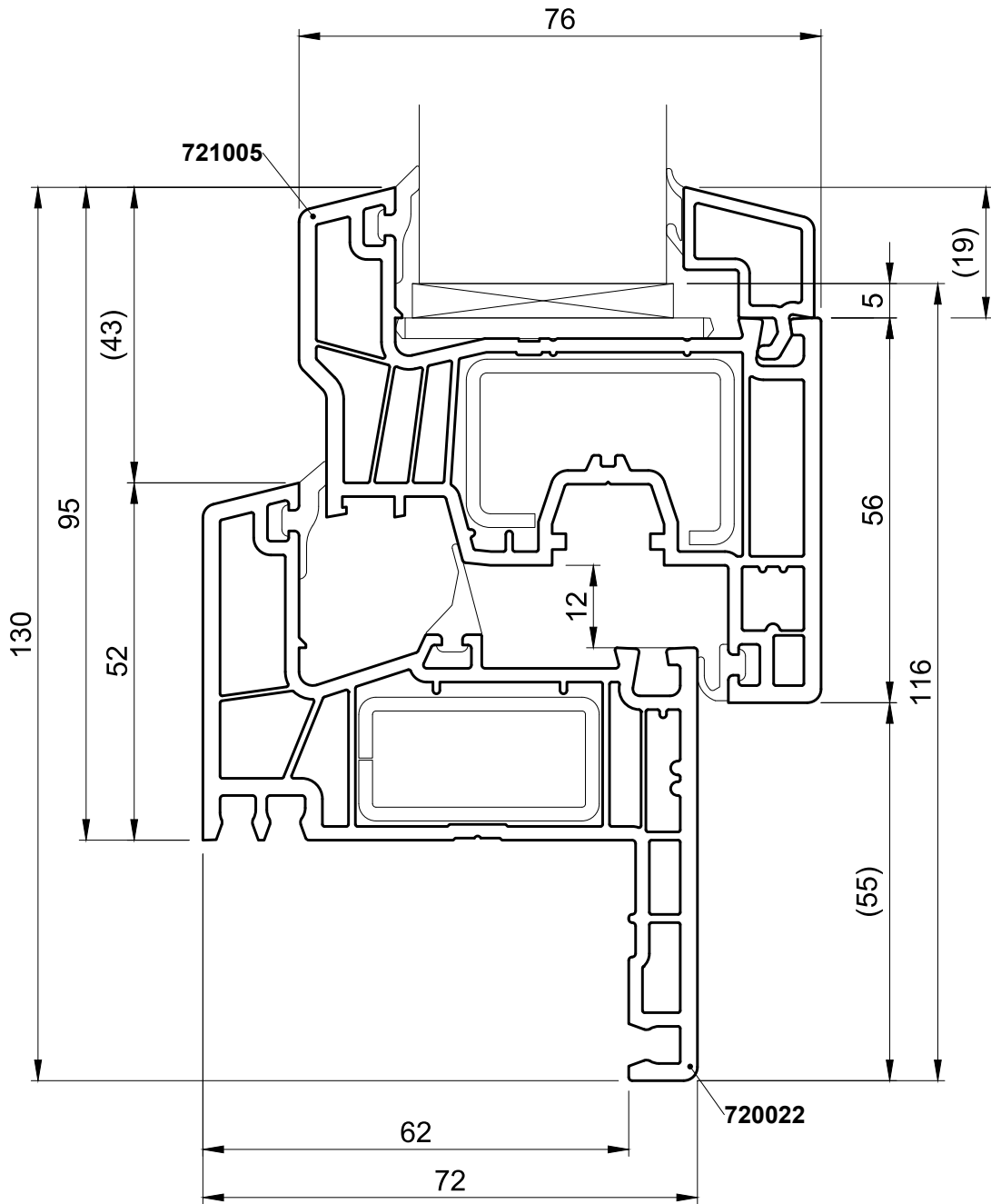
Sash
721005

Frame
720023



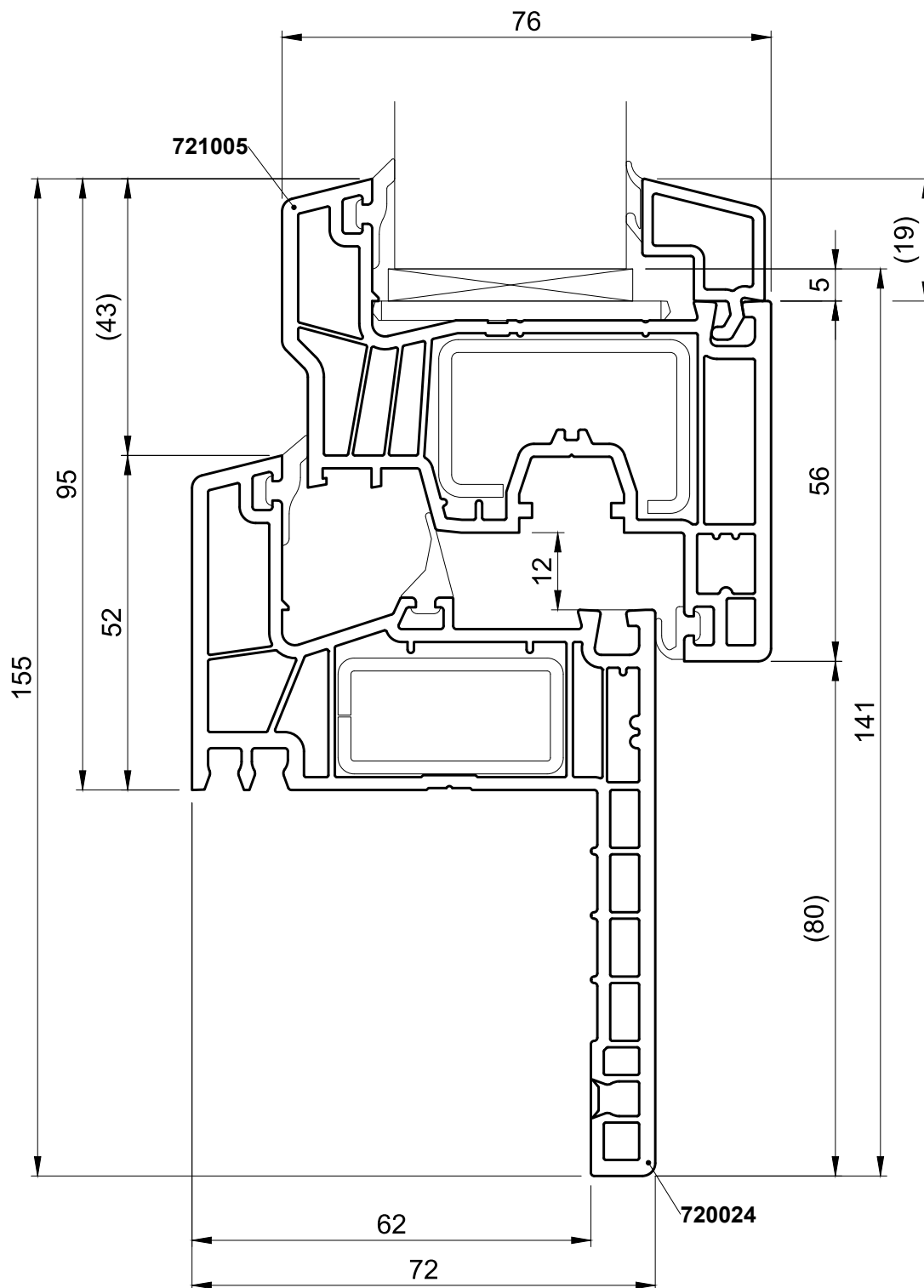
Sash
721005

Old building frame
720022



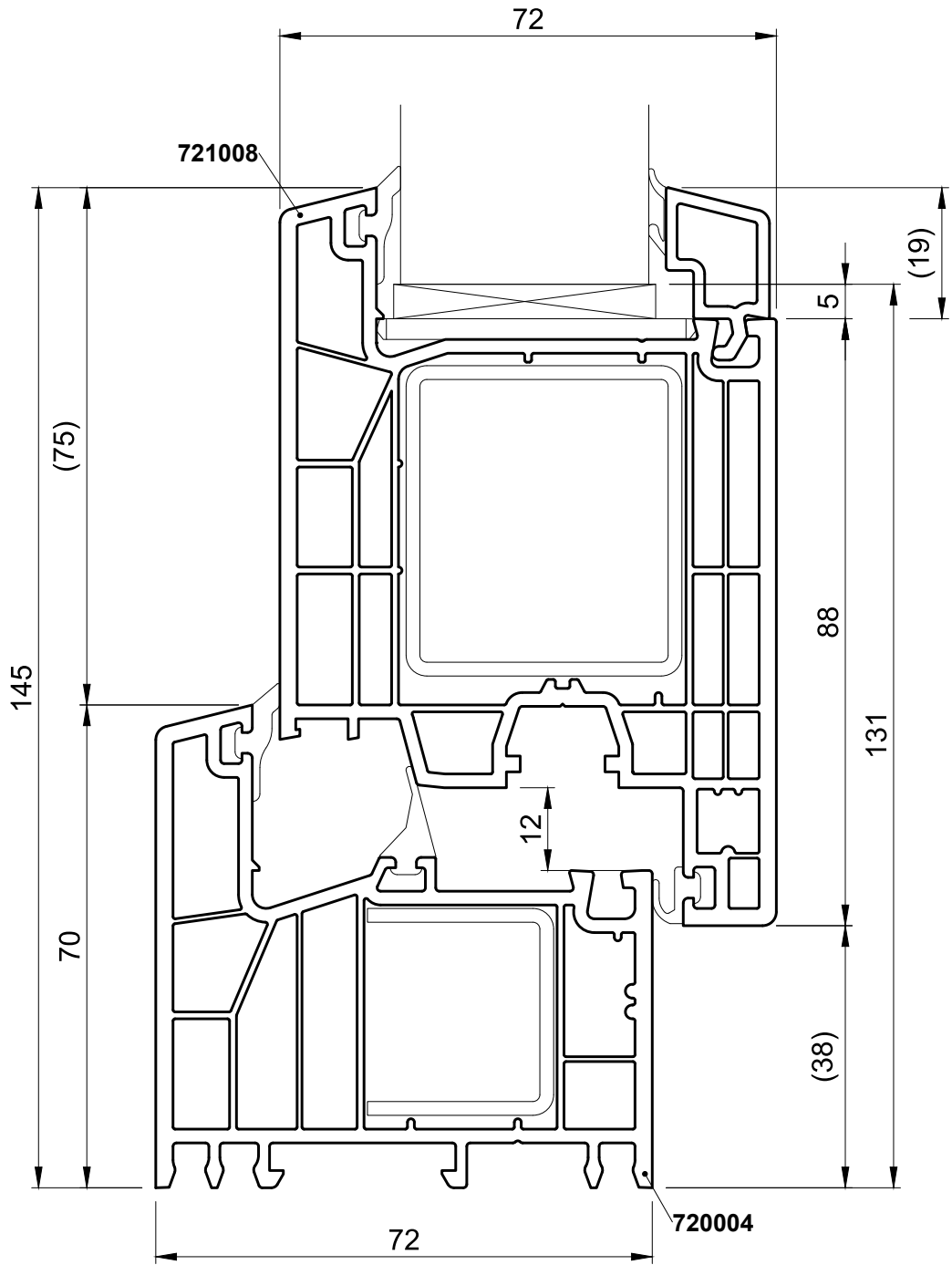
Sash
721005

Old building frame
720024



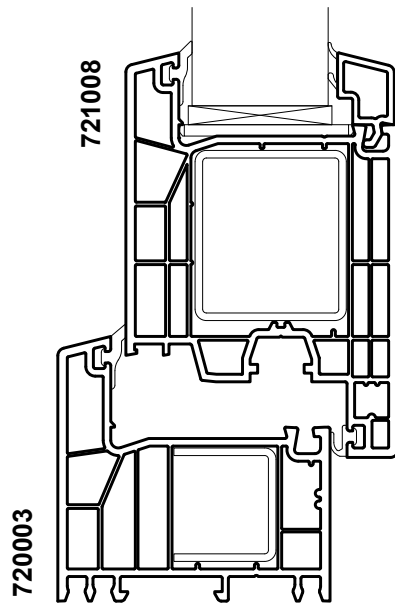
Sash
721008

Frame
720004



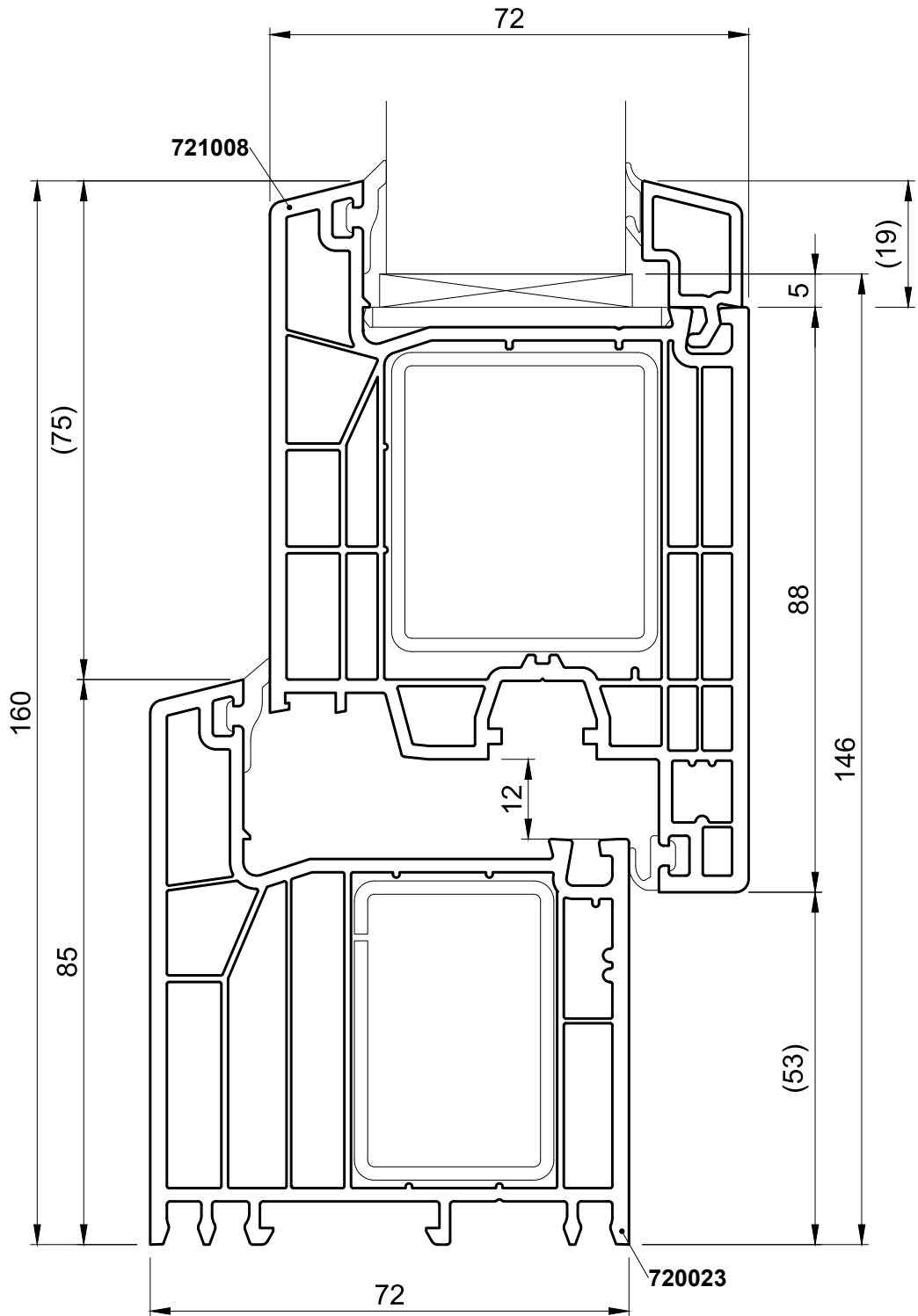
Sash
721008

Frame
720003



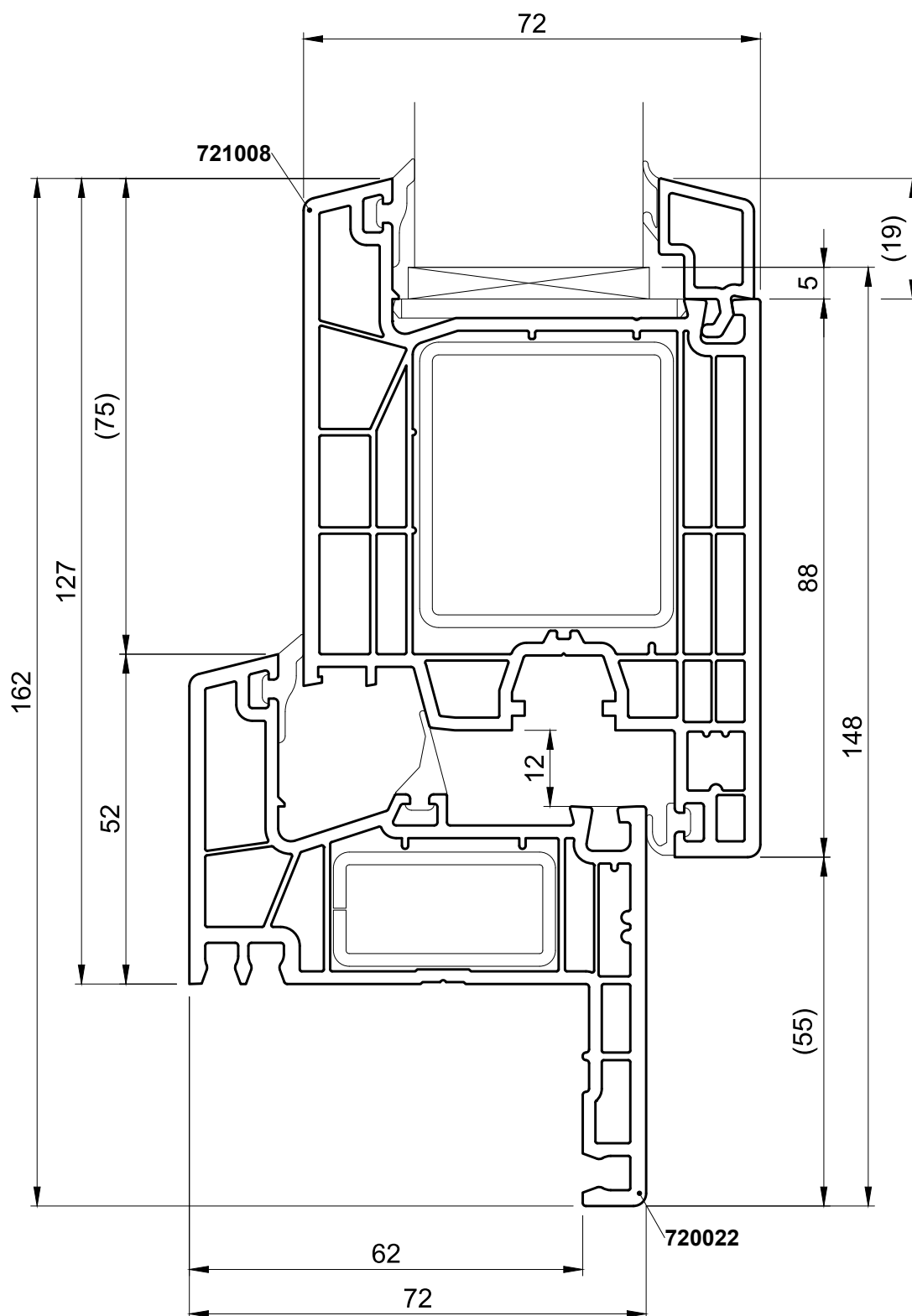
Sash
721008

Frame
720023



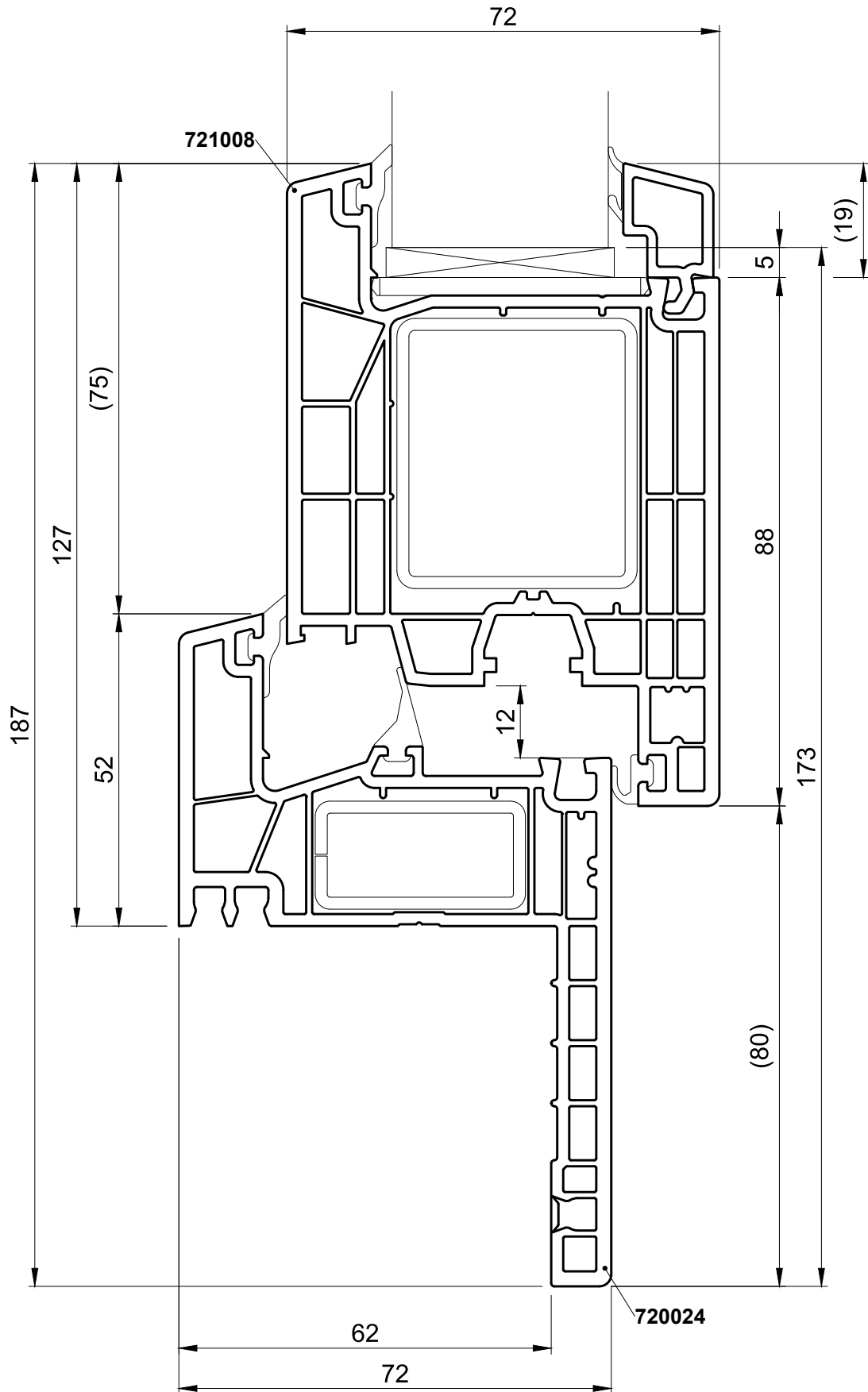
Sash
721008

Old building frame
720022



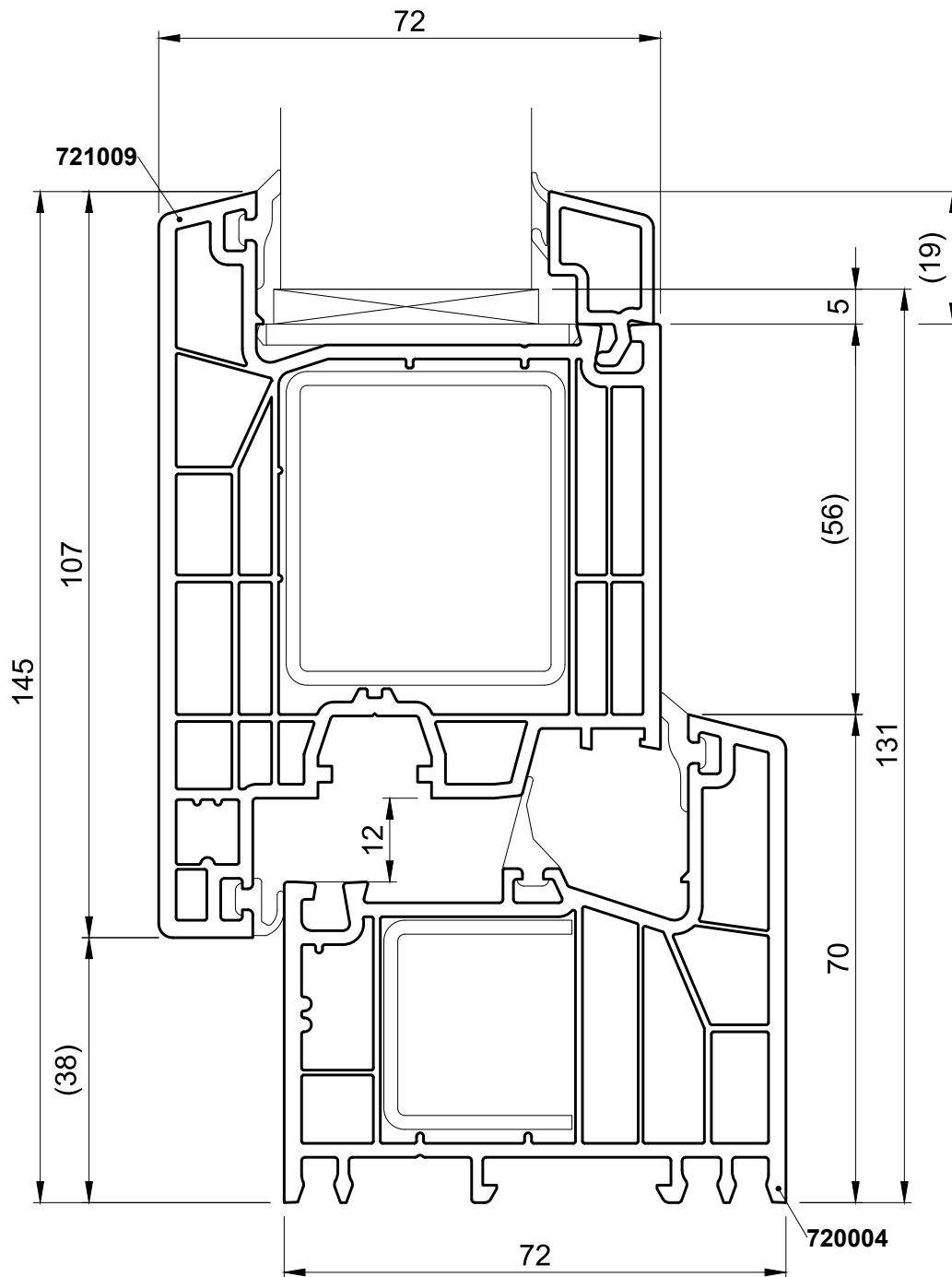
Sash
721008

Old building frame
720024



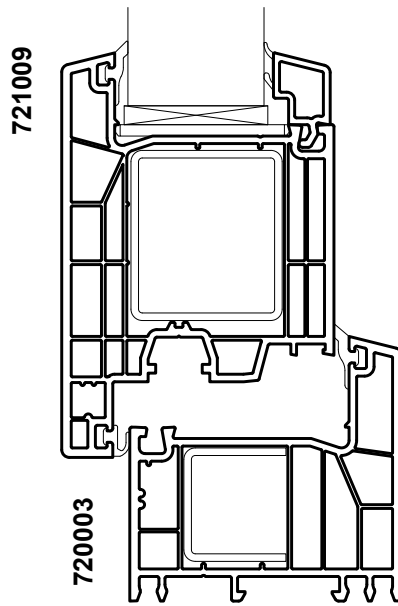
Sash
721009

Frame
720004



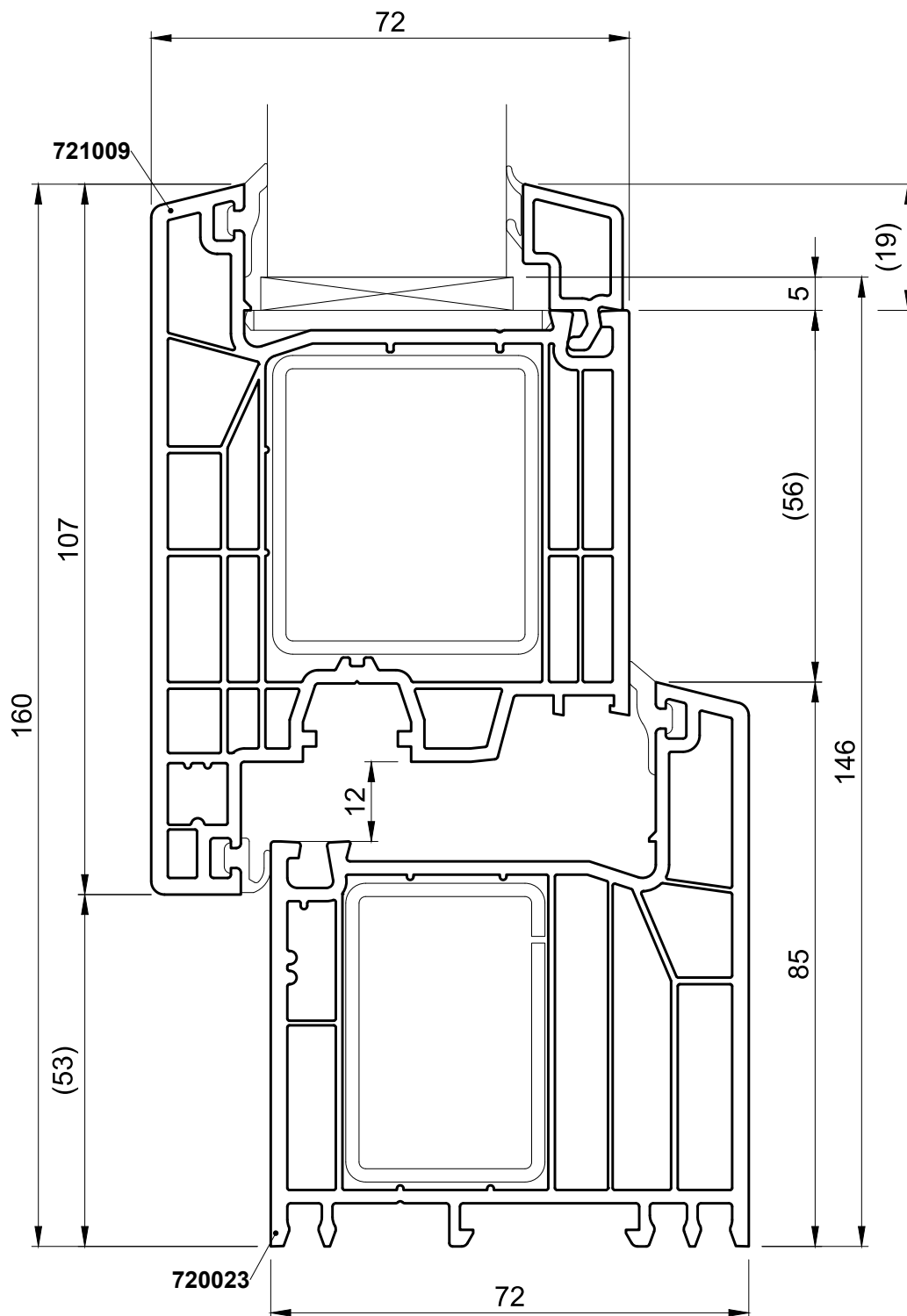
Sash
721009

Frame
720003



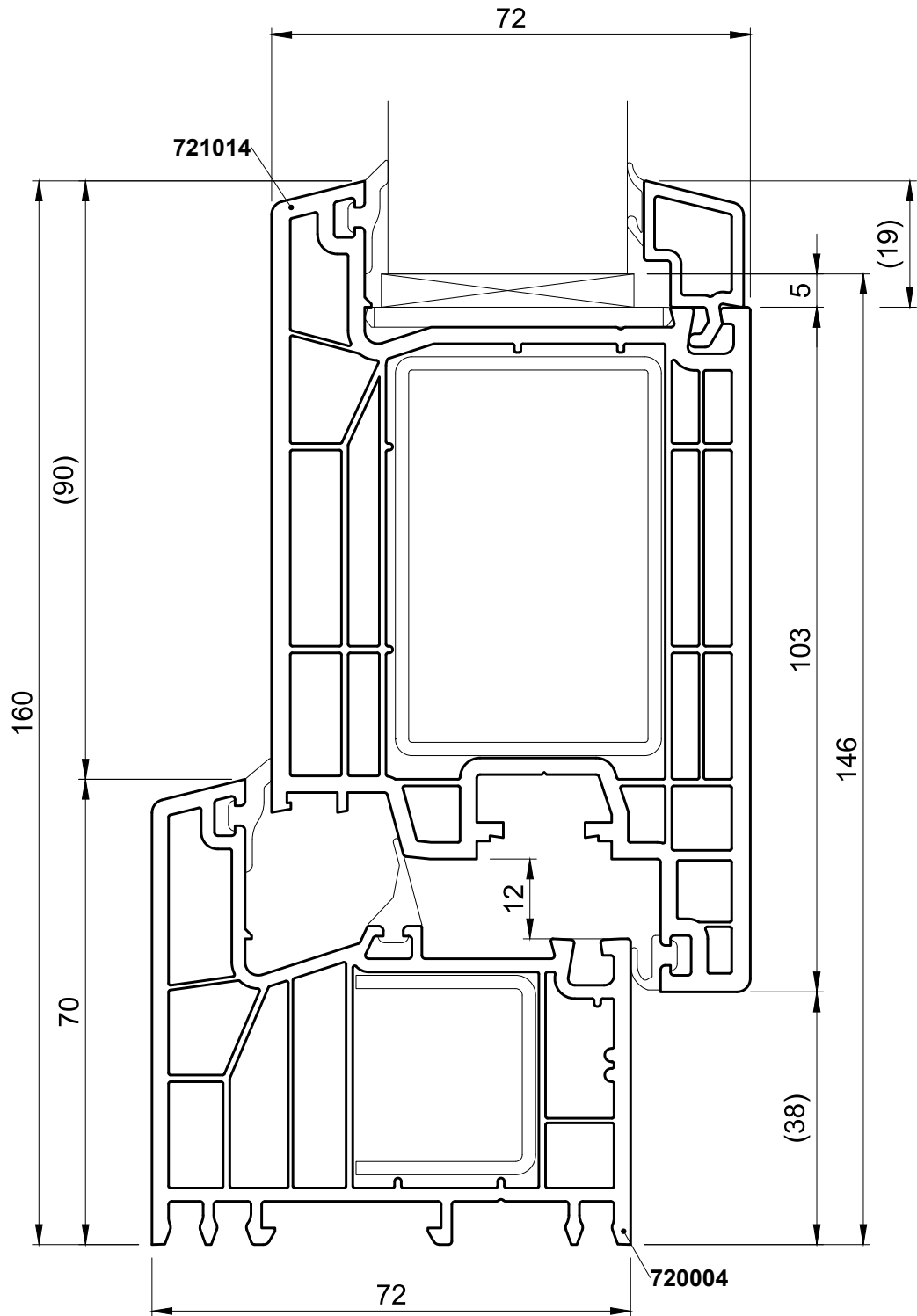
Sash
721009

Frame
720023



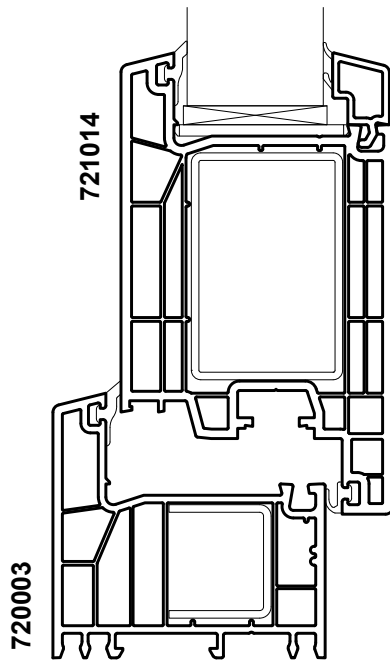
Sash
721014

Frame
720004



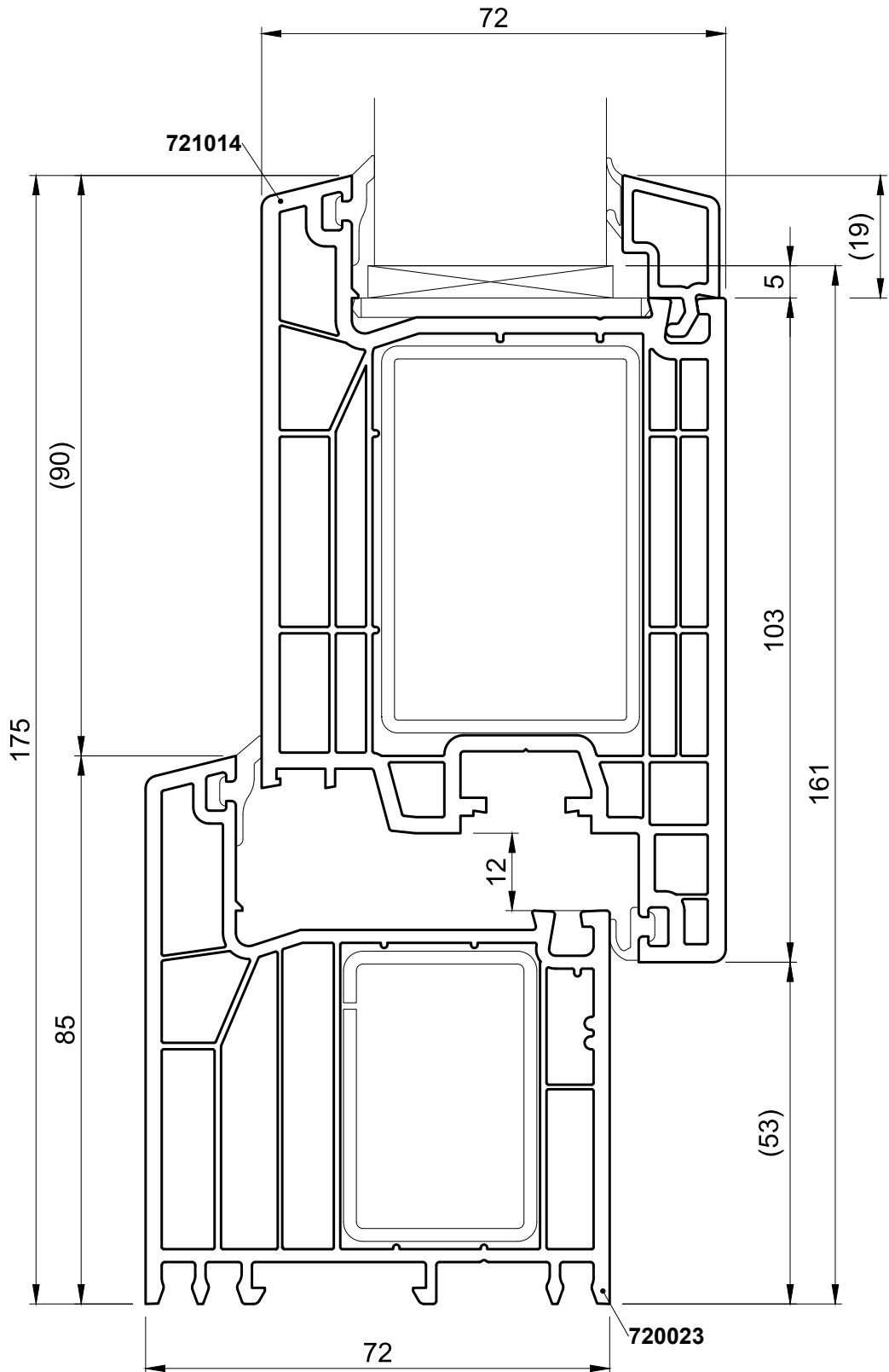
Sash
721014

Frame
720003



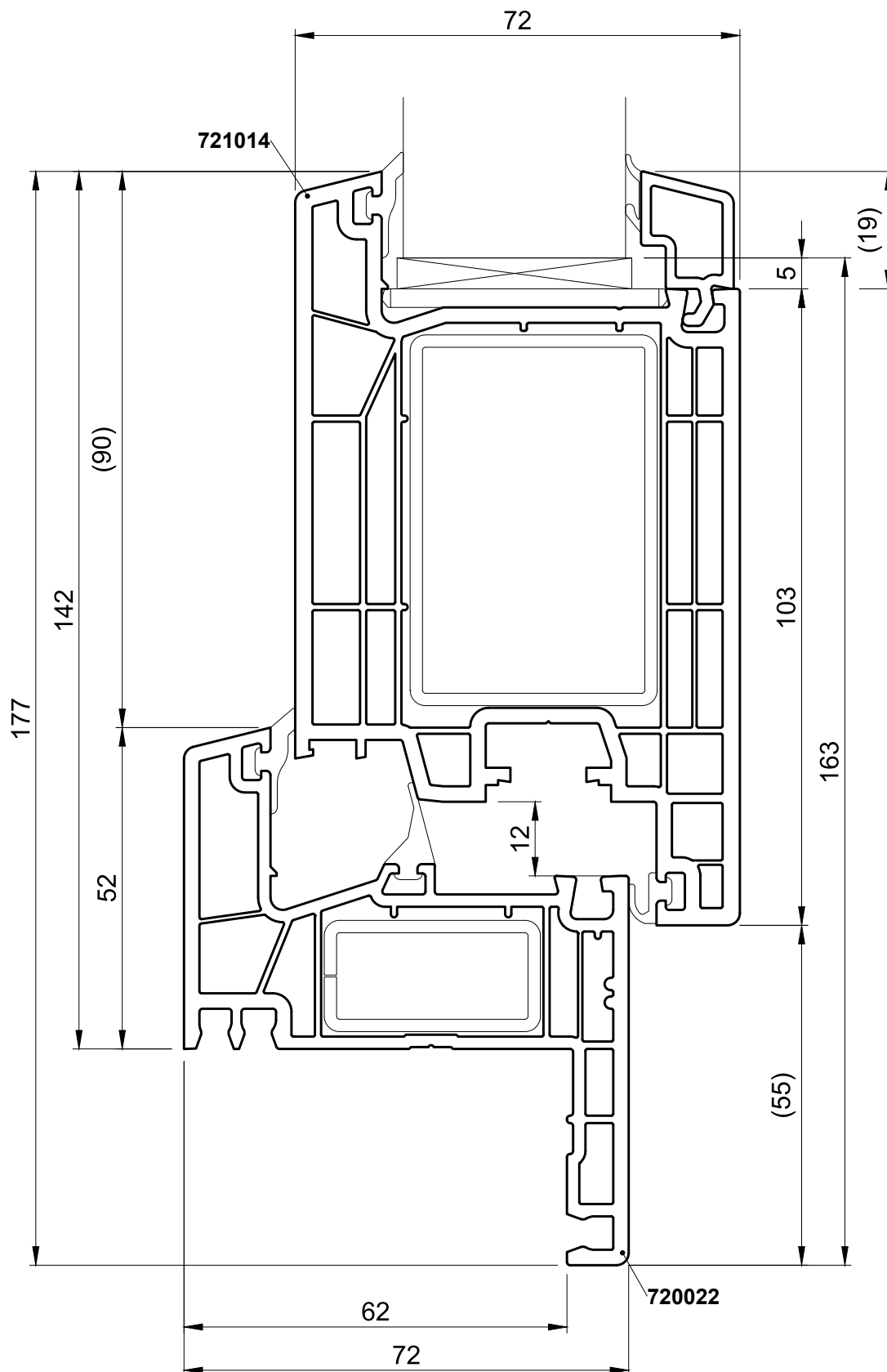
Sash
721014

Frame
720023



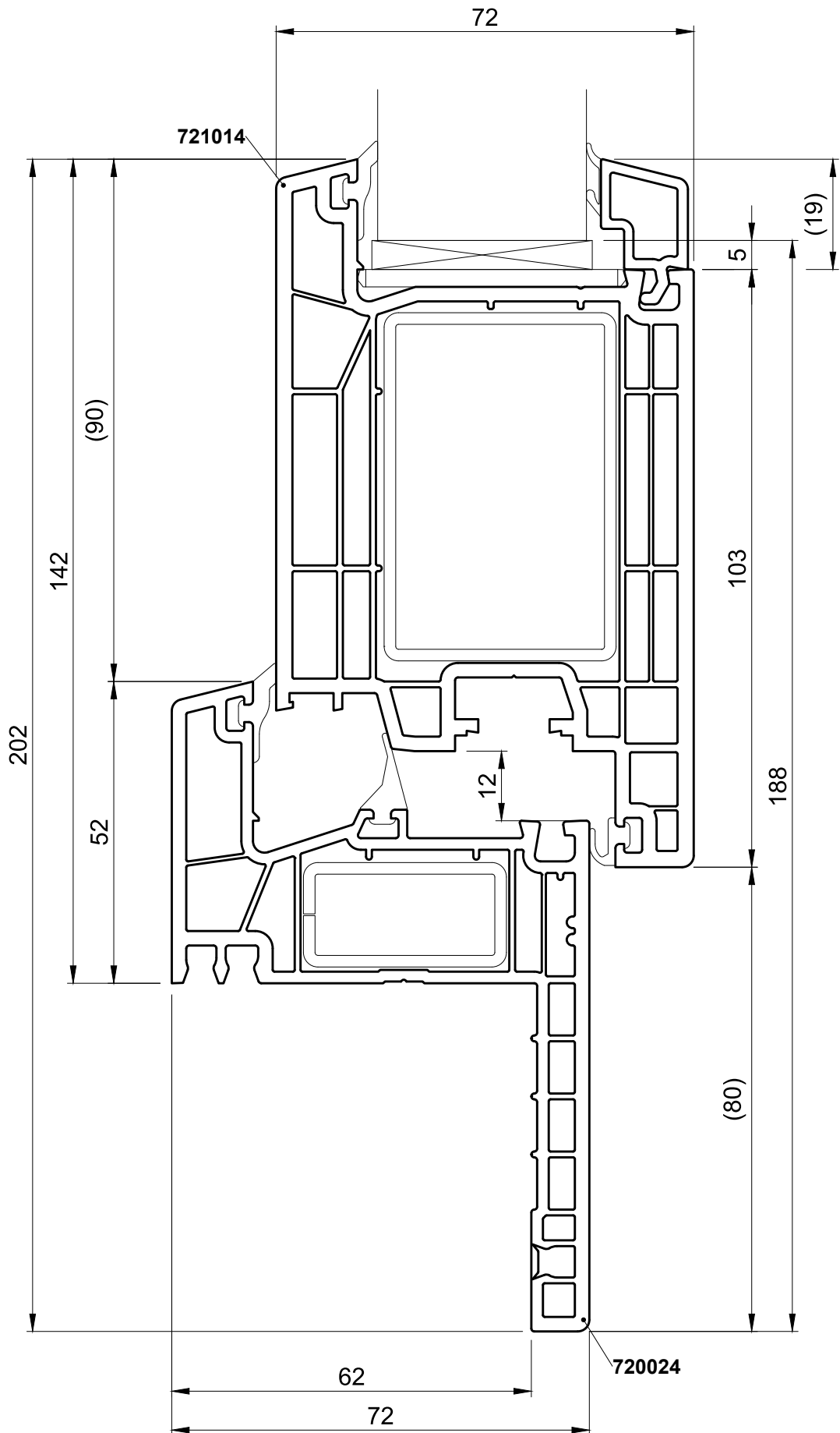
Sash
721014

Old building frame
720022



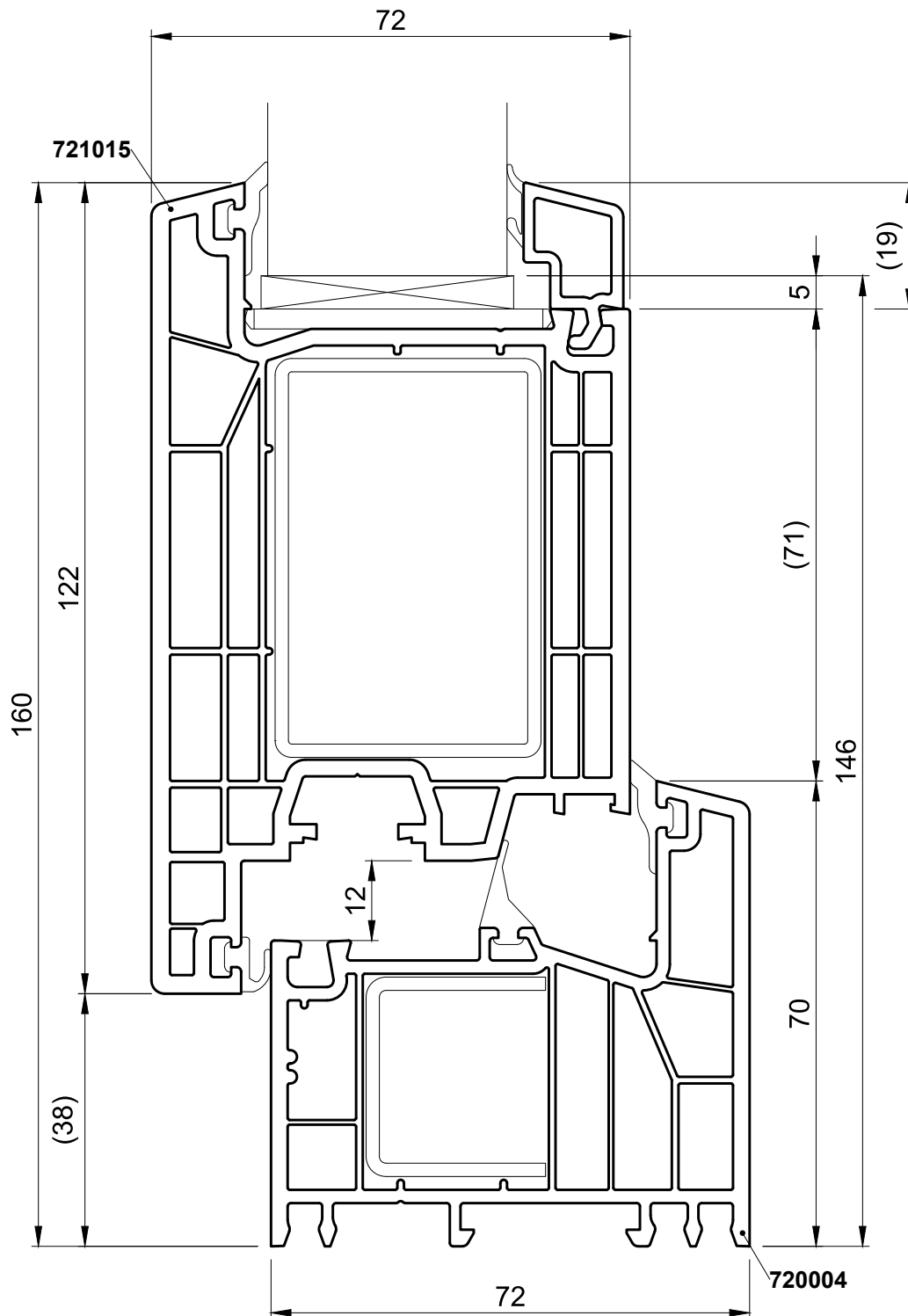
Sash
721014

Old building frame
720024



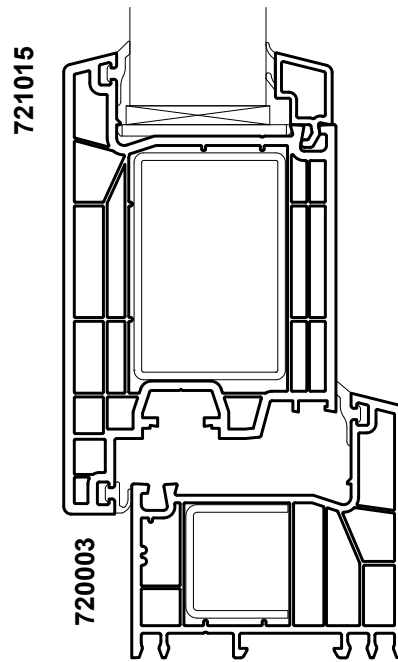
Sash
721015

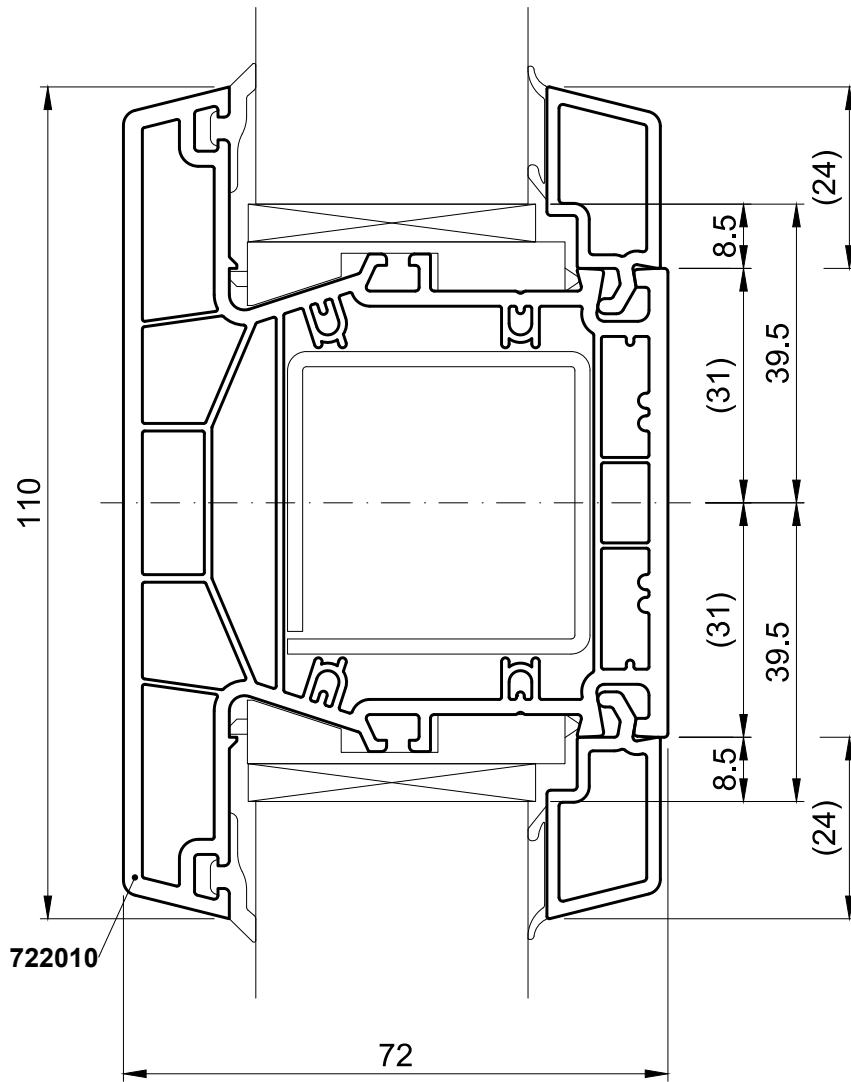
Frame
720004



Sash
721015

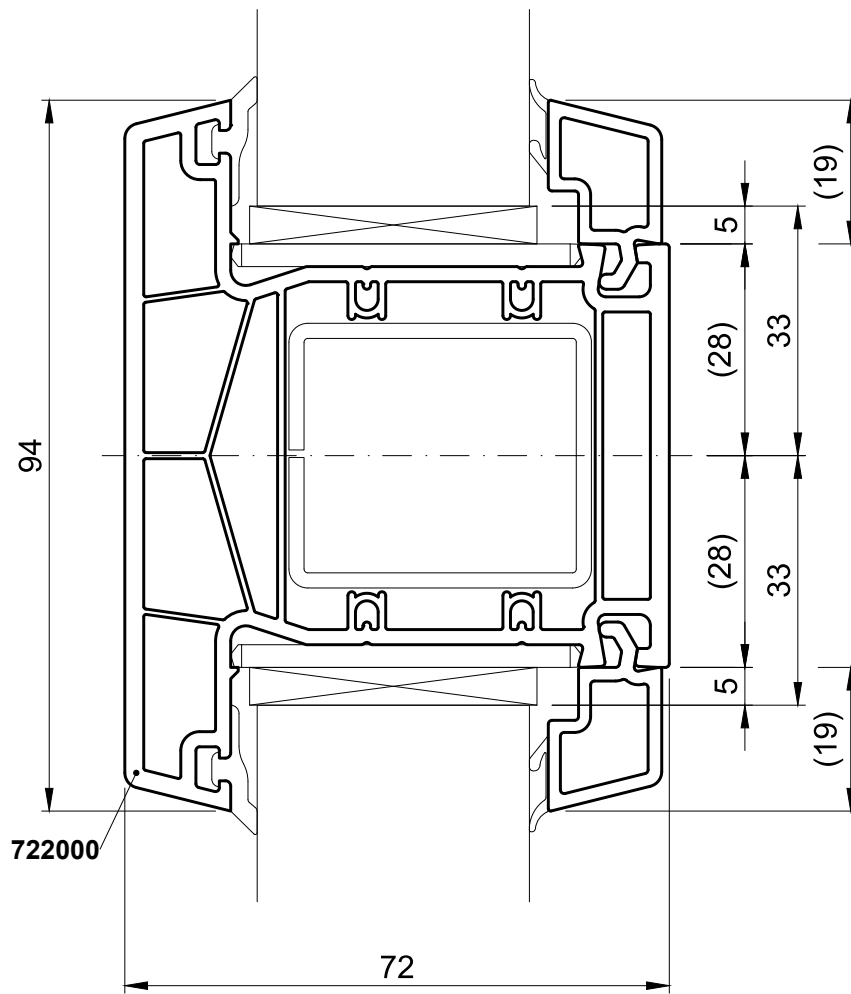
Frame
720003





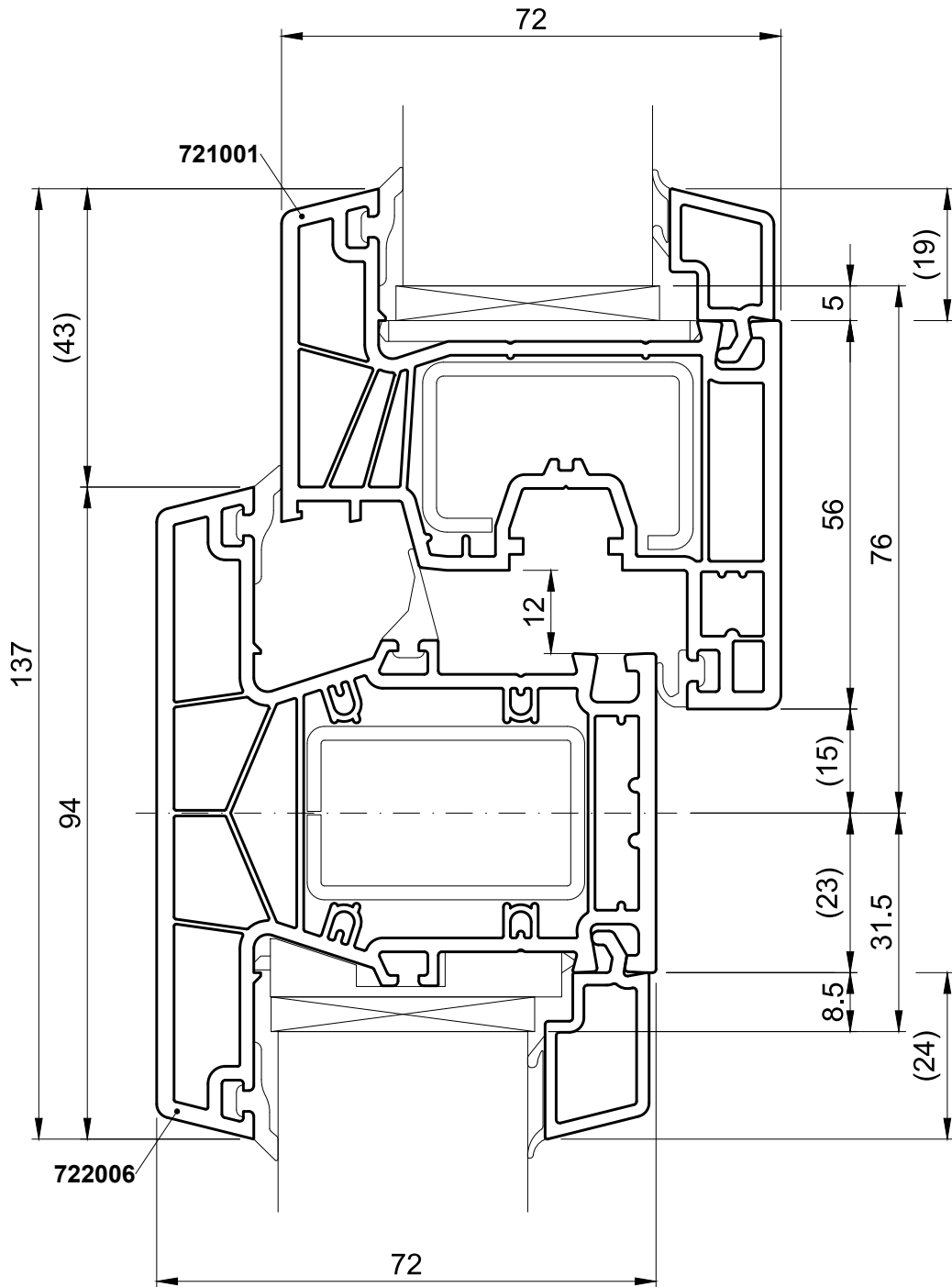
Glazing bar / mullion

722000



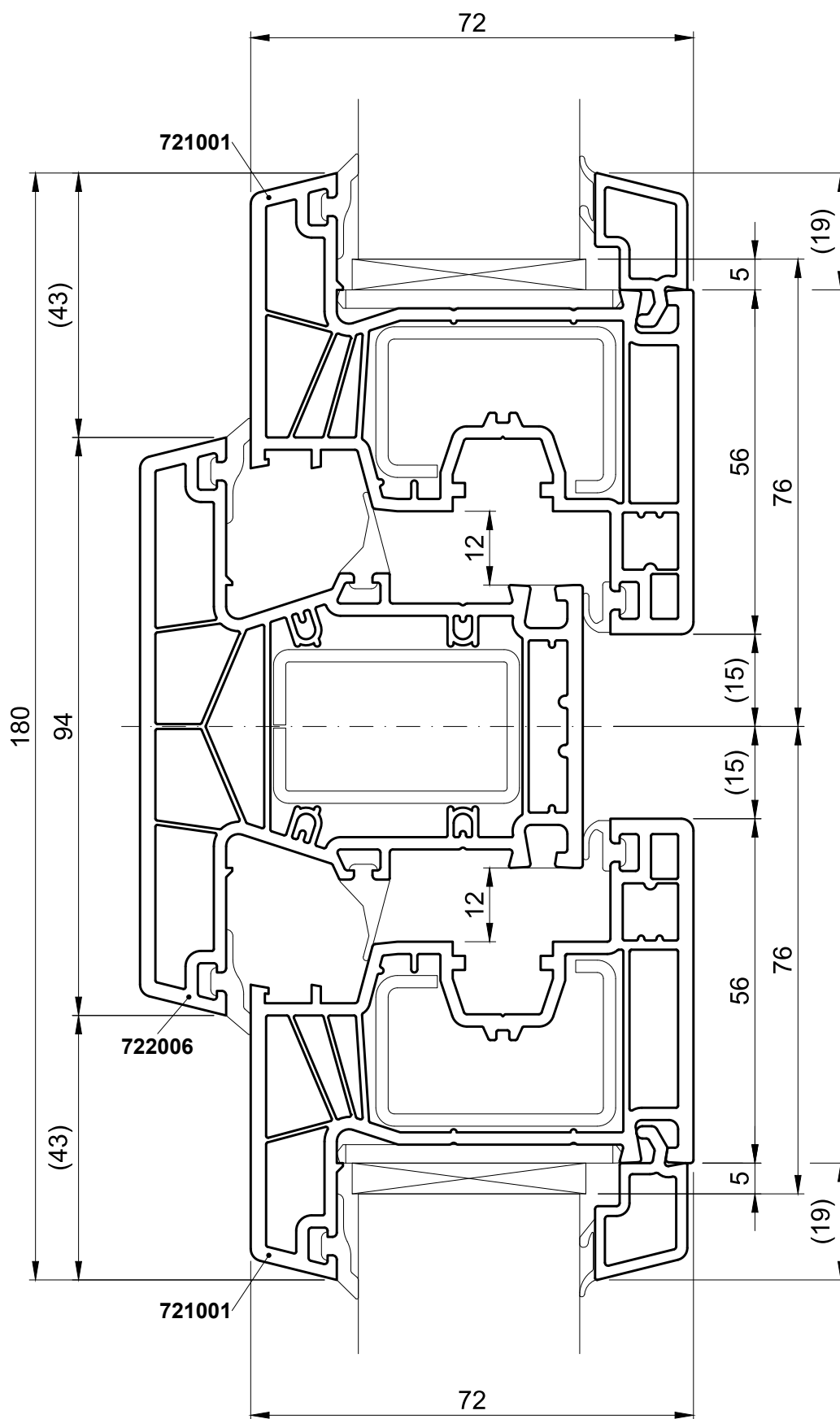
Sash
721001

Fixed mullion
722006



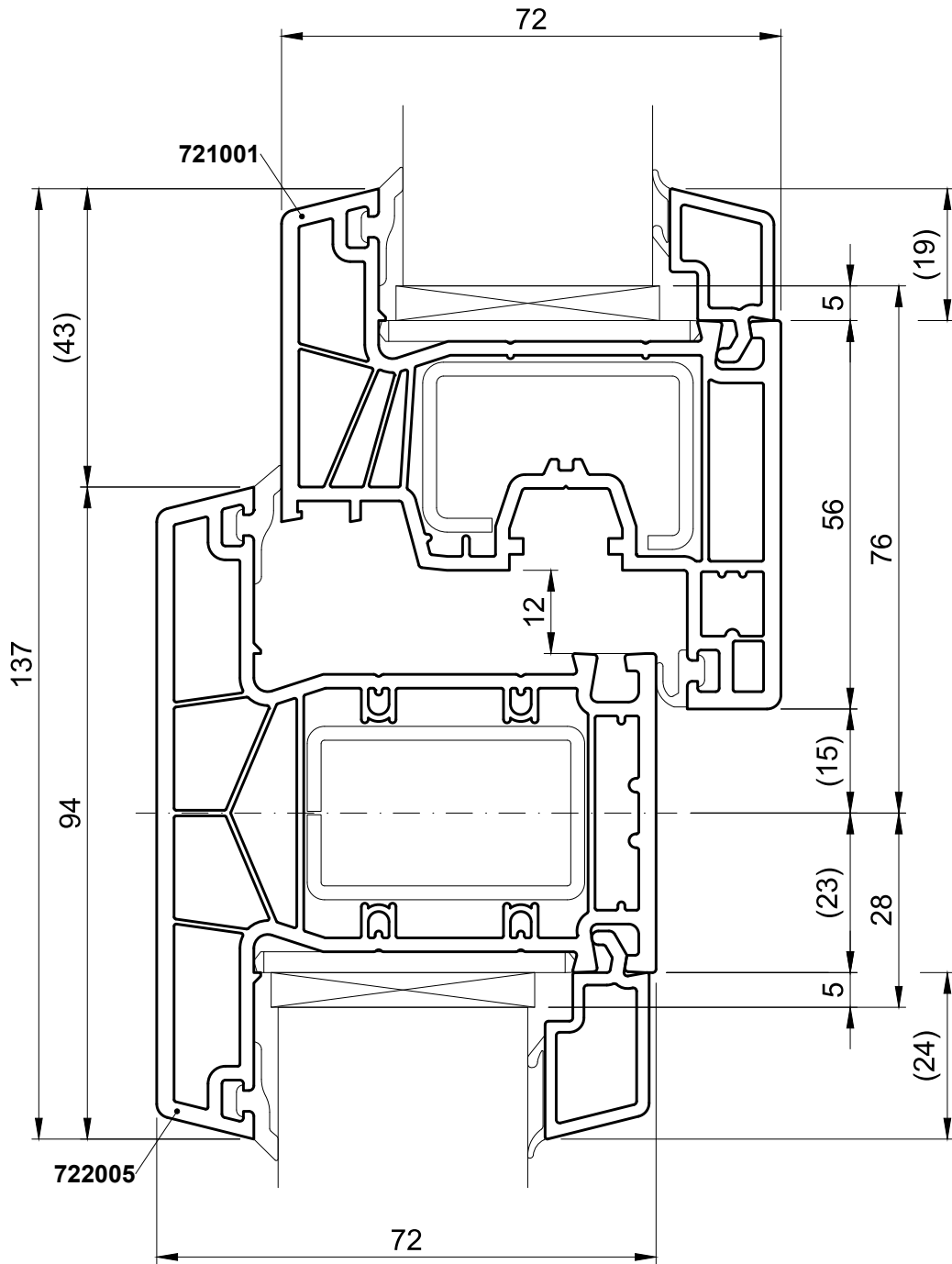
Sash
721001

Fixed mullion
722006



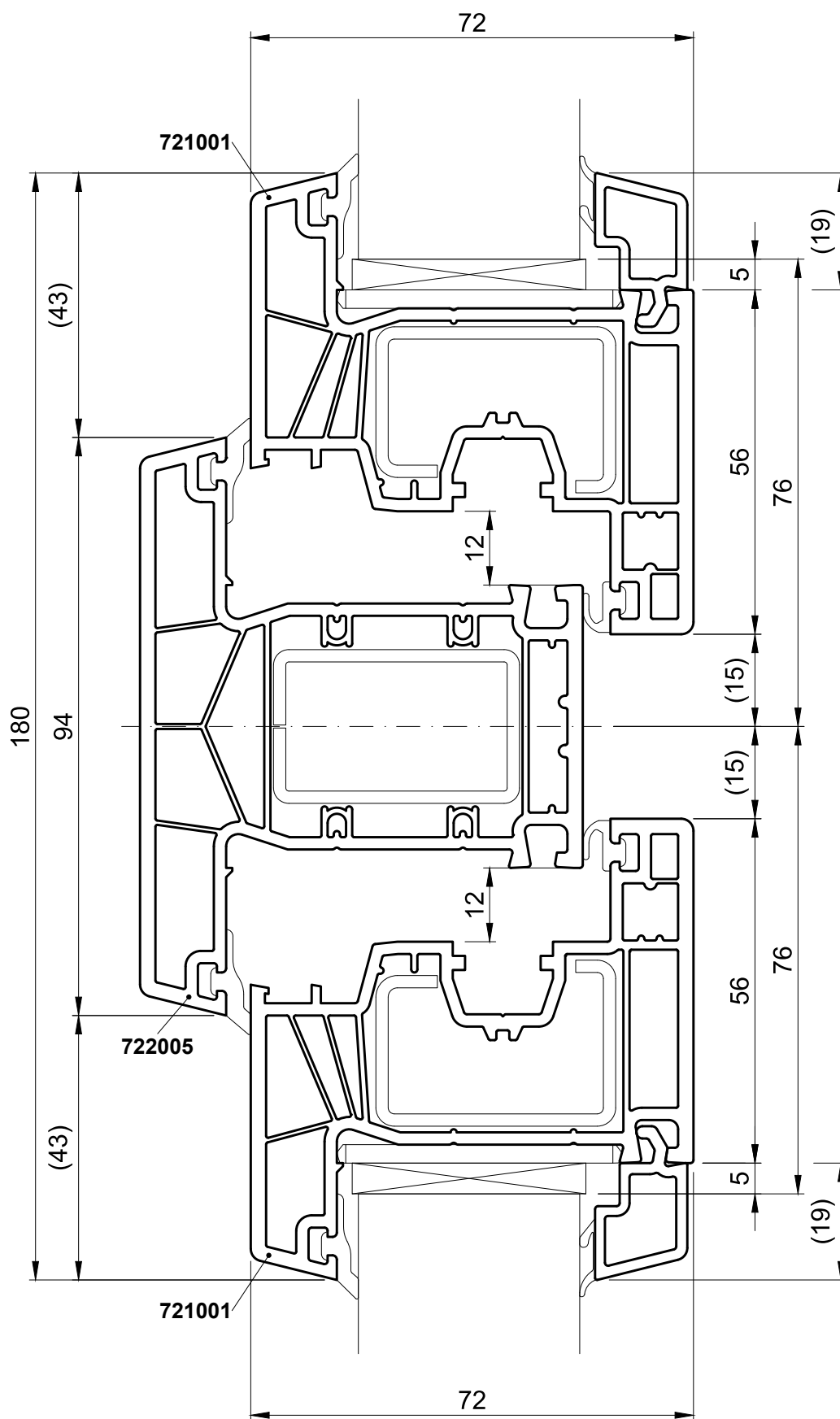
Sash
721001

Fixed mullion
722005



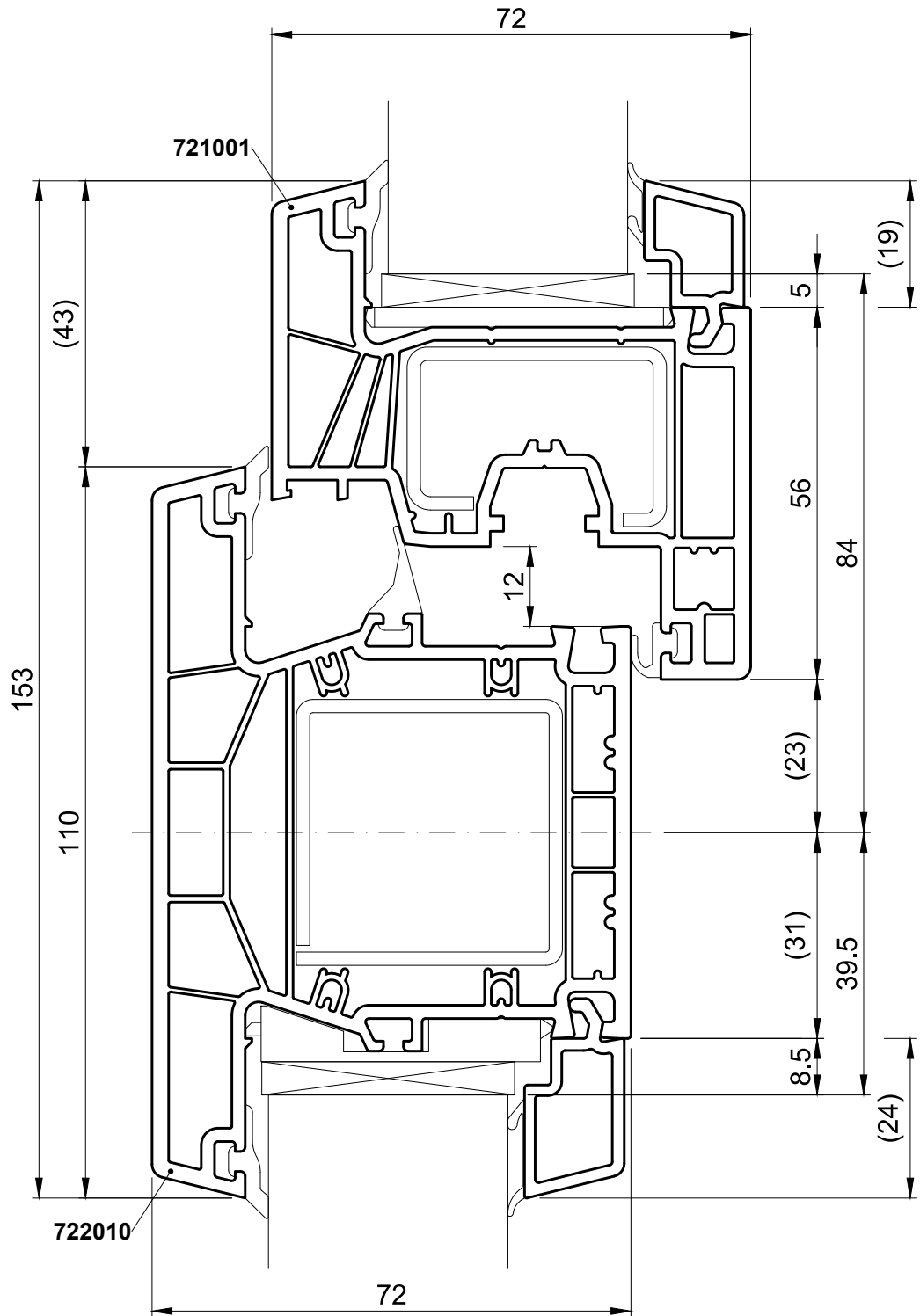
Sash
721001

Fixed mullion
722005



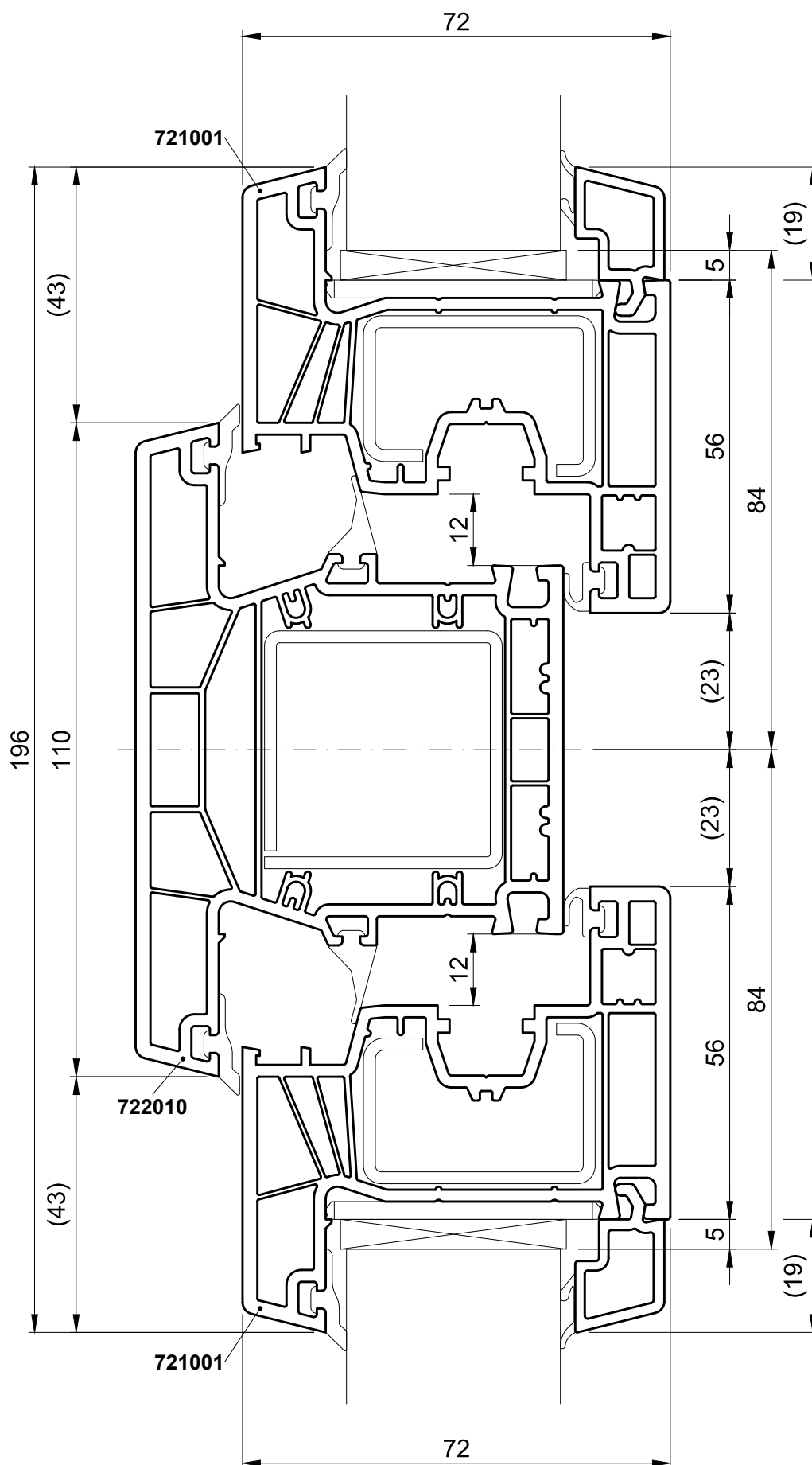
Sash
721001

Fixed mullion
722010



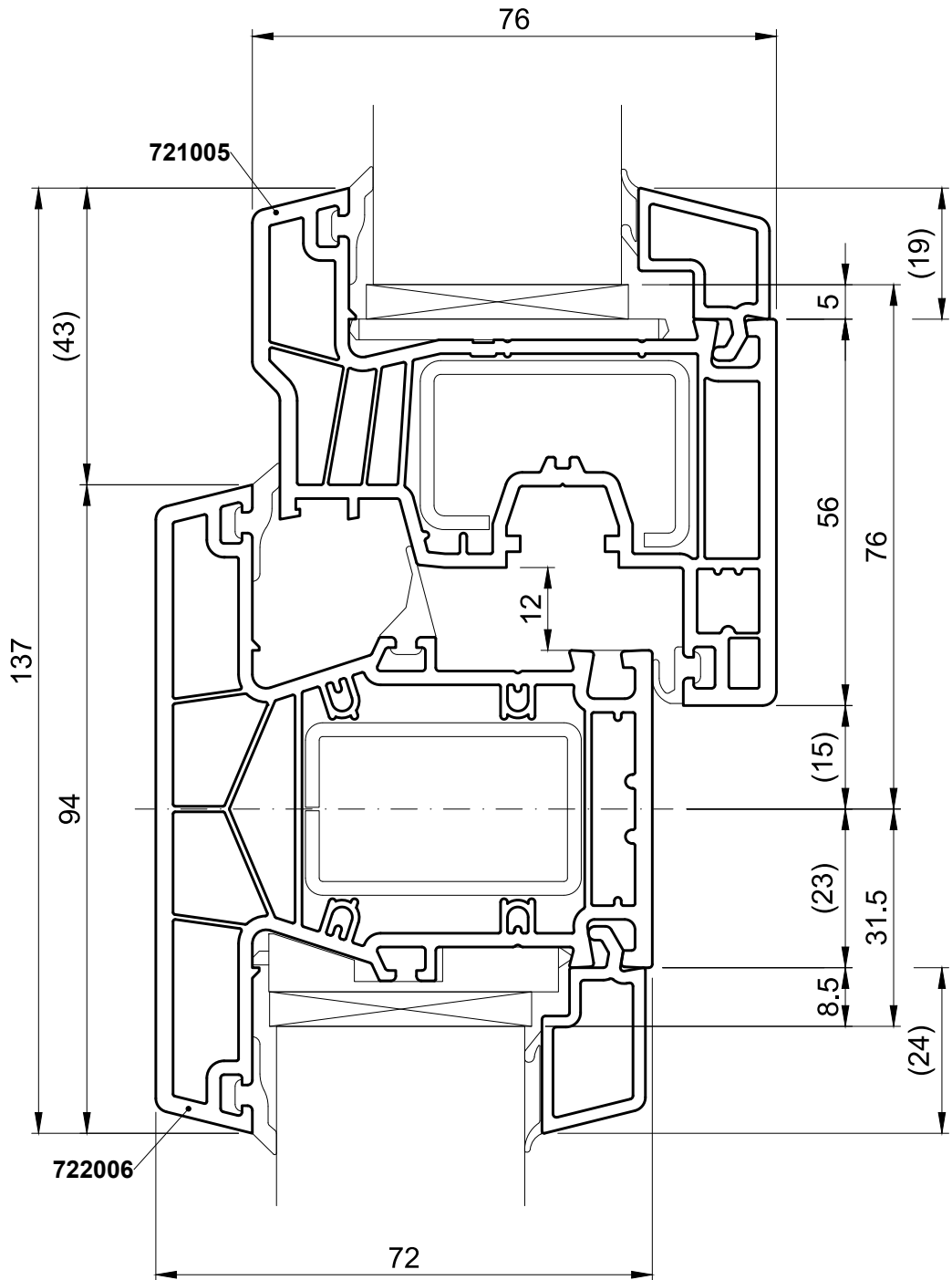
Sash
721001

Fixed mullion
722010



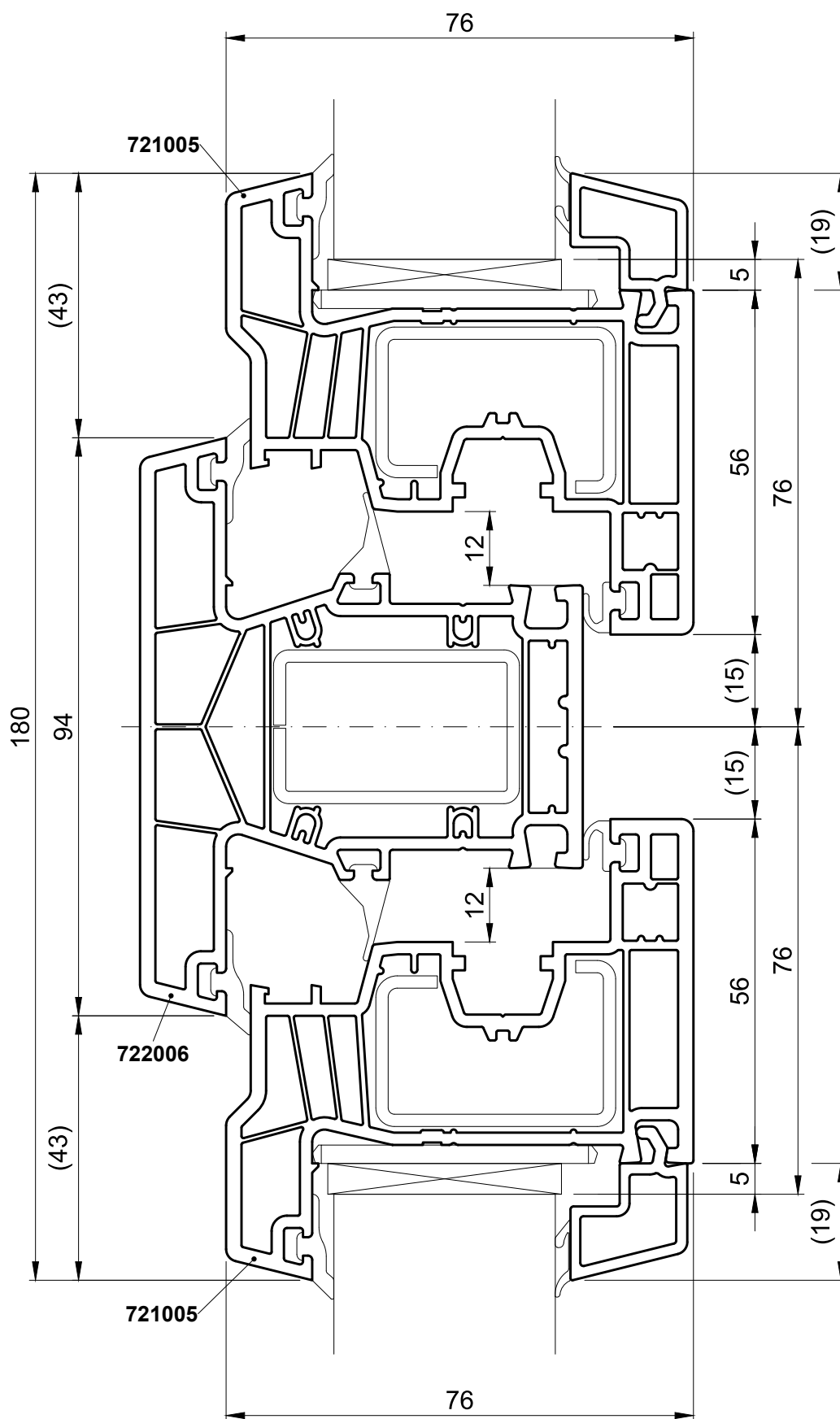
Sash
721005

Fixed mullion
722006



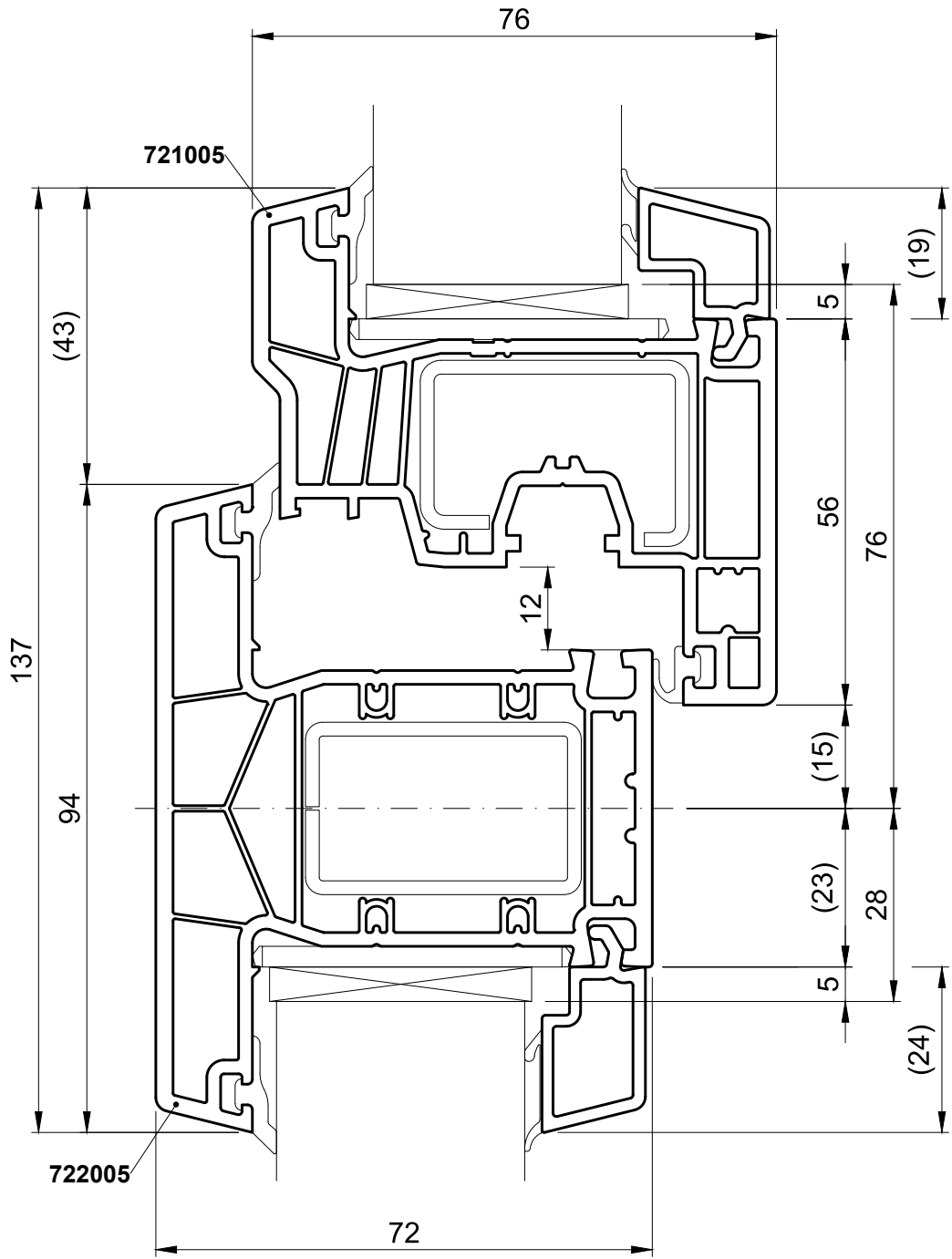
Sash
721005

Fixed mullion
722006



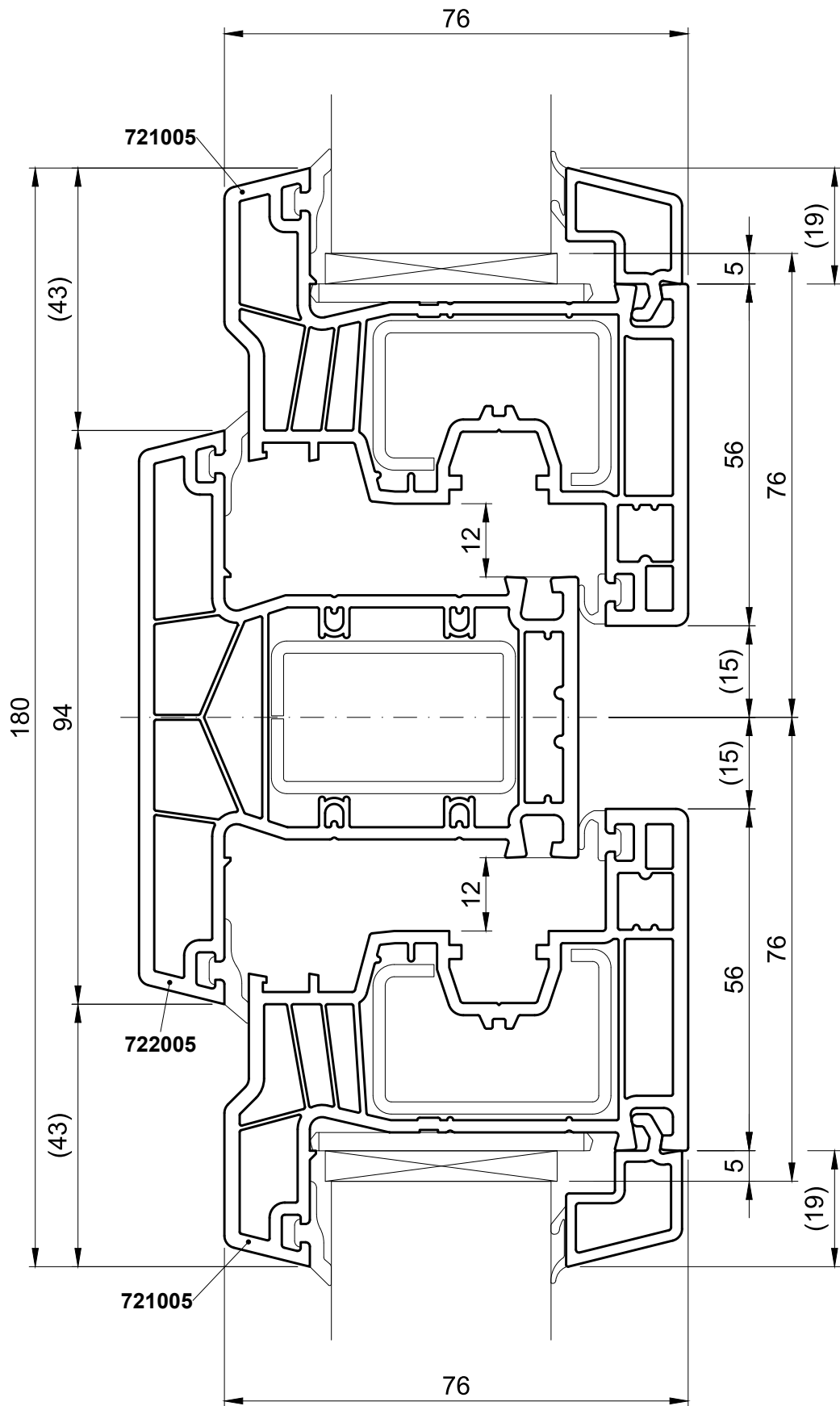
Sash
721005

Fixed mullion
722005



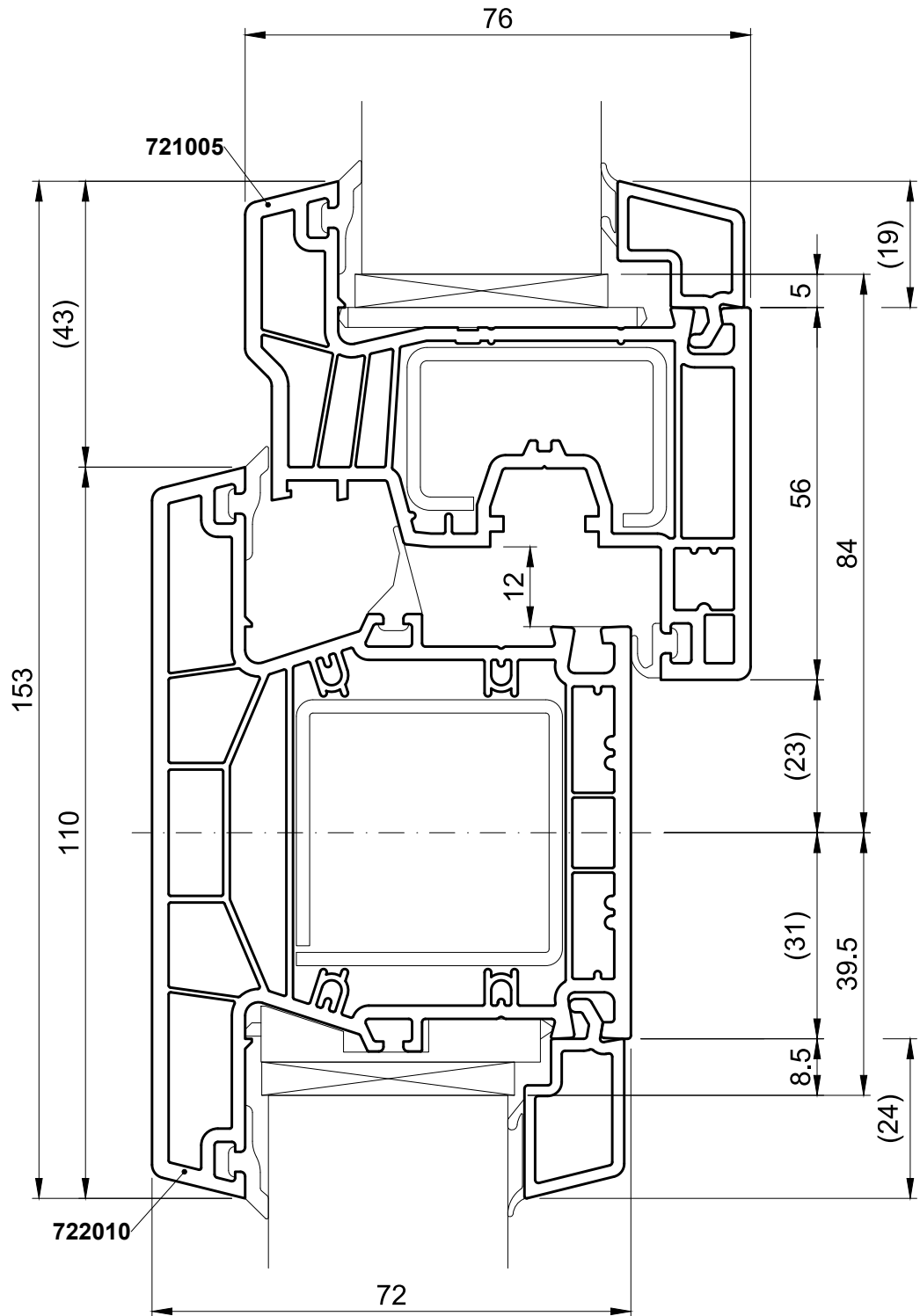
Sash
721005

Fixed mullion
722005



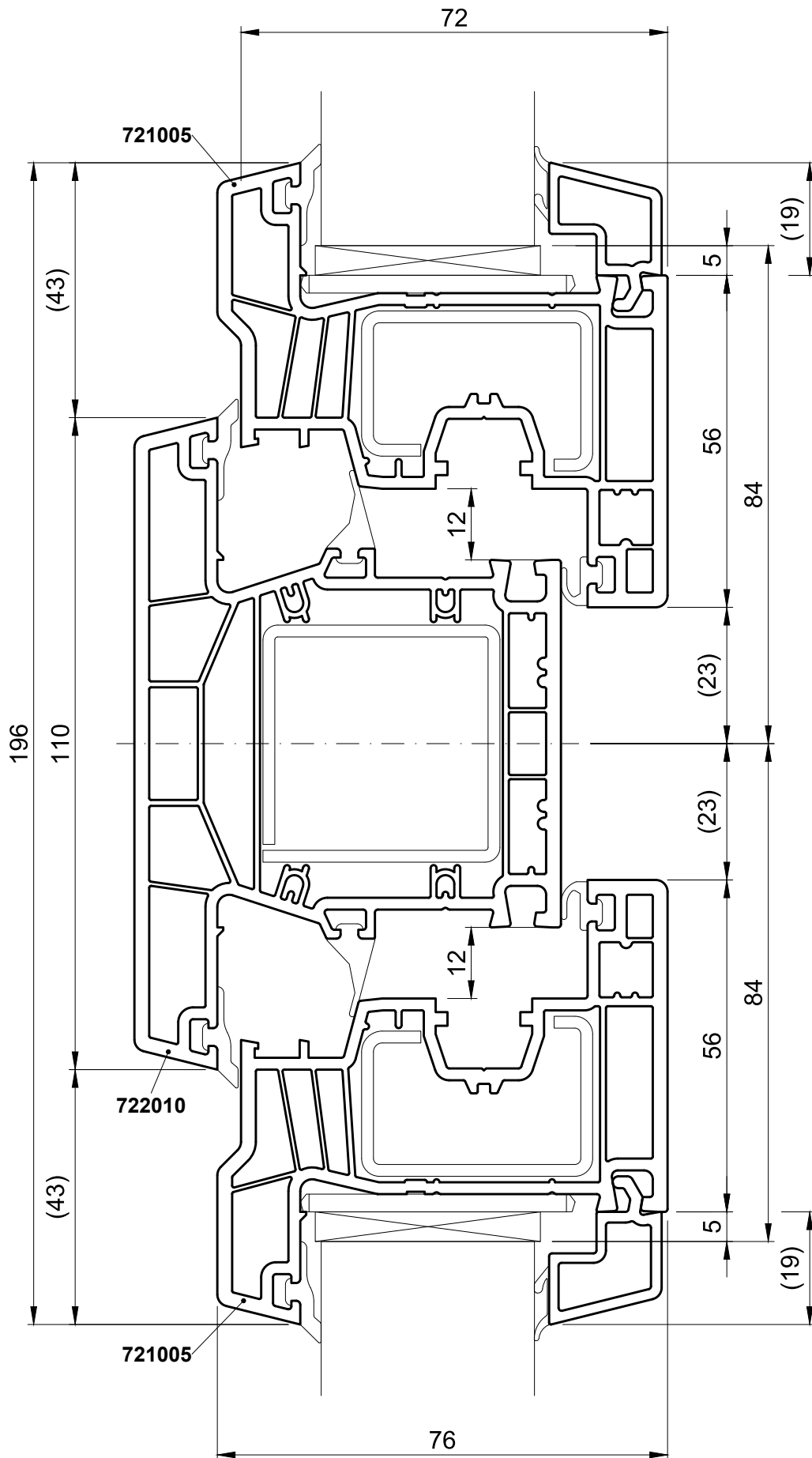
Sash
721005

Fixed mullion
722010



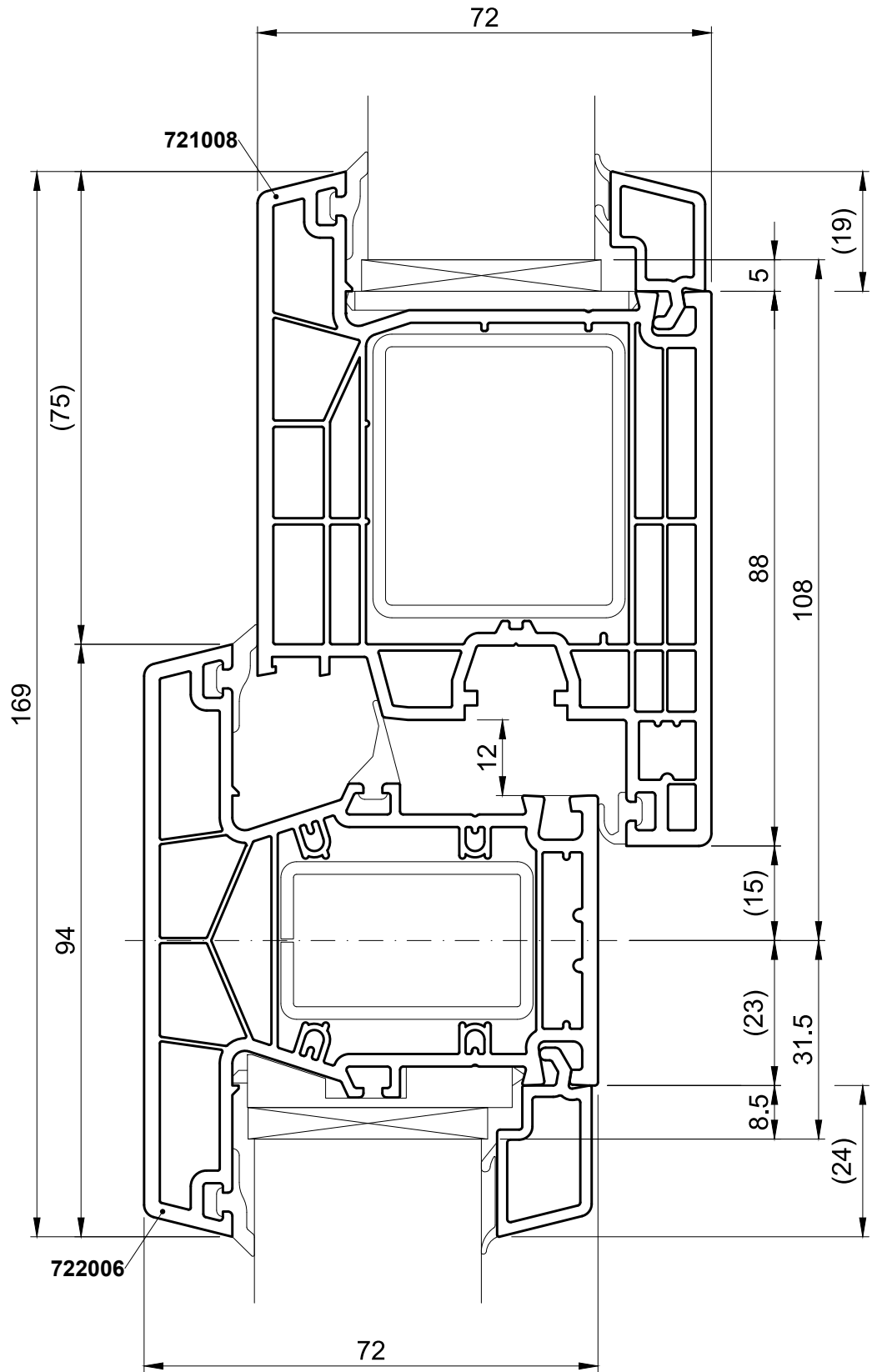
Sash
721005

Fixed mullion
722010



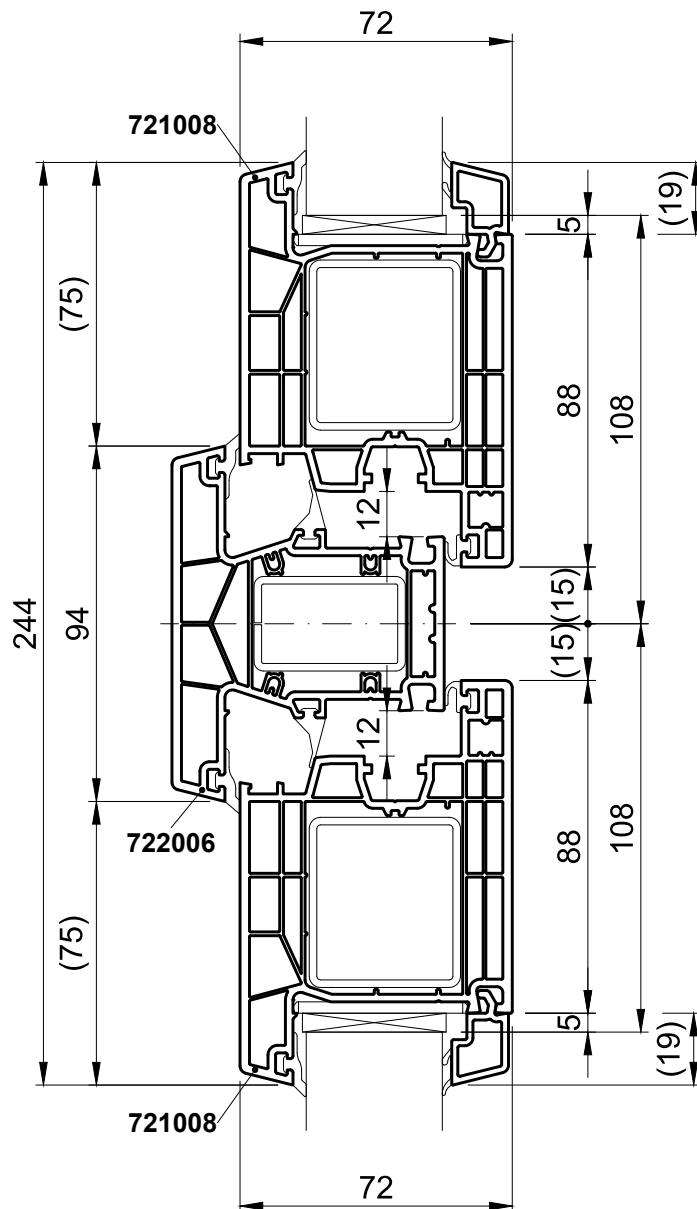
Sash
721008

Fixed mullion
722006



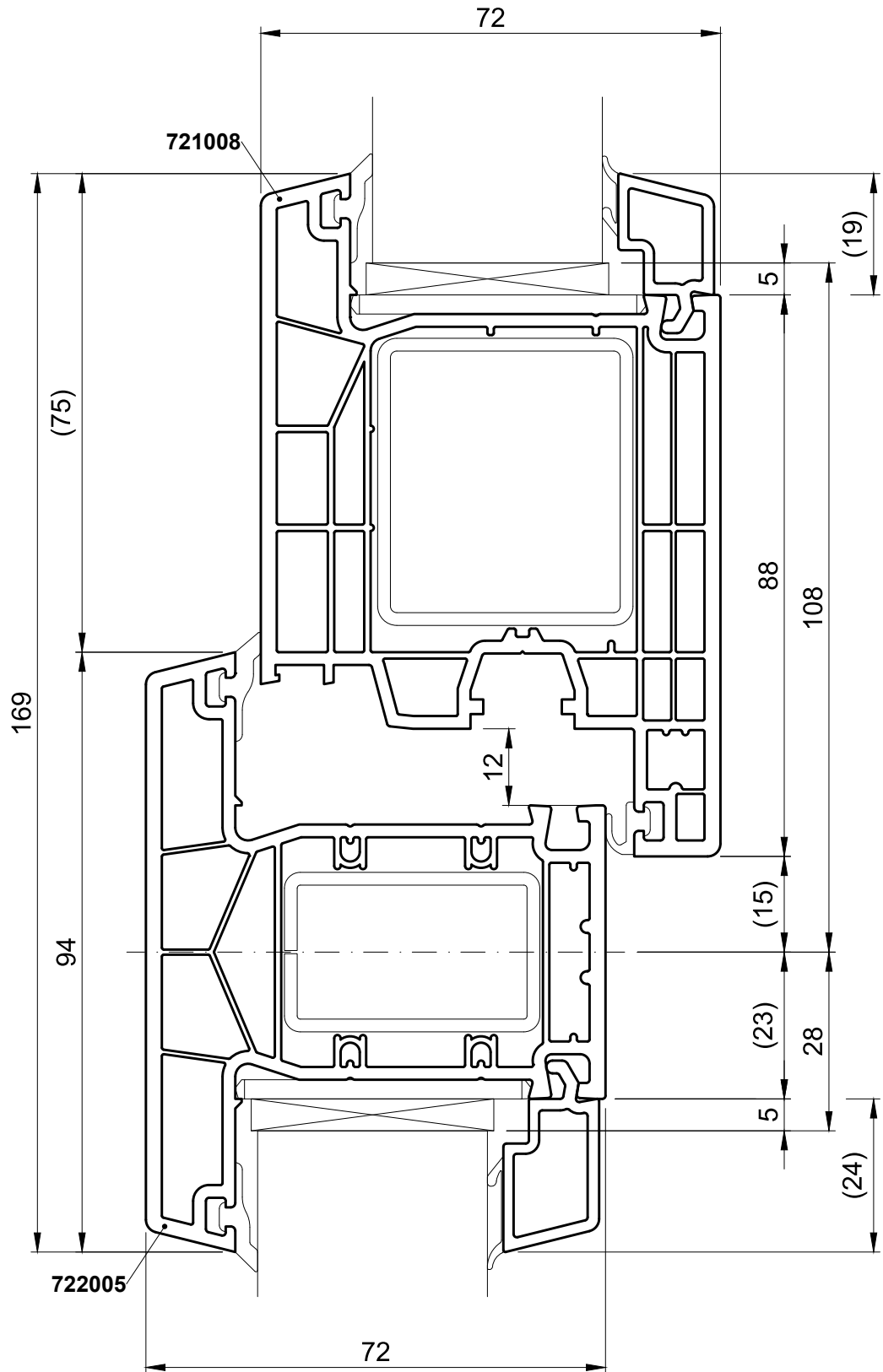
Sash
721008

Fixed mullion
722006



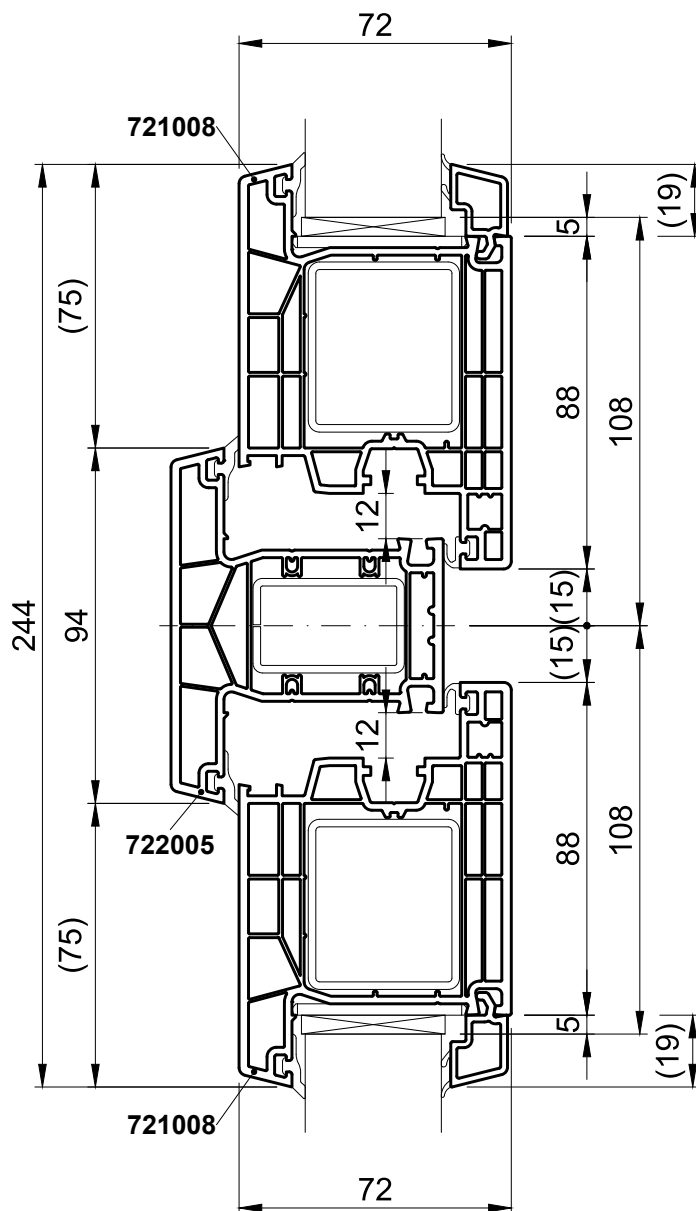
Sash
721008

Fixed mullion
722005



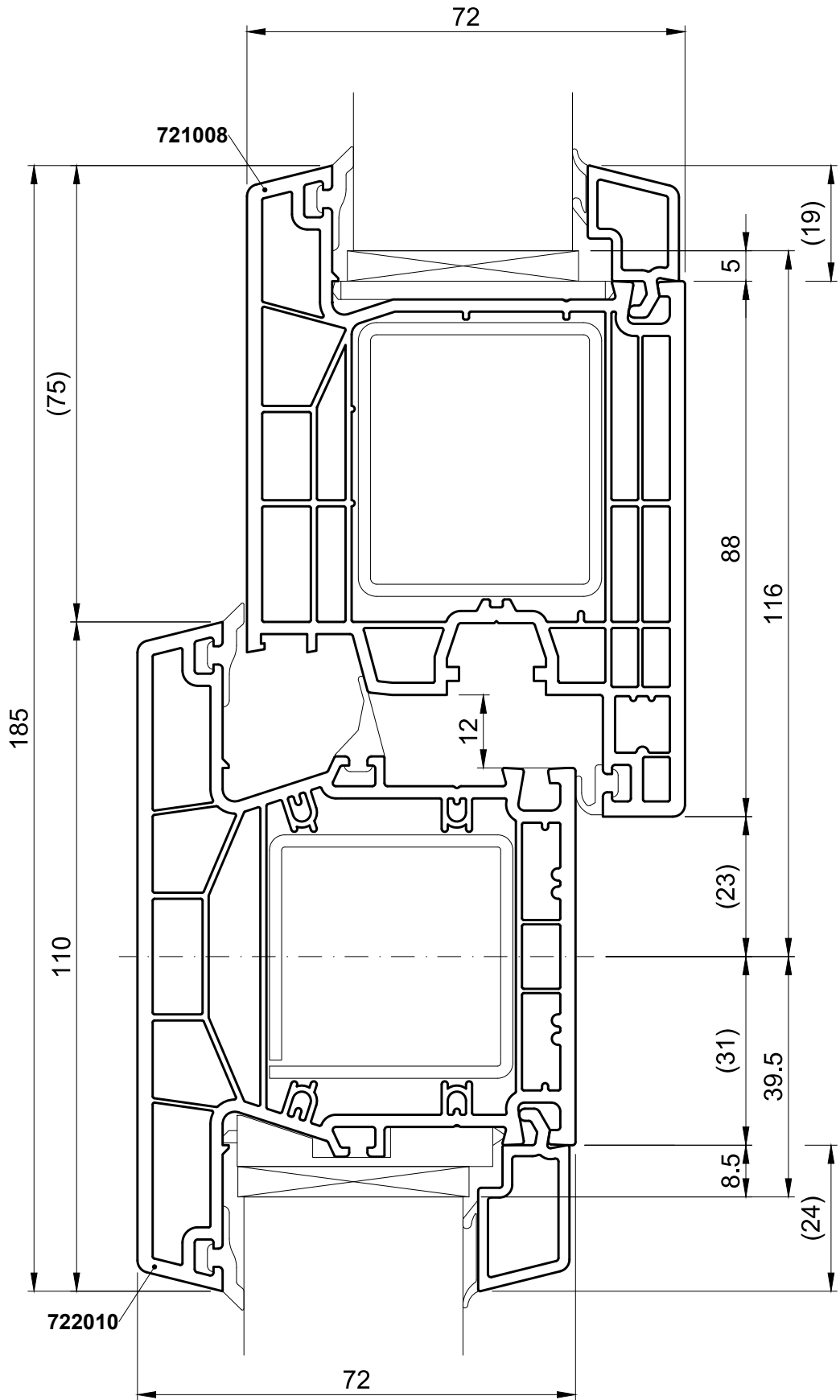
Sash
721008

Fixed mullion
722005



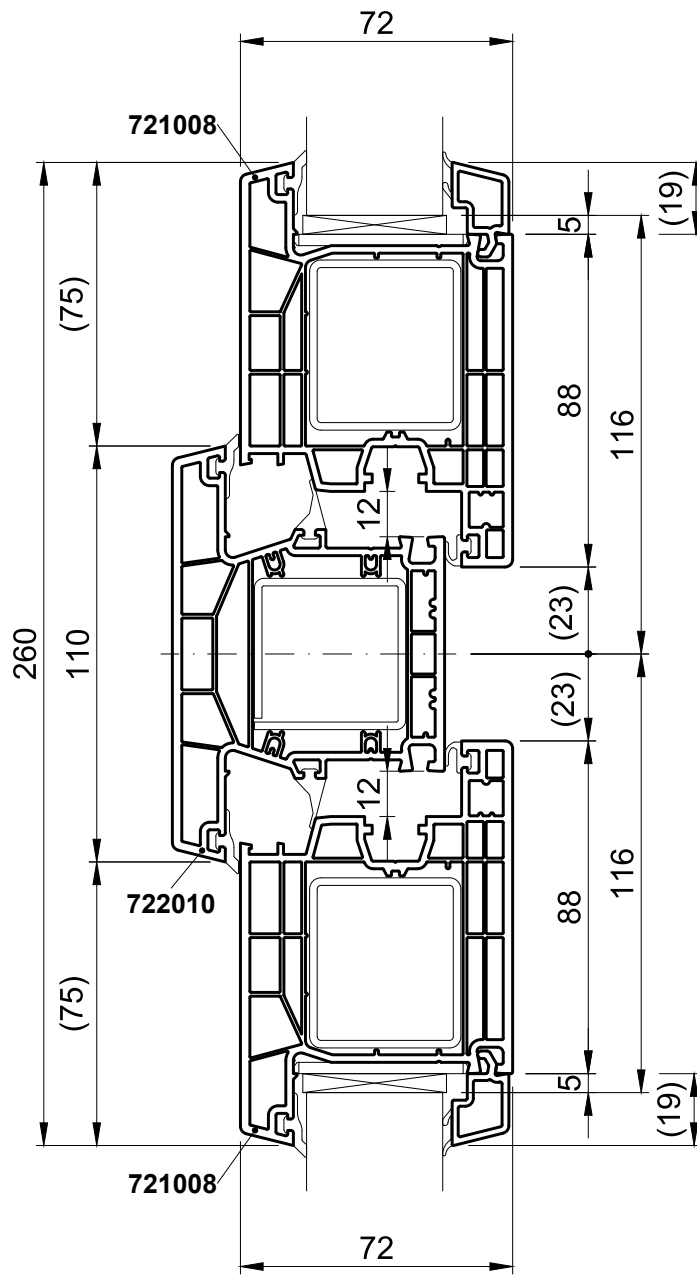
Sash
721008

Fixed mullion
722010



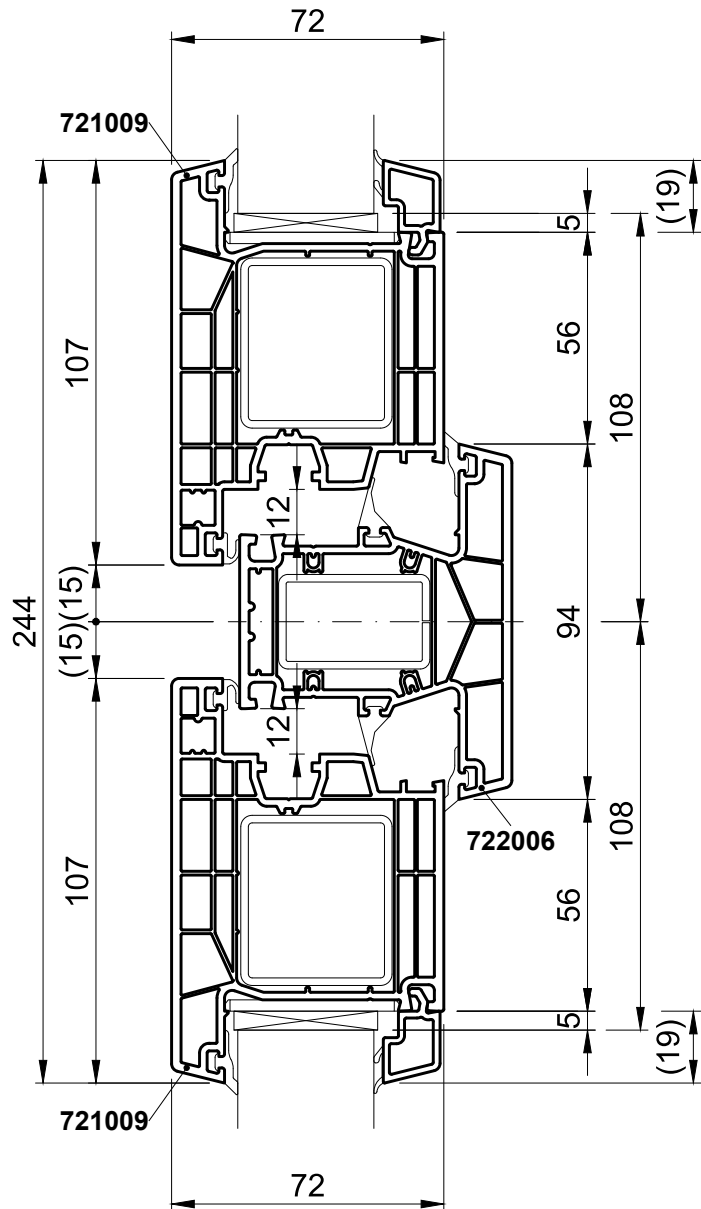
Sash
721008

Fixed mullion
722010



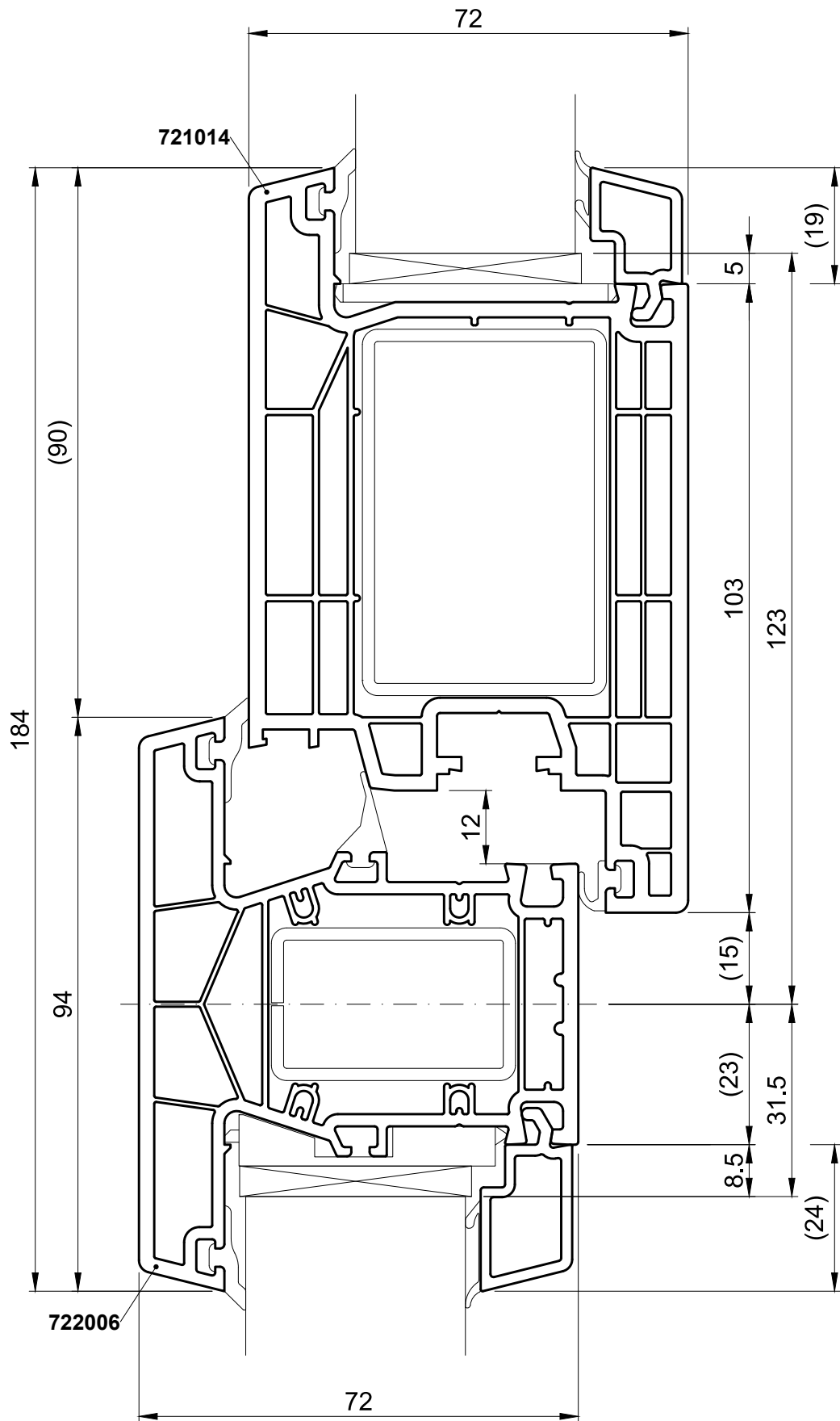
Sash
721009

Fixed mullion
722006



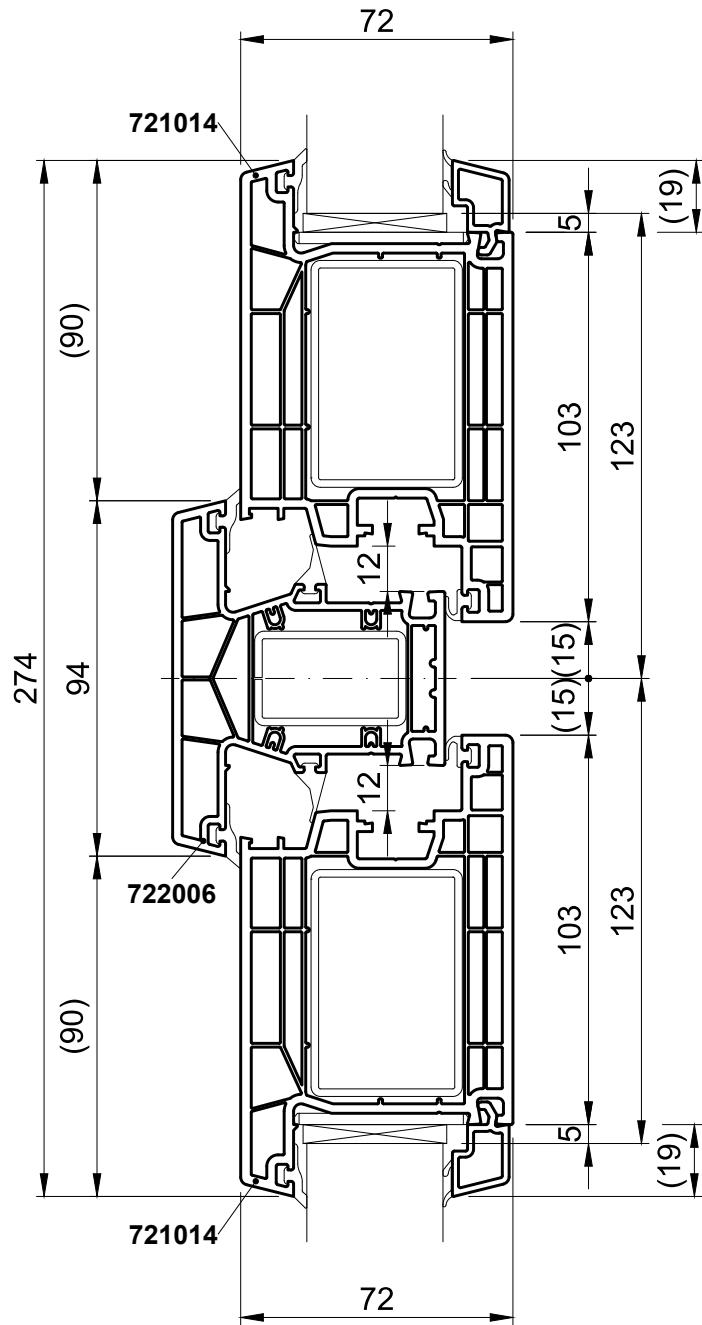
Sash
721014

Fixed mullion
722006



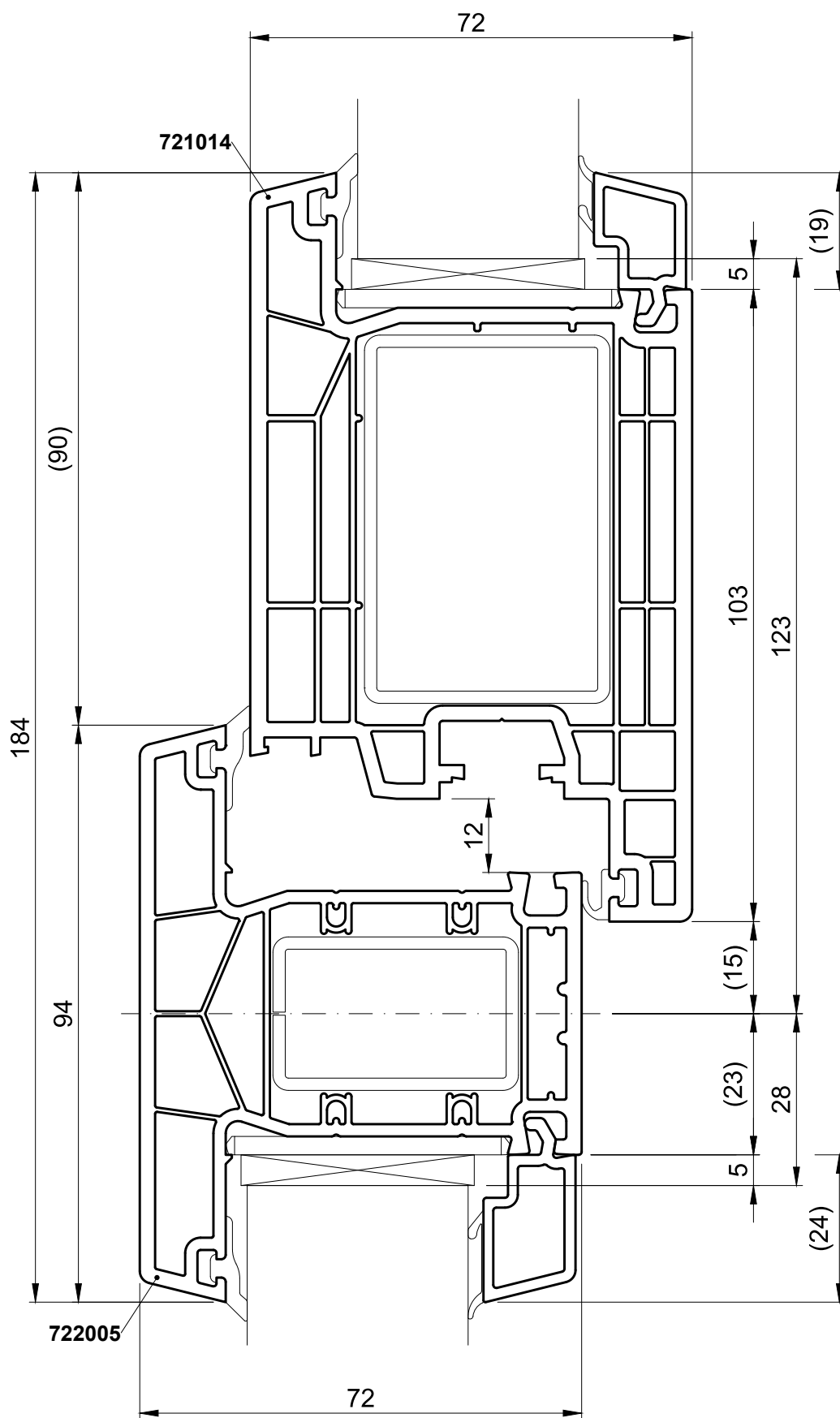
Sash
721014

Fixed mullion
722006



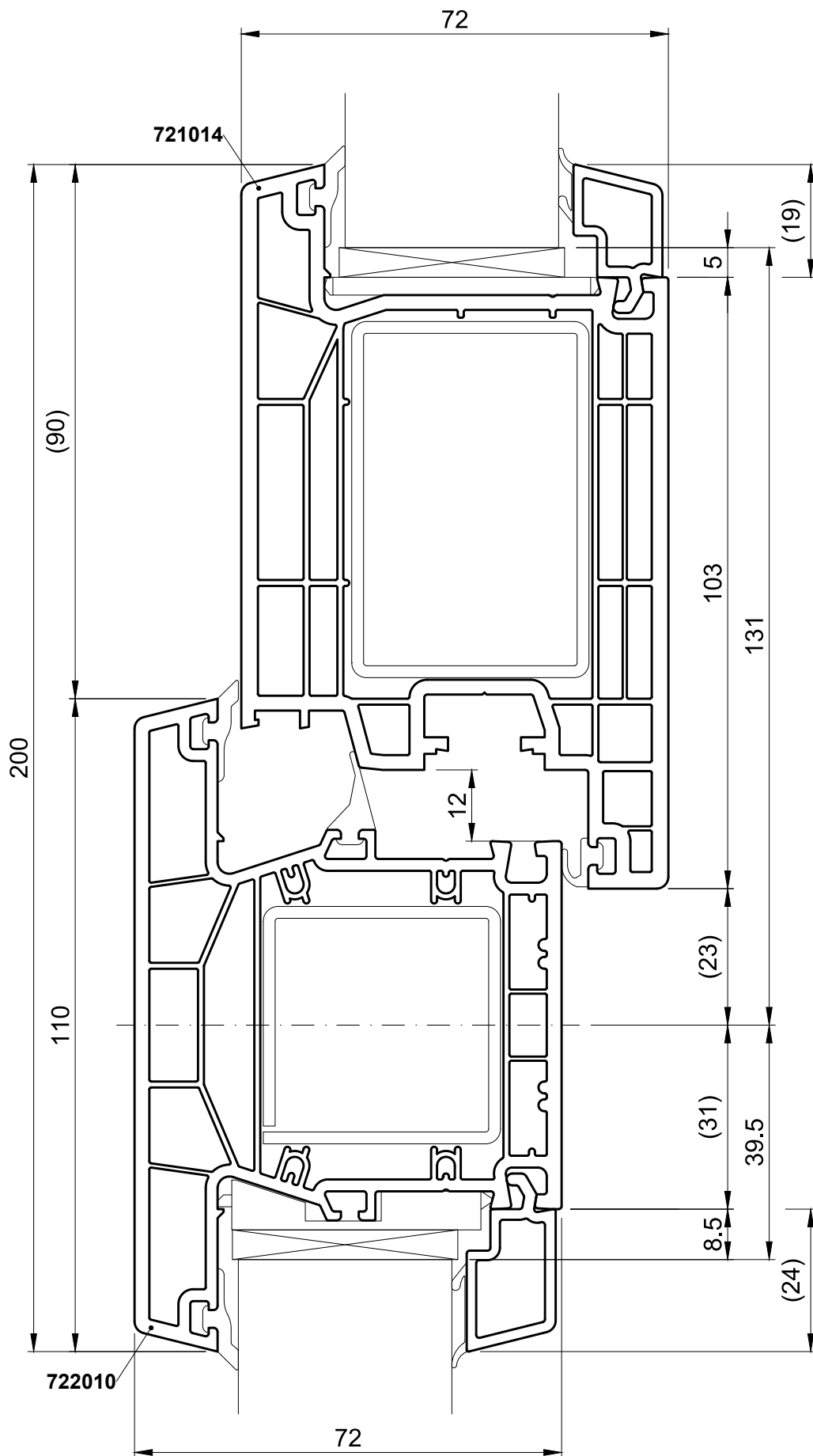
Sash
721014

Fixed mullion
722005



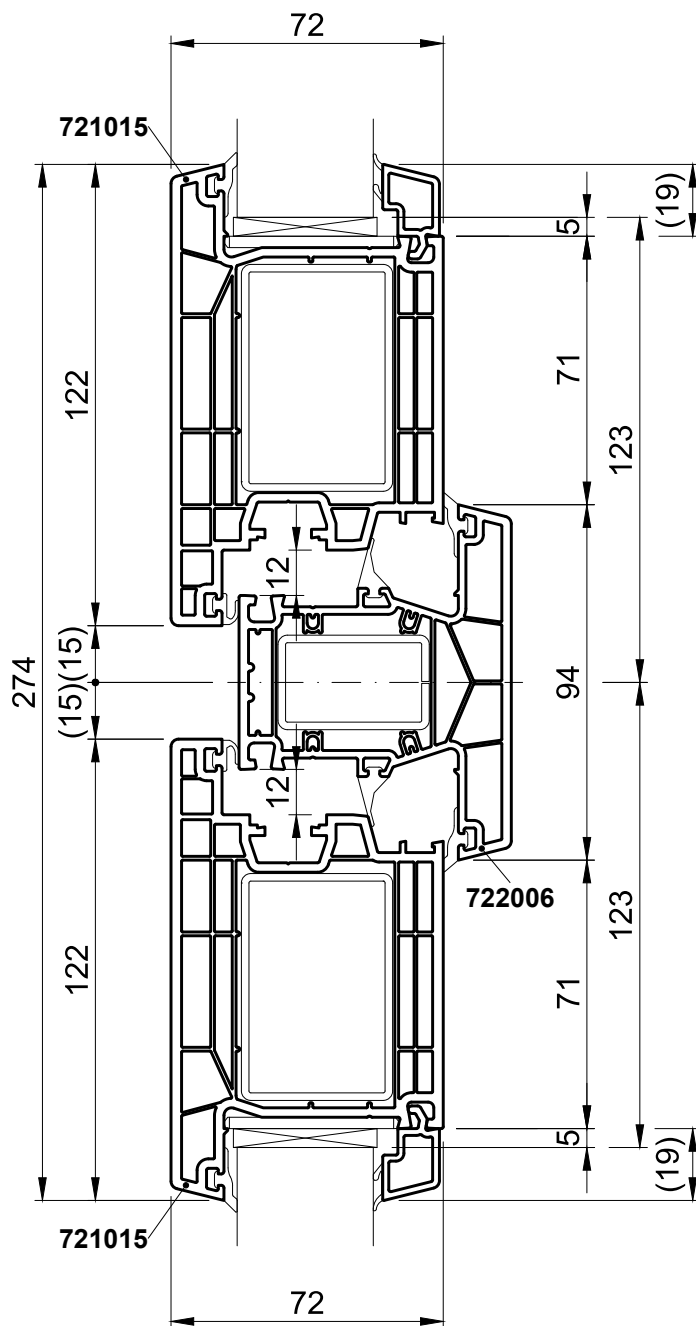
Sash
721014

Fixed mullion
722010



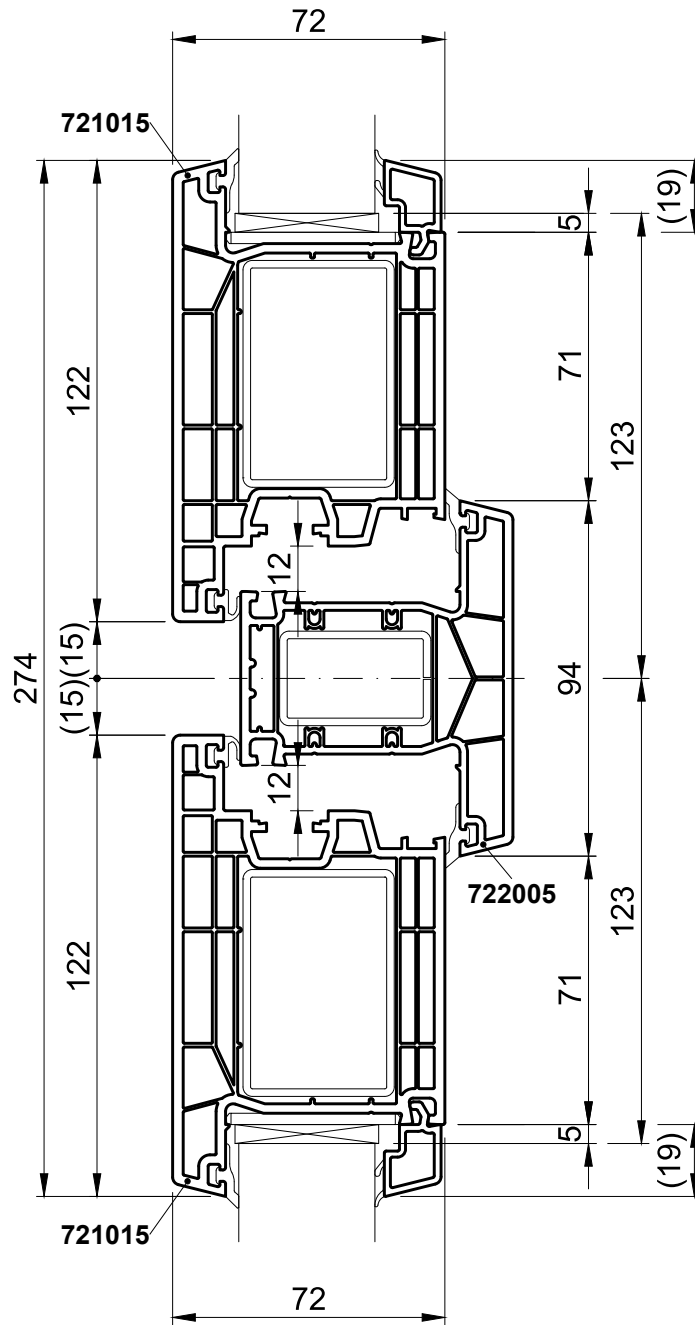
Sash
721015

Fixed mullion
722006



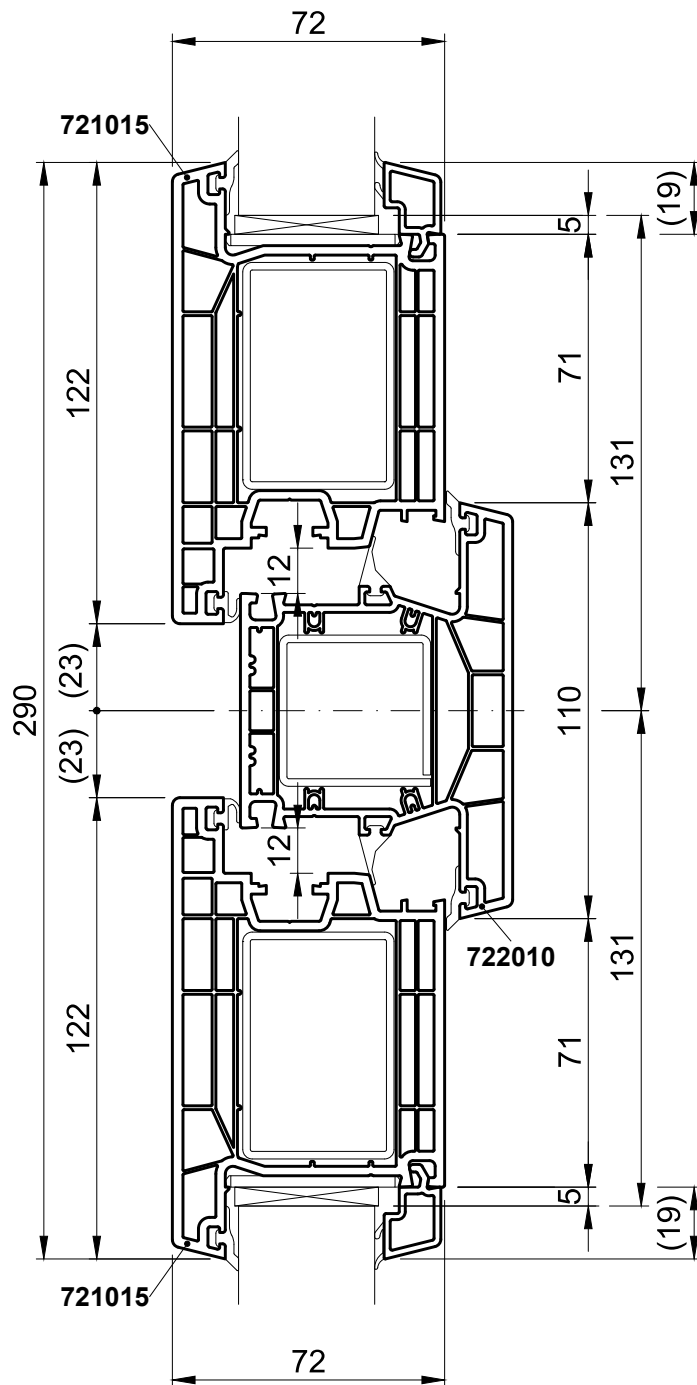
Sash
721015

Fixed mullion
722005



Sash
721015

Fixed mullion
722010

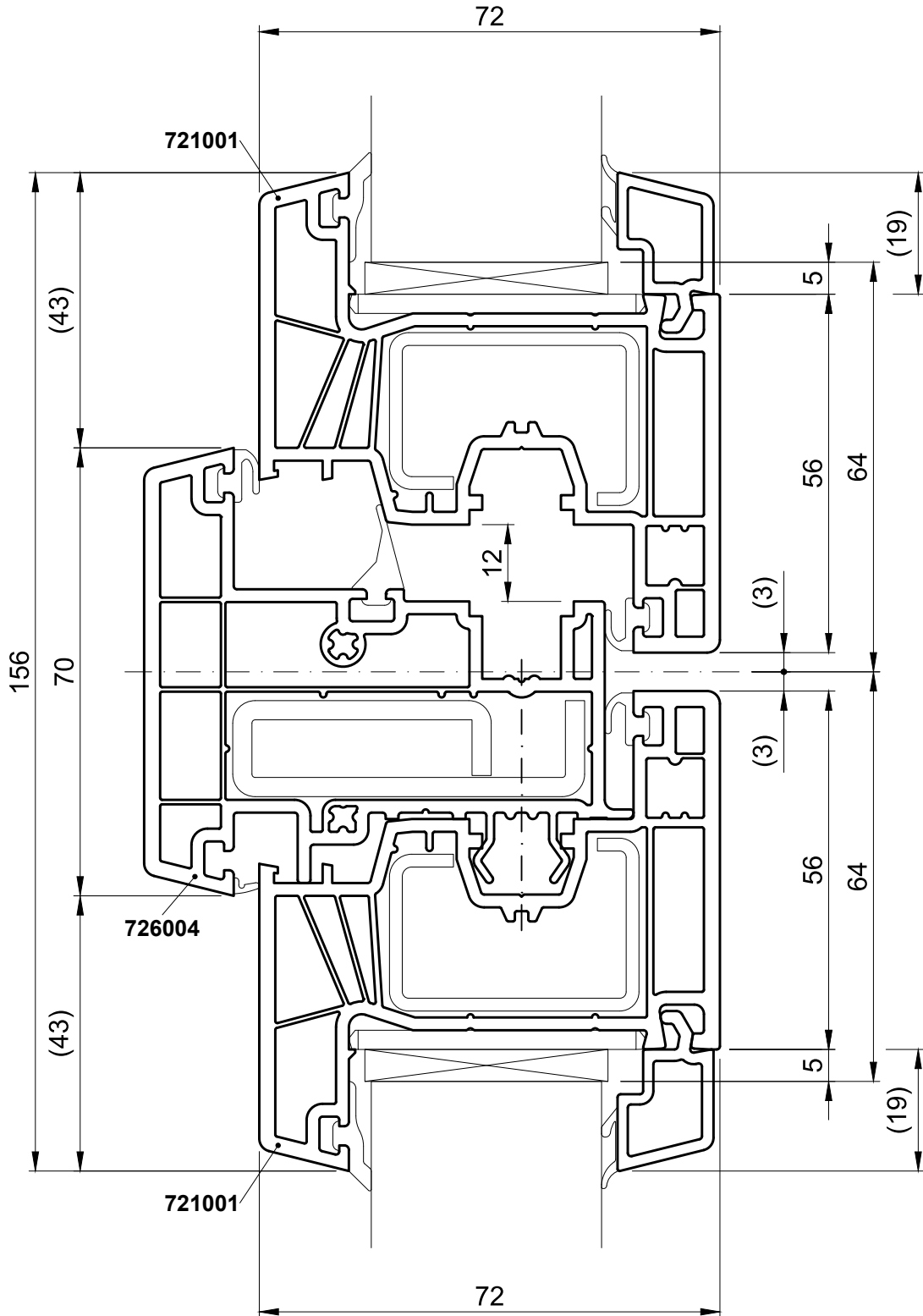


Sash
721001

Floating mullion / faceplate
726004

Clearance

Sash width		Faceplate height	
720004	(RAM/2) – 41 mm	726004	FAM – 92 mm
720022	(RAM/2) – 58 mm		
720024	(RAM/2) – 83 mm	Faceplate cap 427014	

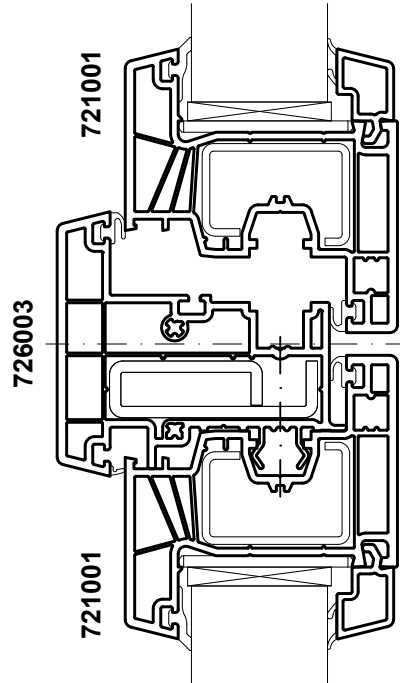


Sash
721001

Floating mullion / faceplate
726003

Clearance

Sash width		Faceplate height	
720003	(RAM/2) – 41 mm	726003	FAM – 92 mm
720023	(RAM/2) – 56 mm	Faceplate cap 427016	

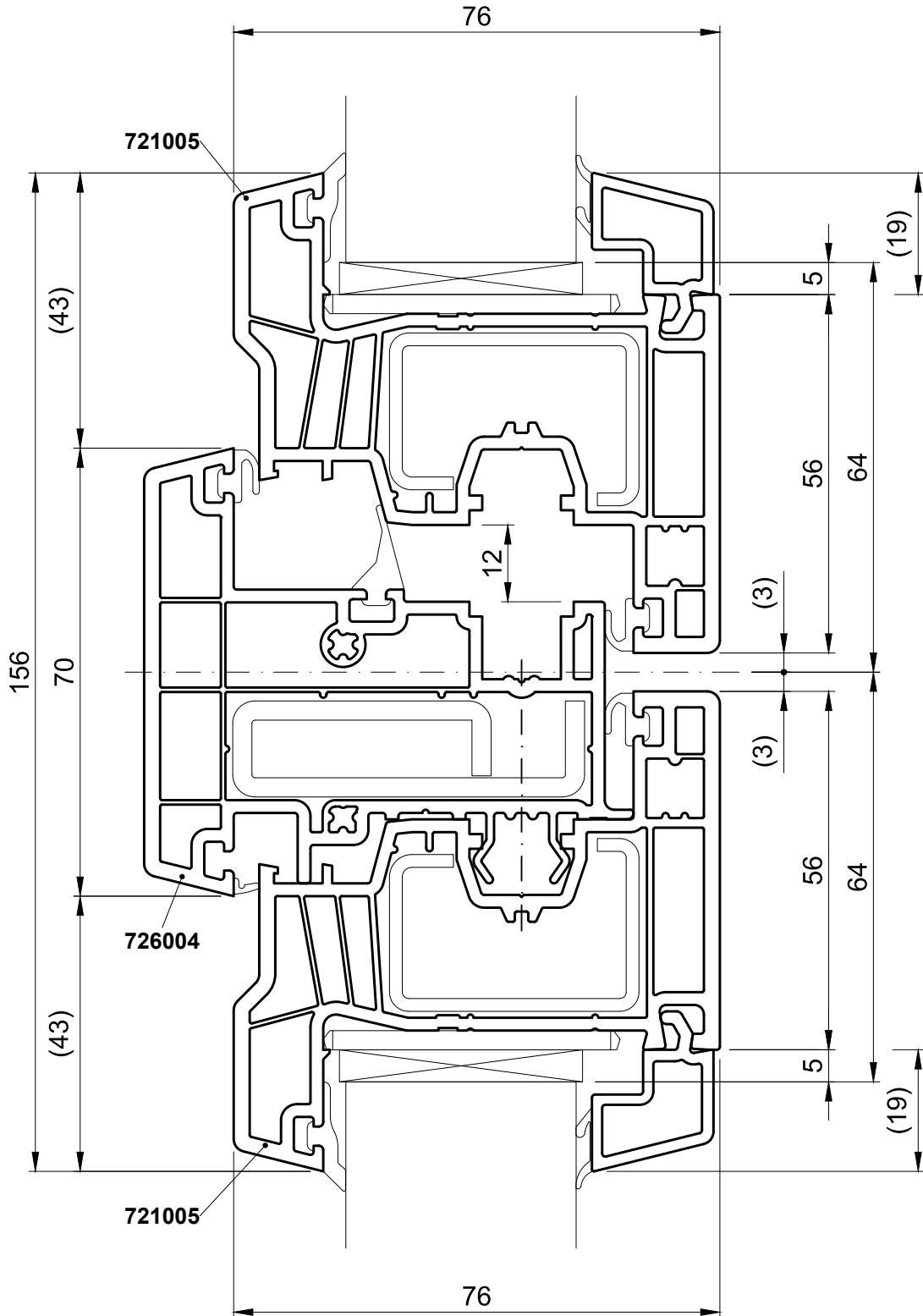


Sash
721005

Faceplate
726004

Clearance

Sash width		Faceplate height	
720004	(RAM/2) – 41 mm	726004	FAM – 92 mm
720022	(RAM/2) – 58 mm		
720024	(RAM/2) – 83 mm	Faceplate cap 427014	

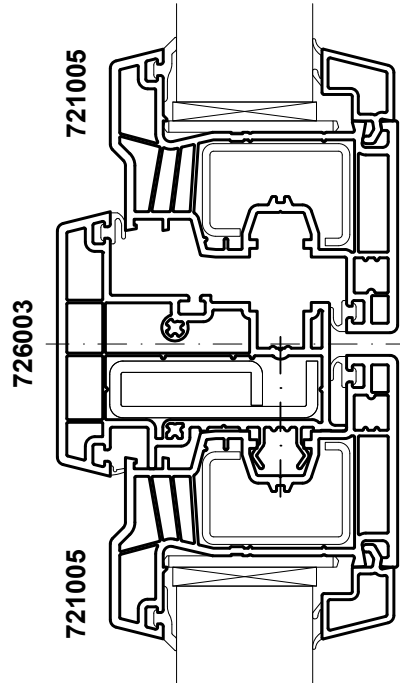


Sash
721005

Faceplate
726003

Clearance

Sash width		Faceplate height	
720003	(RAM/2) – 41 mm	726003	FAM – 92 mm
720023	(RAM/2) – 56 mm	Faceplate cap 427016	

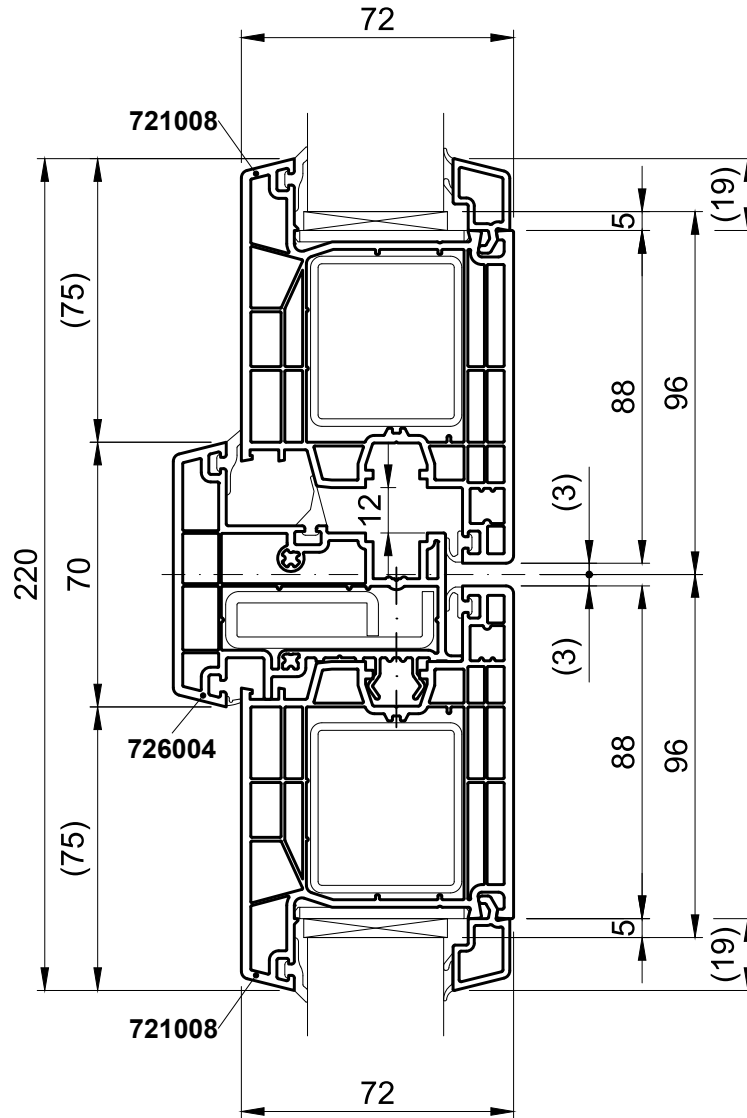


Sash
721008

Floating mullion / faceplate
726004

Clearance

Sash width		Faceplate height	
720004	(RAM/2) – 41 mm	726004	FAM – 92 mm
720022	(RAM/2) – 58 mm		
720024	(RAM/2) – 83 mm	Faceplate cap 427014	

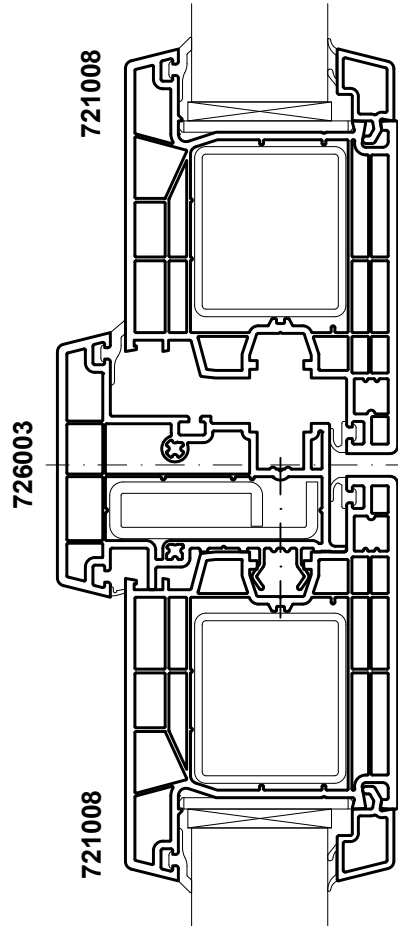


Sash
721008

Floating mullion / faceplate
726003

Clearance

Sash width		Faceplate height	
720003	(RAM/2) – 41 mm	726003	FAM – 92 mm
720023	(RAM/2) – 56 mm	Faceplate cap 427016	

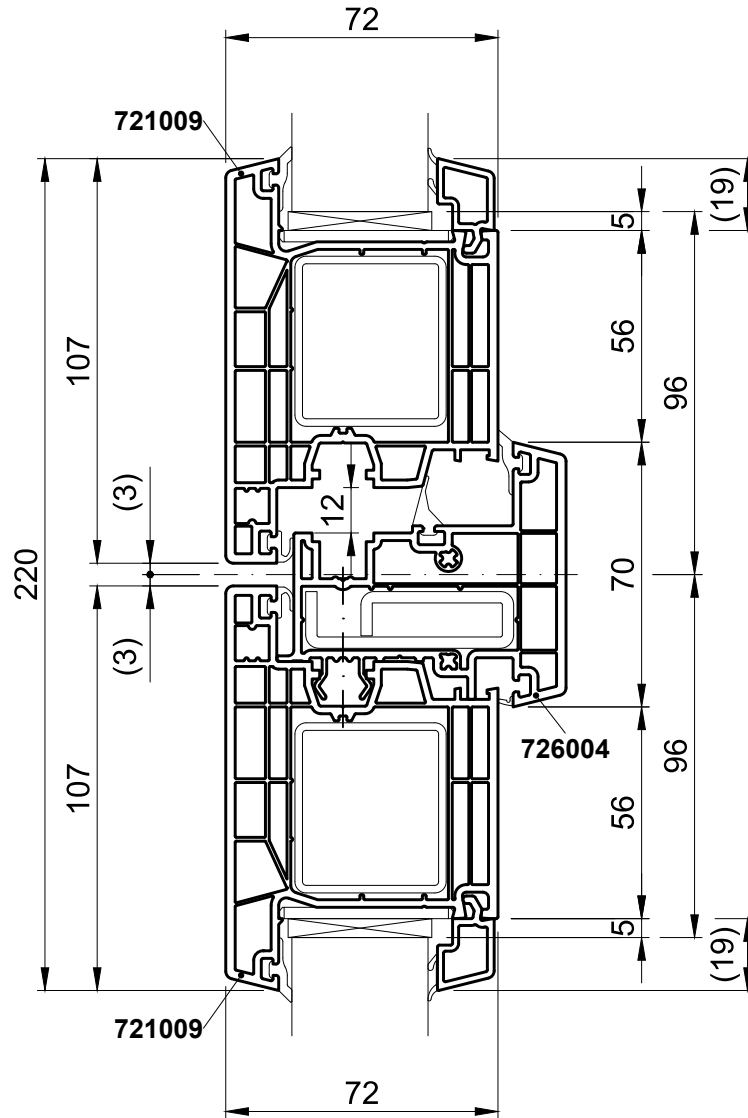


Sash
721009

Floating mullion / faceplate
726004

Clearance

Sash width		Faceplate height	
720004	(RAM/2) – 41 mm	726004	FAM – 92 mm
720022	(RAM/2) – 58 mm		
720024	(RAM/2) – 83 mm	Faceplate cap 427014	

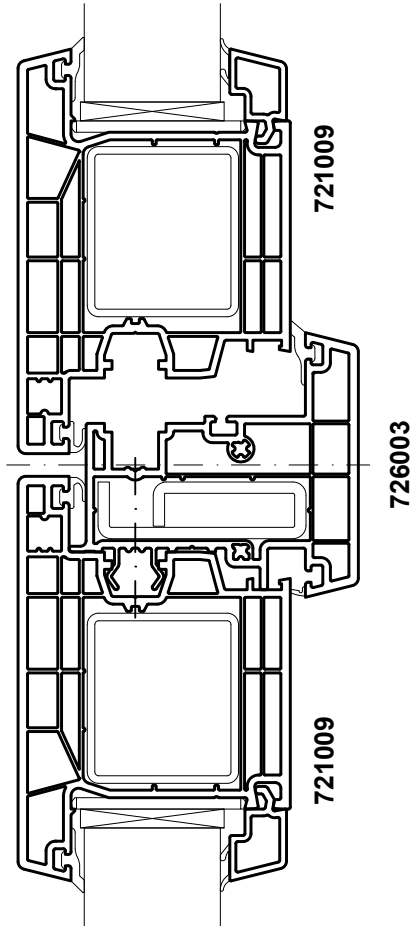


Sash
721009

Floating mullion / faceplate
726003

Clearance

Sash width		Faceplate height	
720003	(RAM/2) – 41 mm	726003	FAM – 92 mm
720023	(RAM/2) – 56 mm	Faceplate cap 427016	

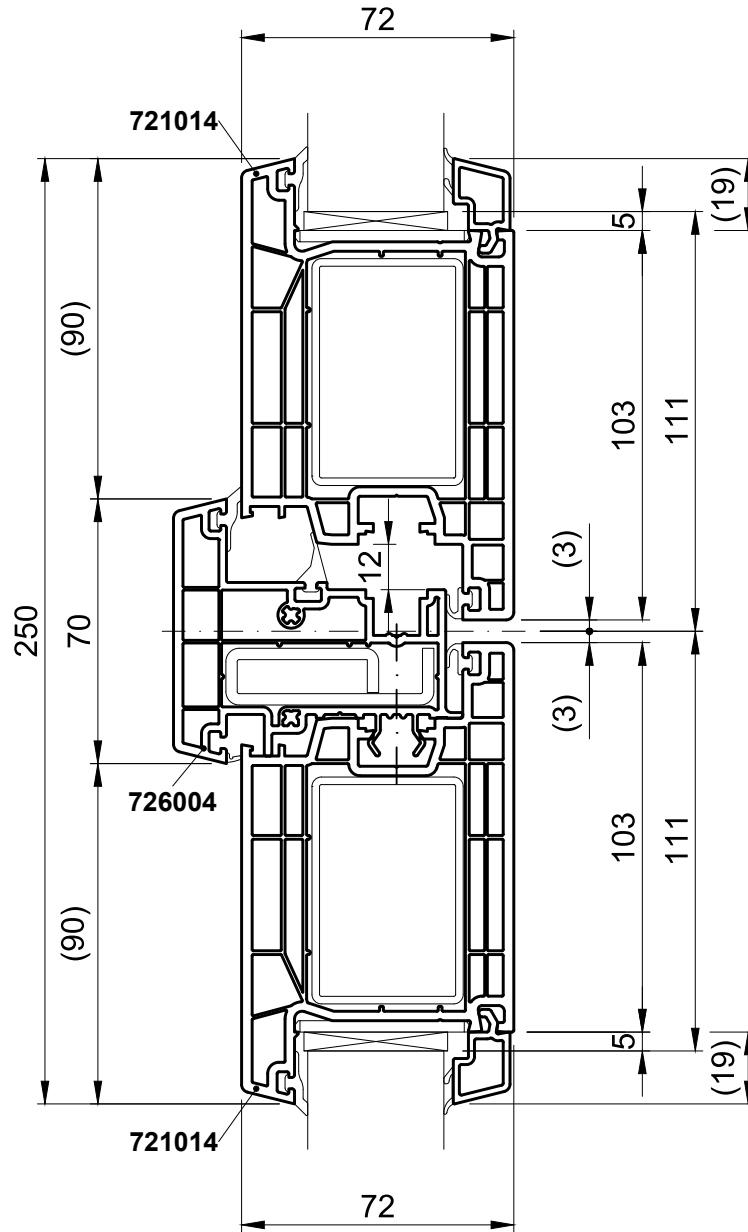


Sash
721014

Faceplate
726004

Clearance

Sash width		Faceplate height	
720004	(RAM/2) – 41 mm	726004	FAM – 92 mm
720022	(RAM/2) – 58 mm		
720024	(RAM/2) – 83 mm	Faceplate cap 427014	

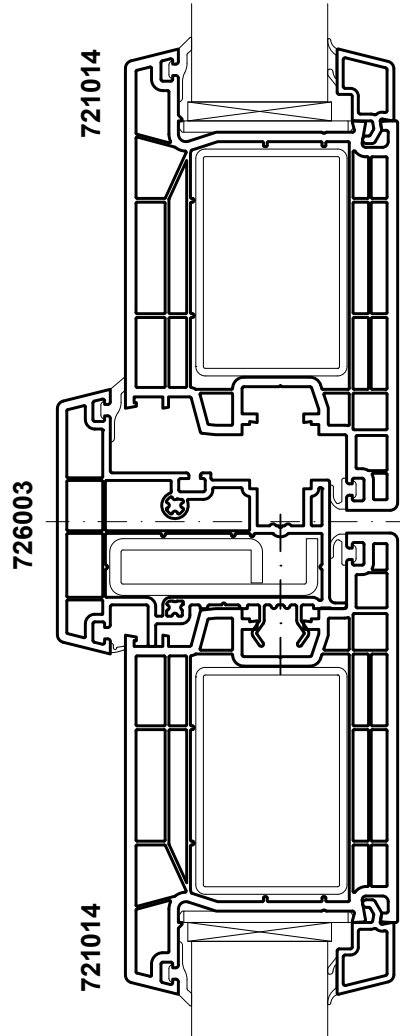


Sash
721014

Faceplate
726003

Clearance

Sash width		Faceplate height	
720003	(RAM/2) – 41 mm	726003	FAM – 92 mm
720023	(RAM/2) – 56 mm	Faceplate cap 427016	

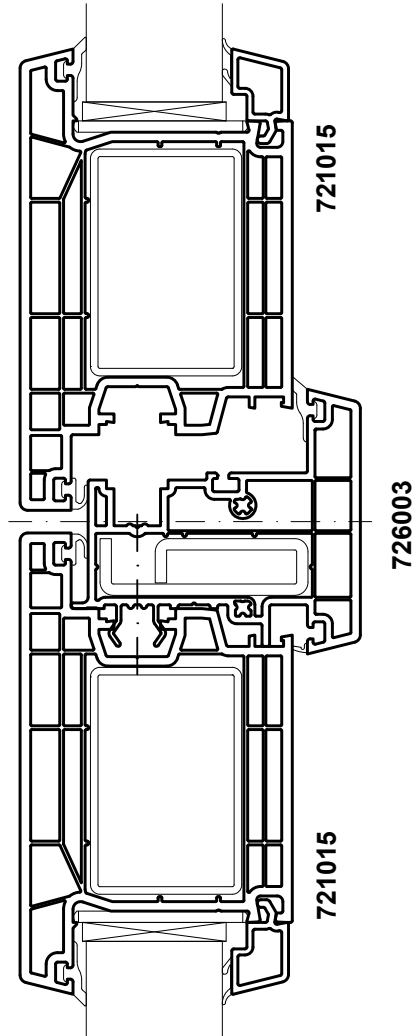


Sash
721015

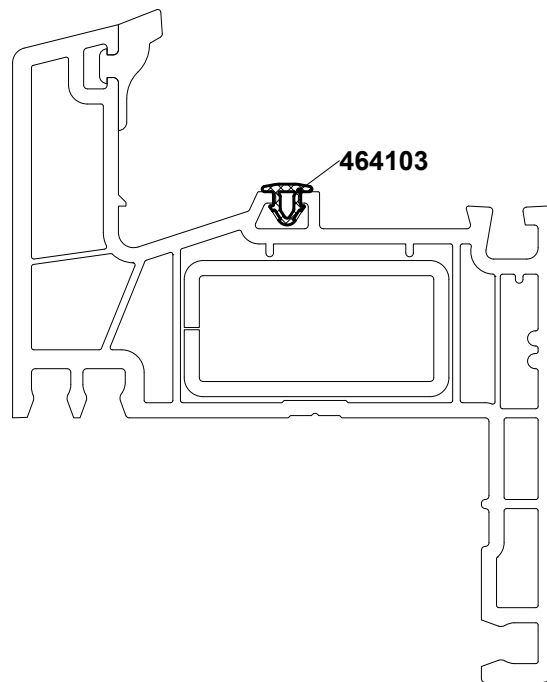
Faceplate
726003

Clearance

Sash width		Faceplate height	
720003	(RAM/2) – 41 mm	726003	FAM – 92 mm
720023	(RAM/2) – 56 mm	Faceplate cap 427016	



Groove cover gasket

464103**i** INFO

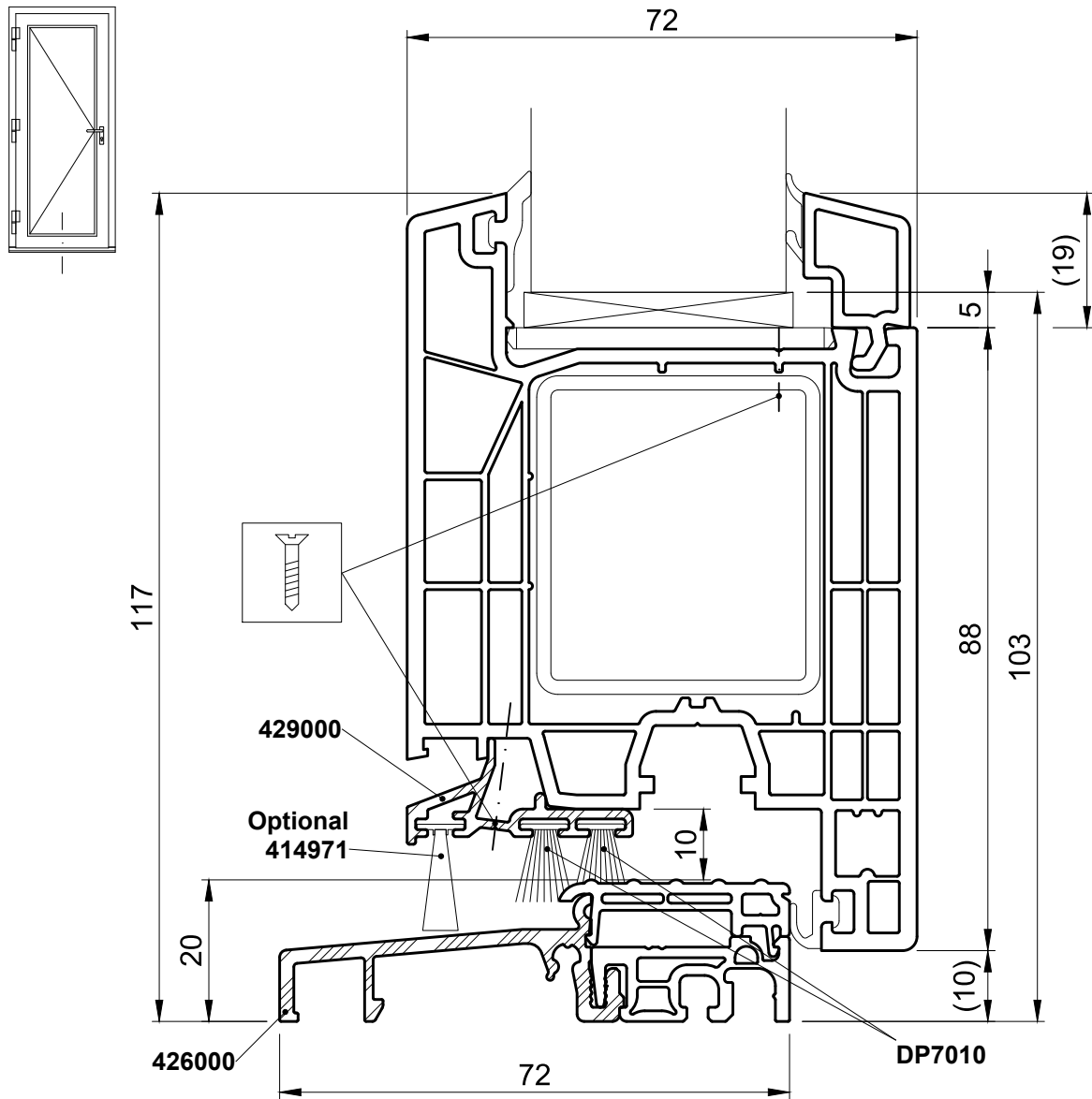
For AD, the groove cover gasket 464103 can be inserted into the gasket groove.

- ▶ Remove central gasket on MD.
- ▶ Insert groove cover gasket into the gasket groove.

Door threshold
426000

Sash
721008

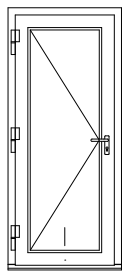
Weather profile strip
429000



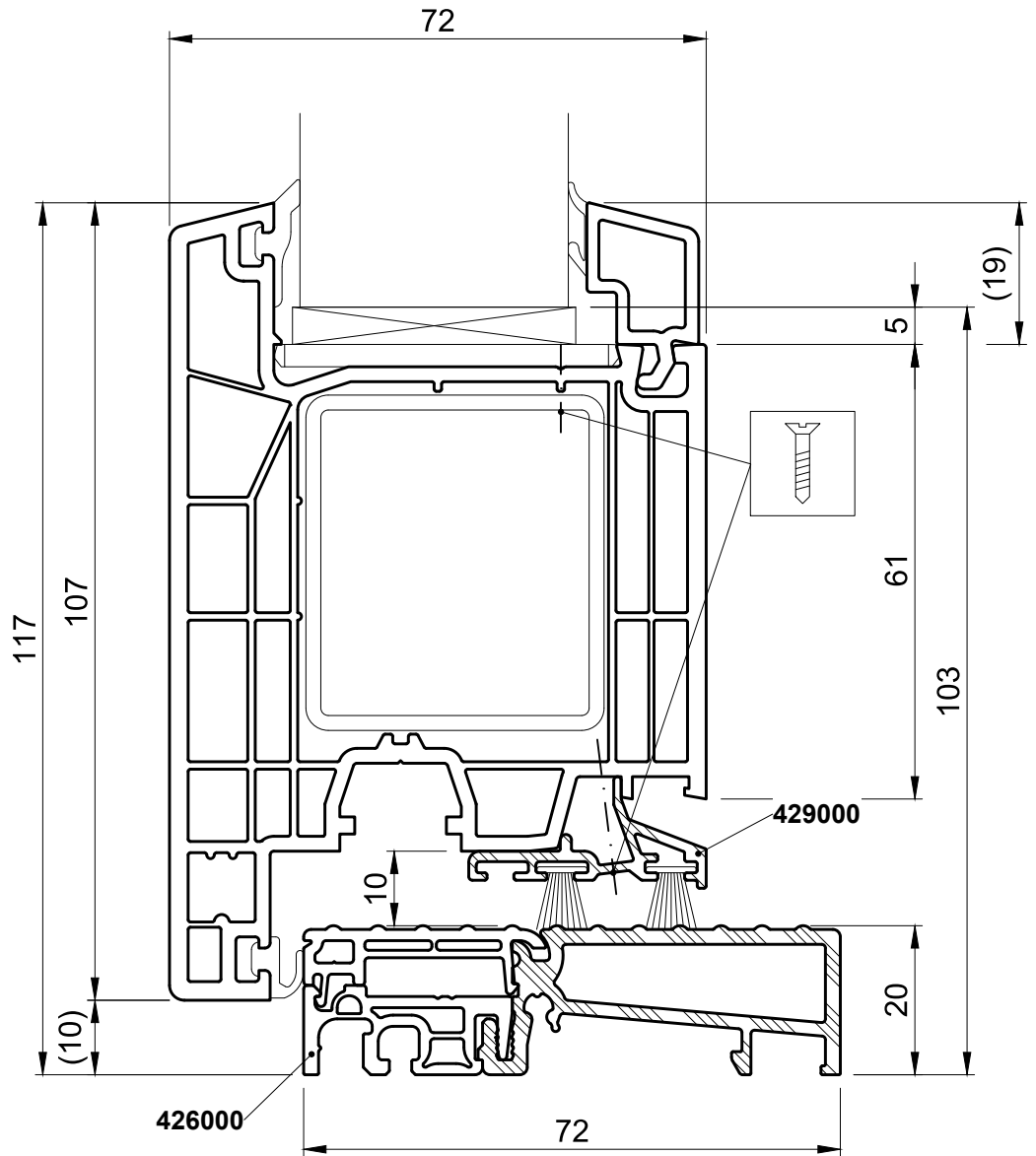
Threshold
426000

Sash
721009

Weather profile strip
429000



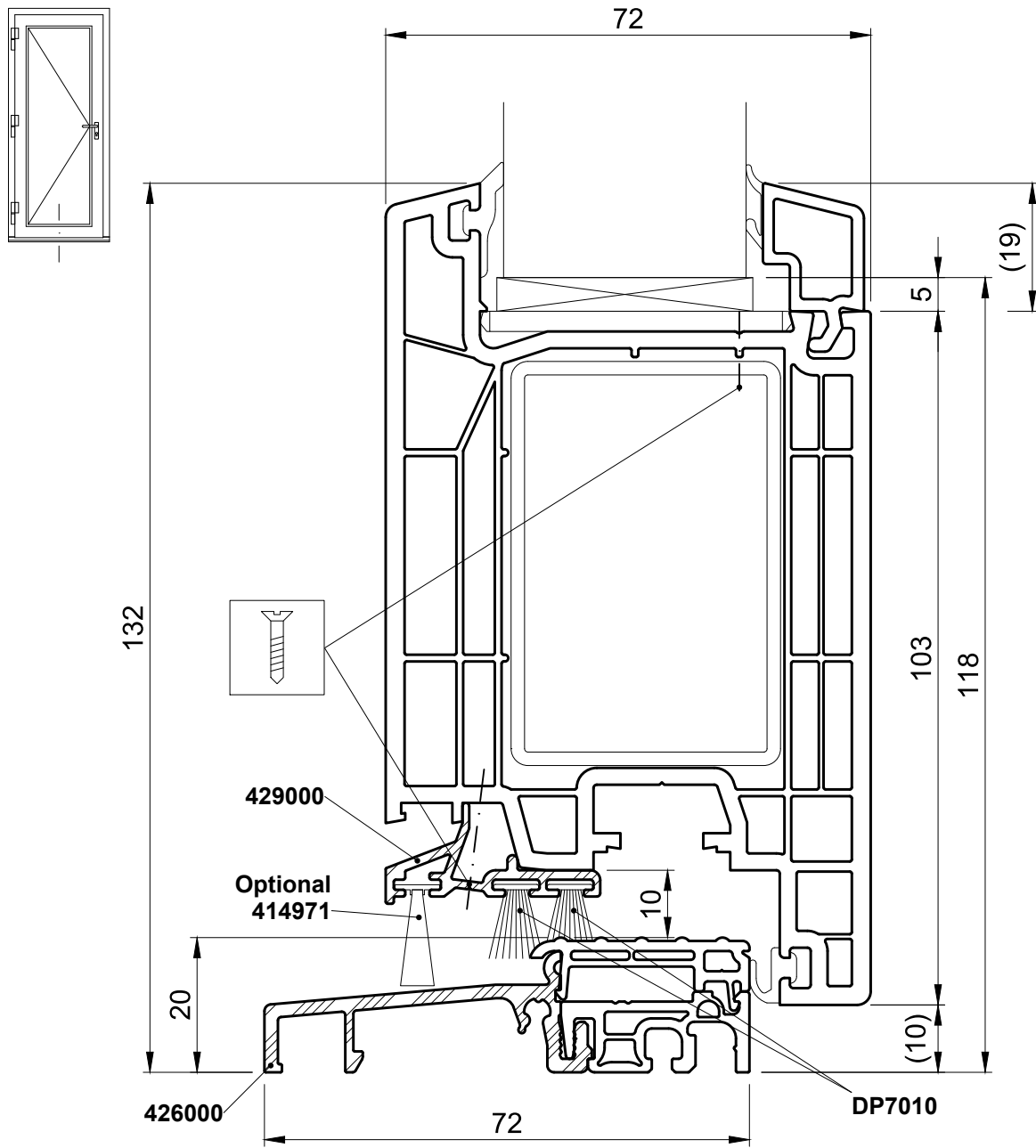
Opening out-wards



Door threshold
426000

Sash
721014

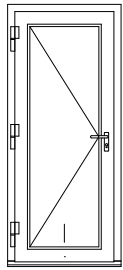
Weather profile strip
429000



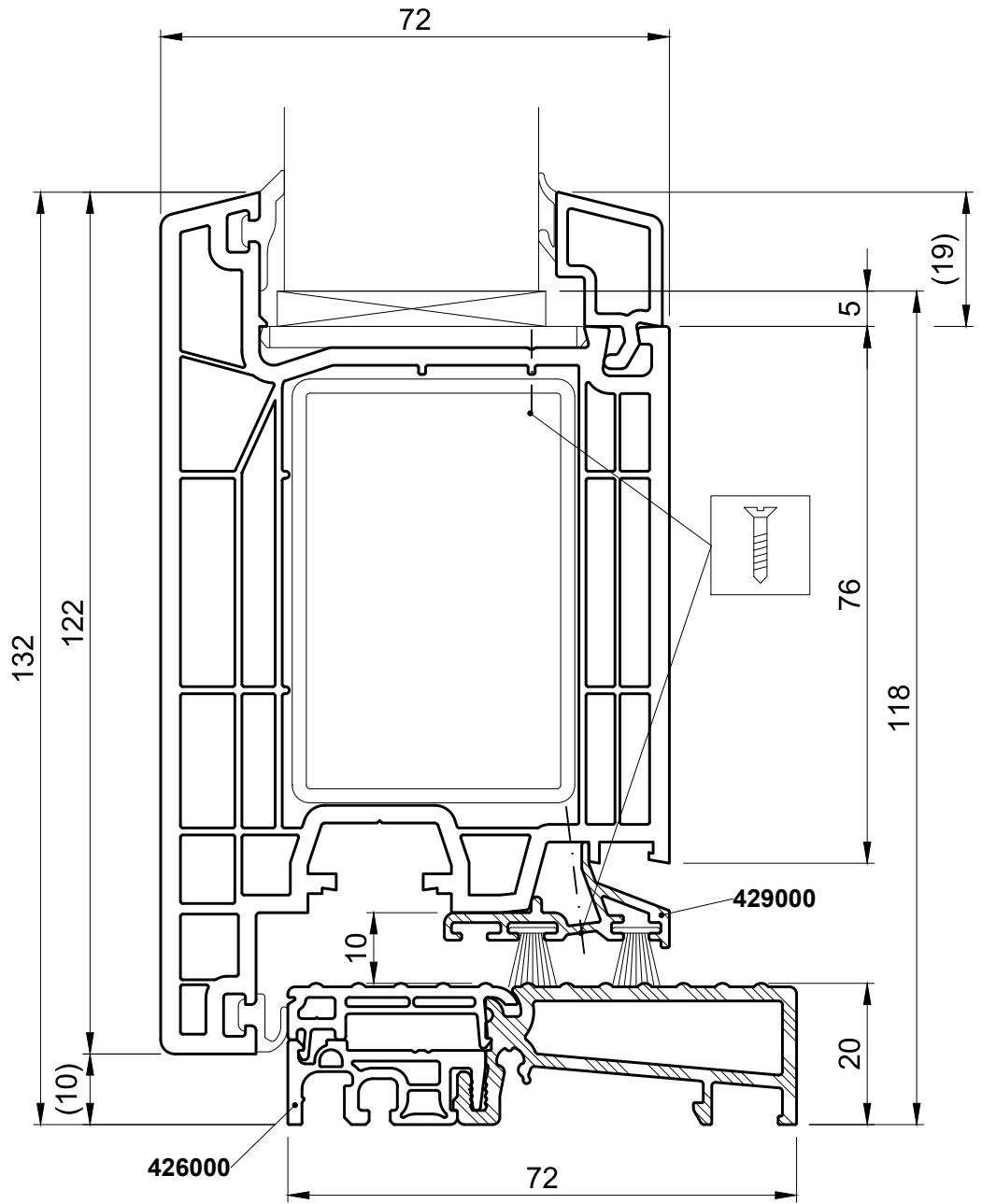
Threshold
426000

Sash
721015

Weather profile strip
429000

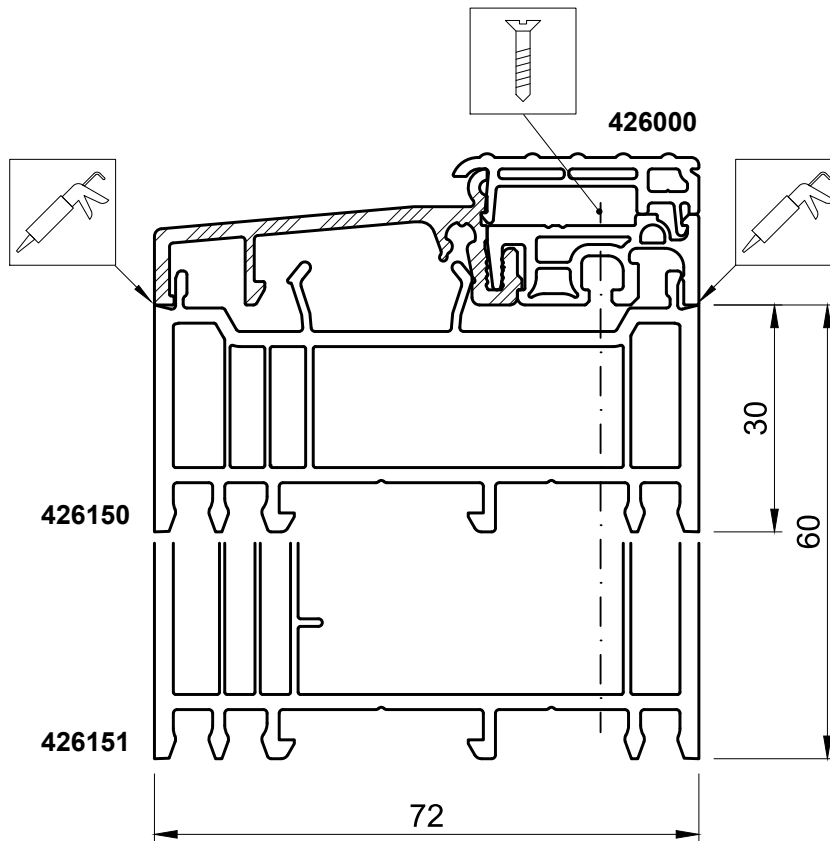


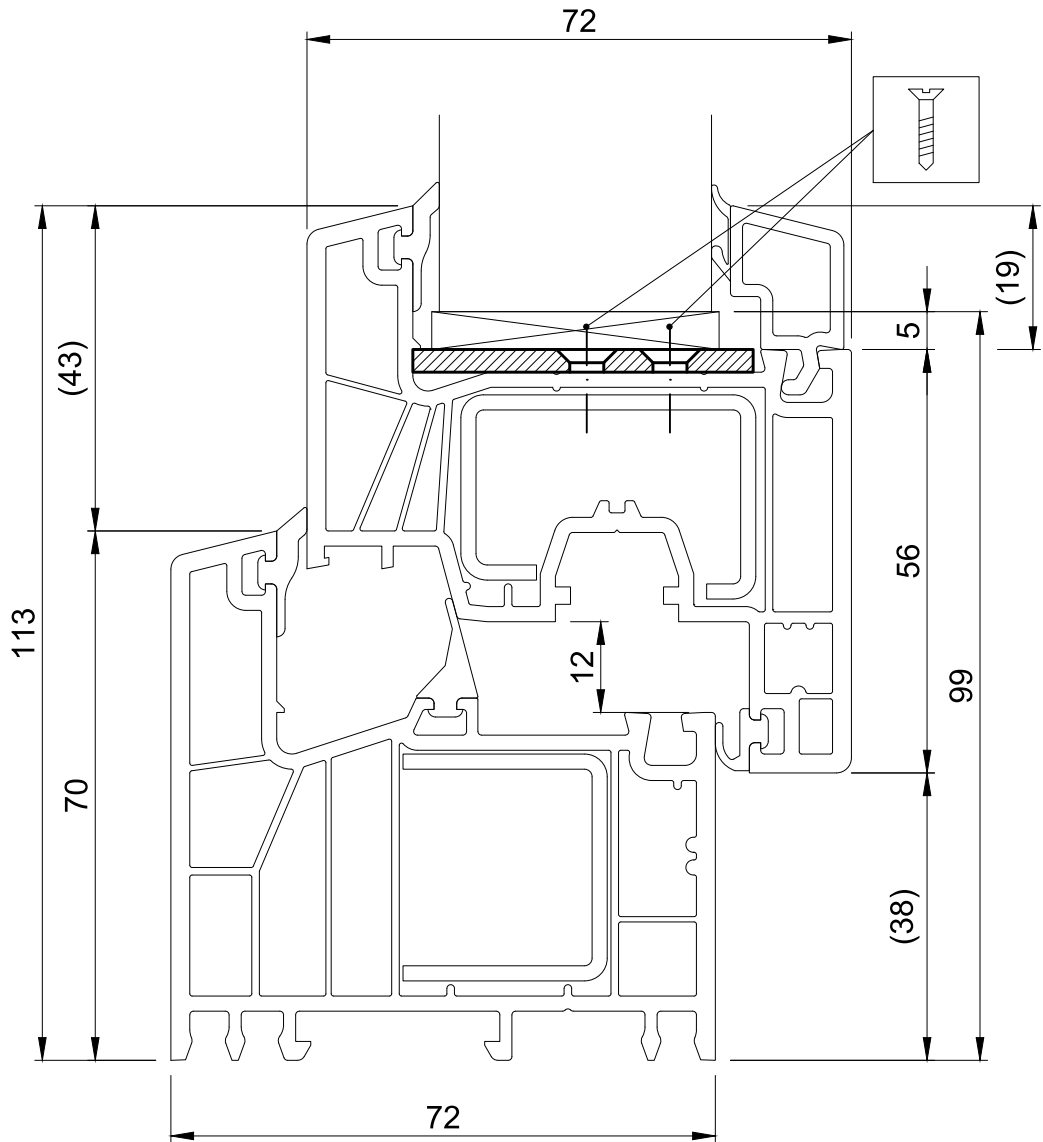
Opening outwards



Door thresholds
426000

Widenings
426150, 426151



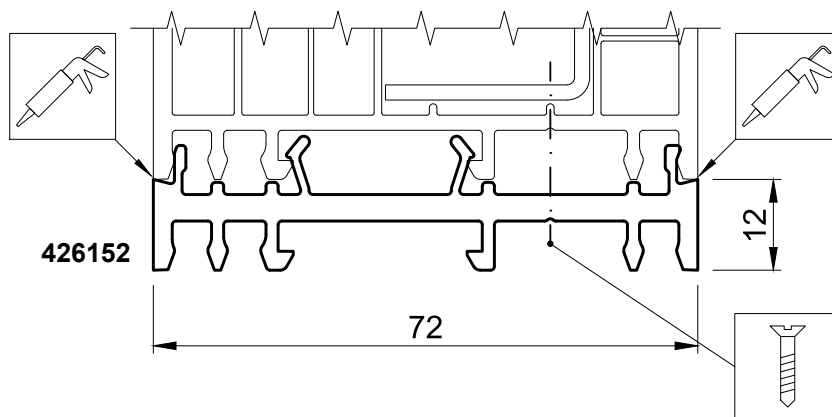
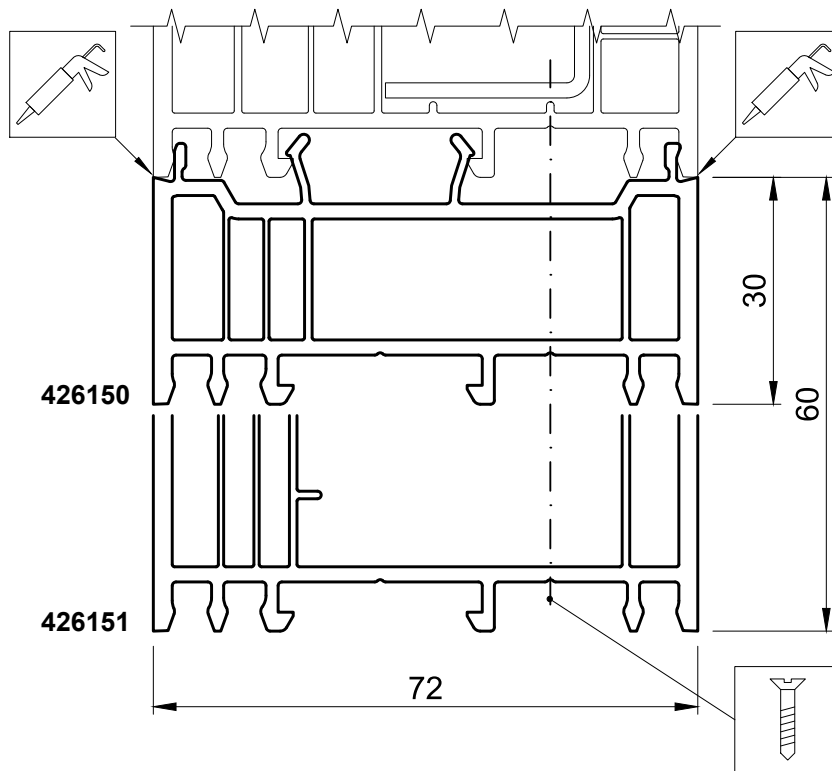


i INFO

Application only vertically

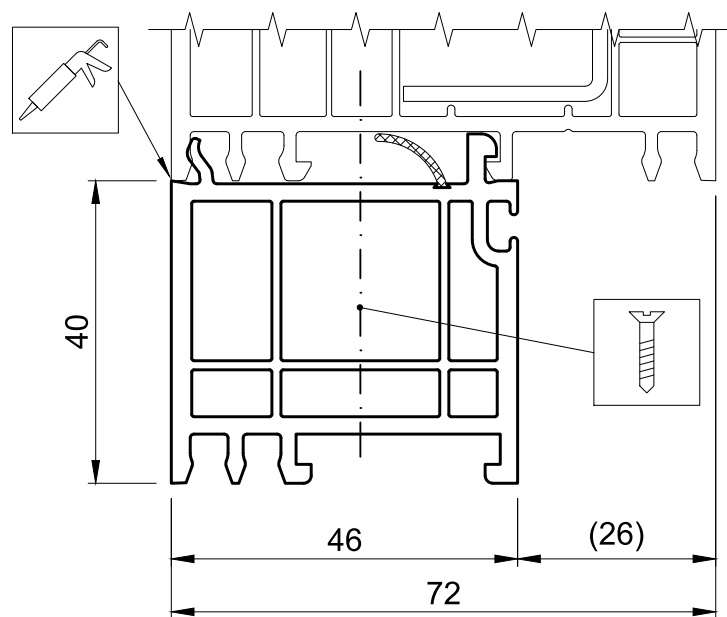
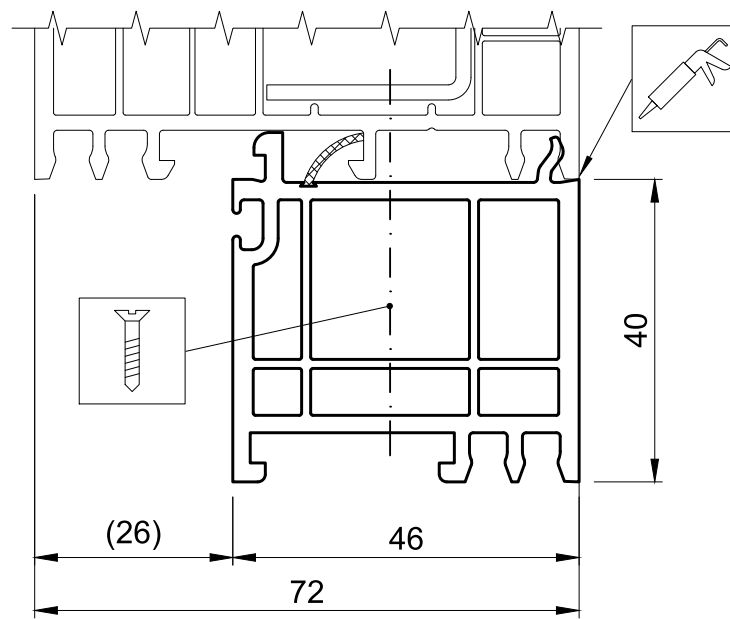
Widenings

426150, 426151, 426152

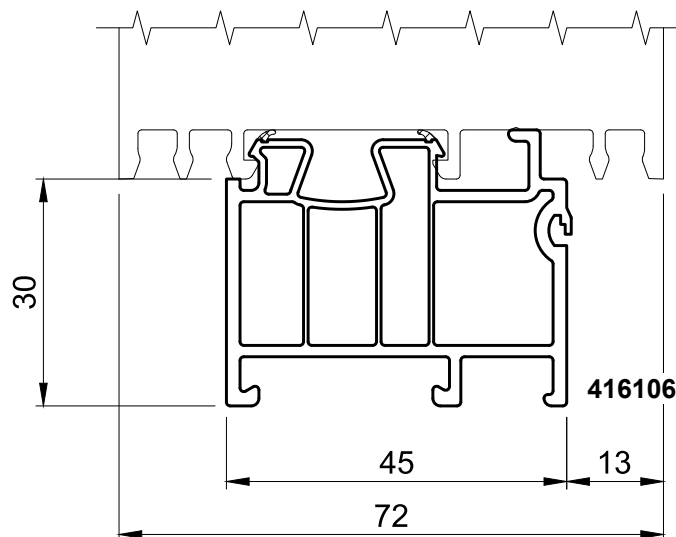
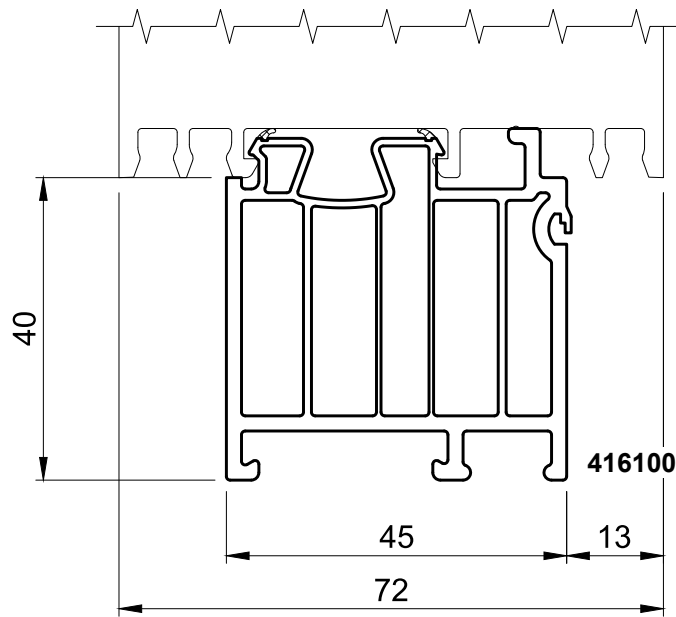


Balcony door connection

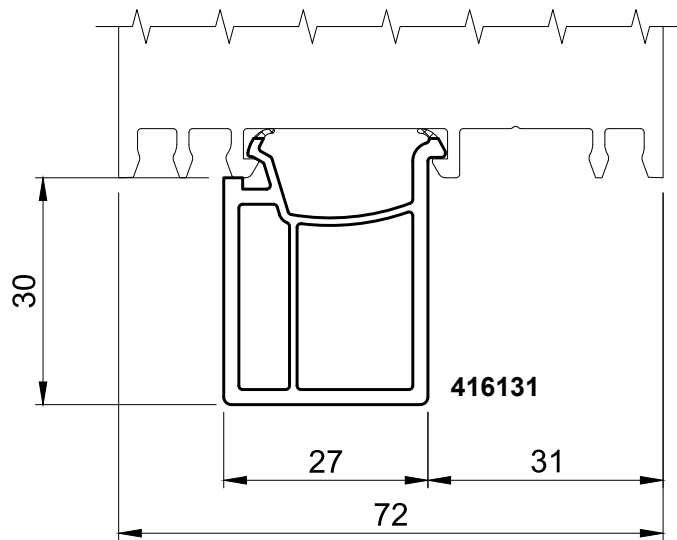
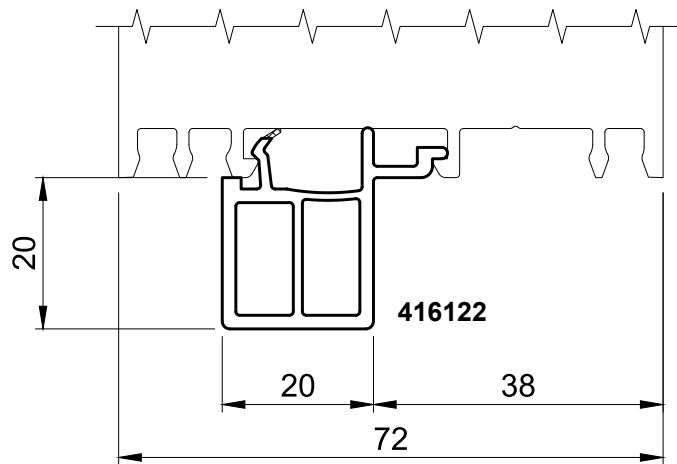
416146



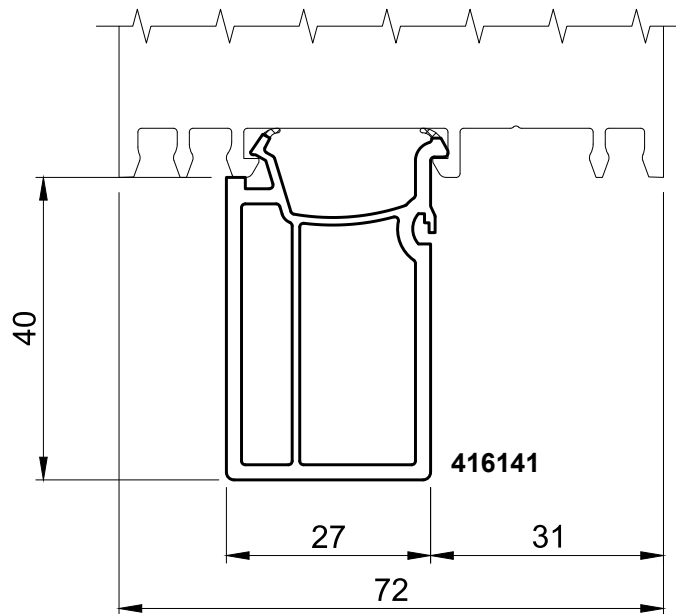
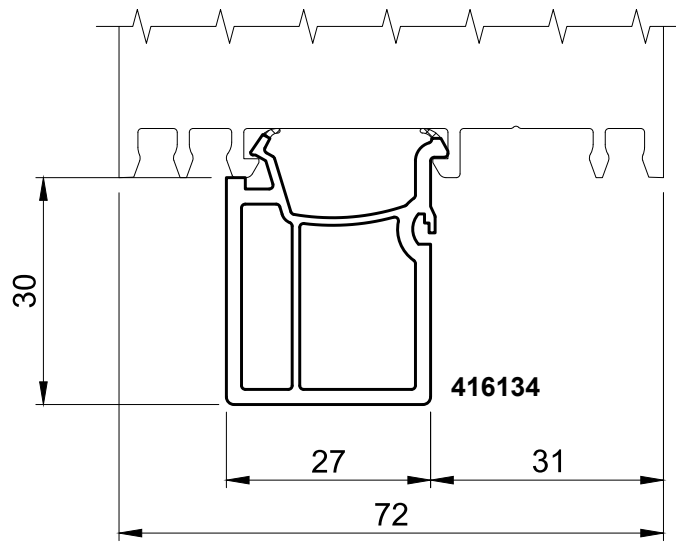
Sill connection
416100, 416106



Sill connection
416122, 416131

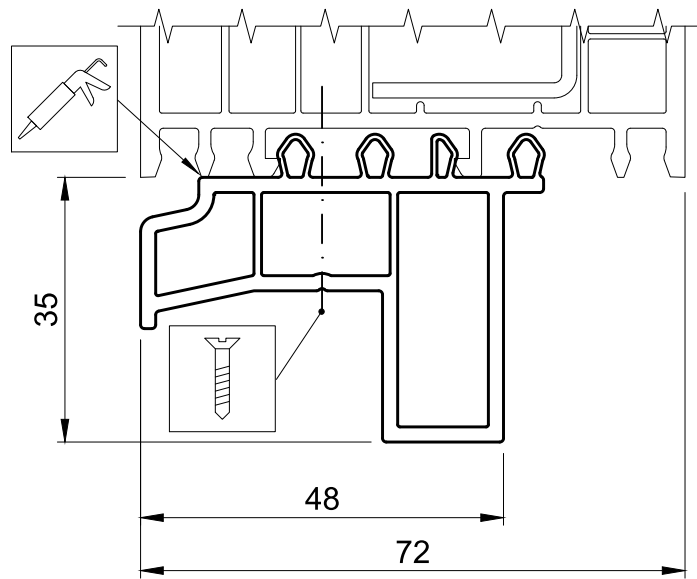


Sill connection
416134, 416141



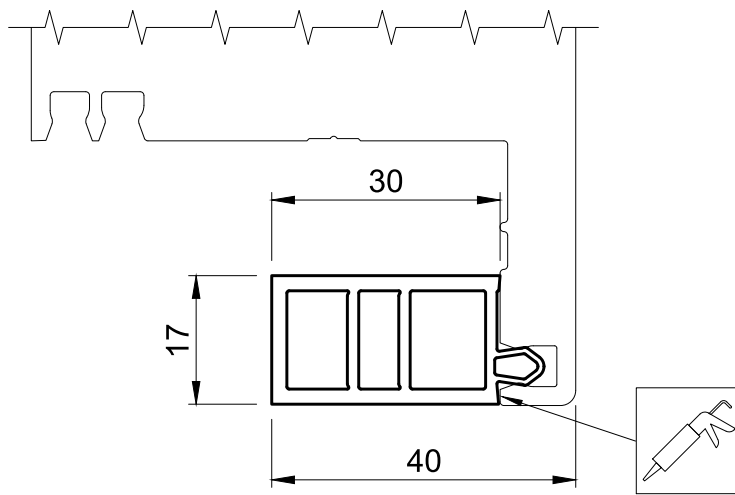
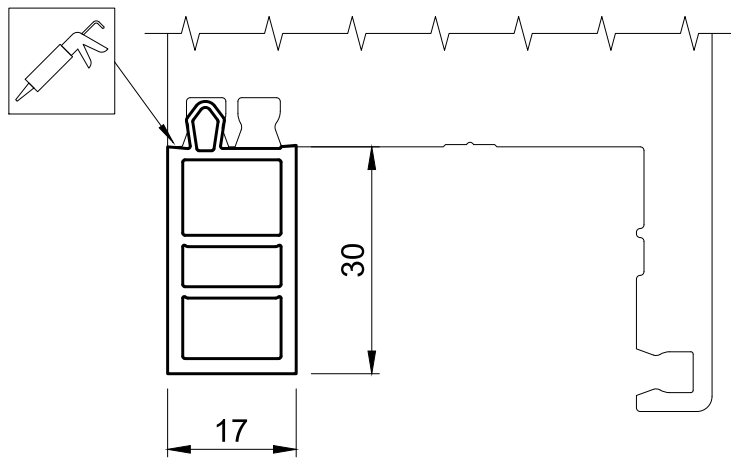
External sill connection

416119



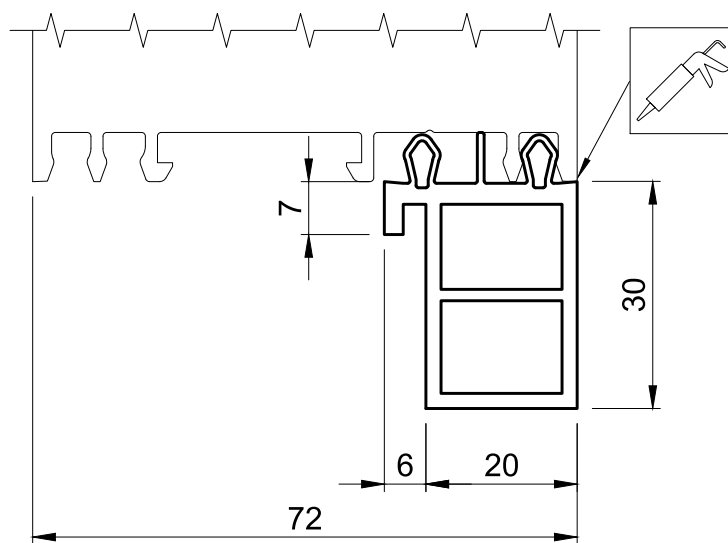
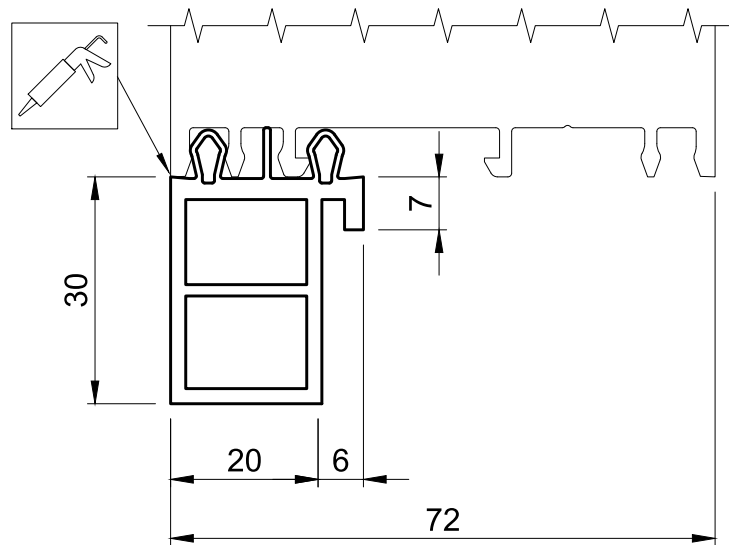
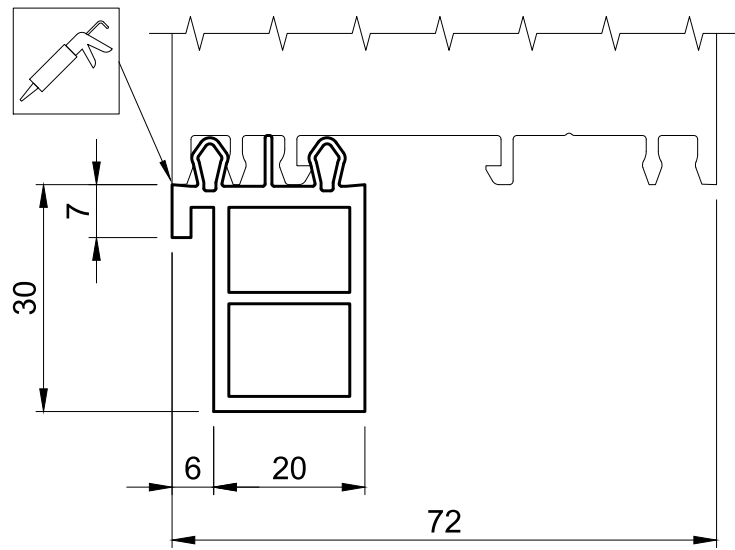
Window sill connection

416107



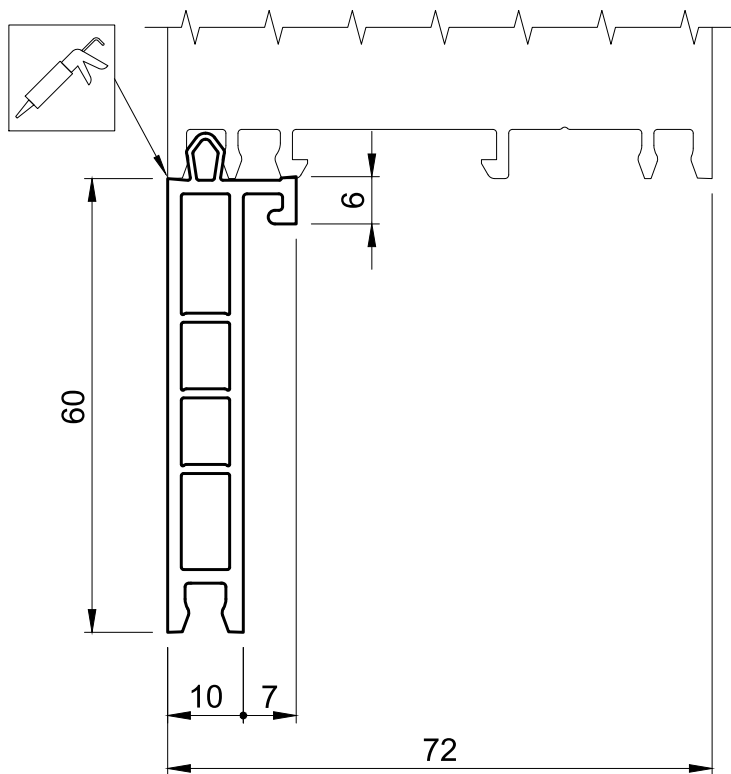
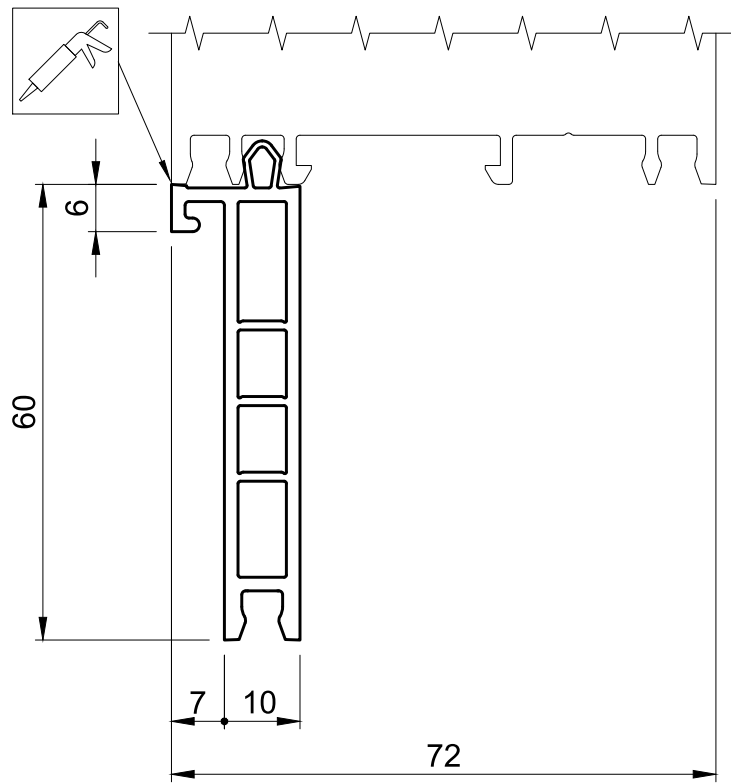
Window sill connection

416139



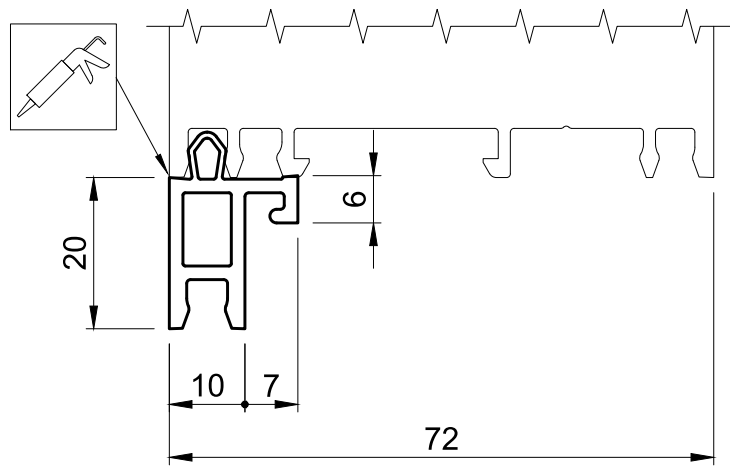
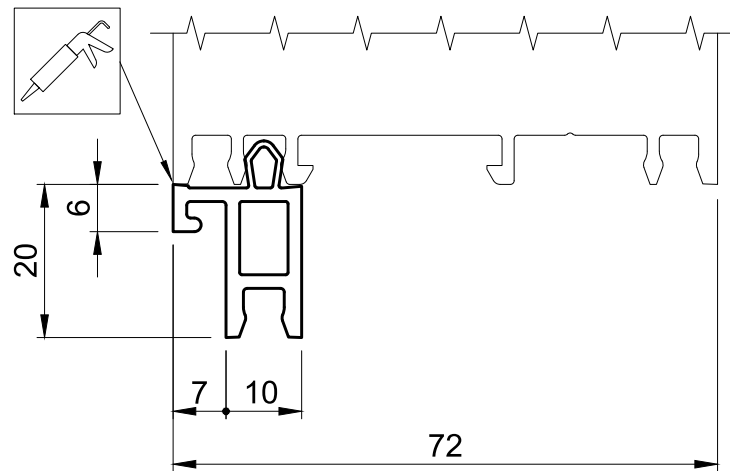
Window sill connection

416147



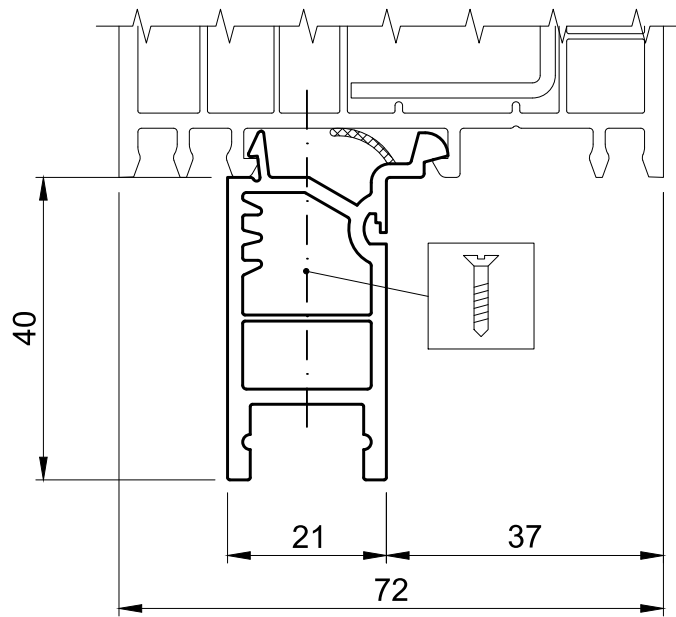
Window sill connection

416148



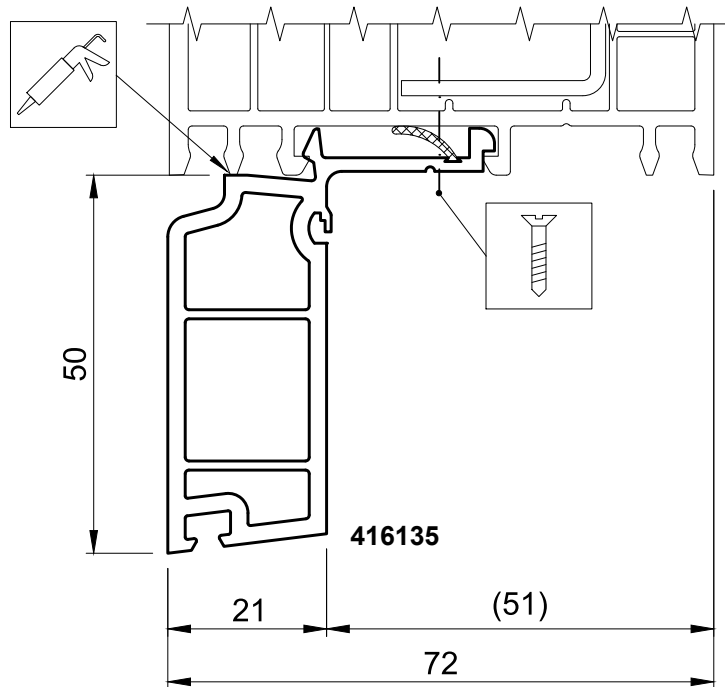
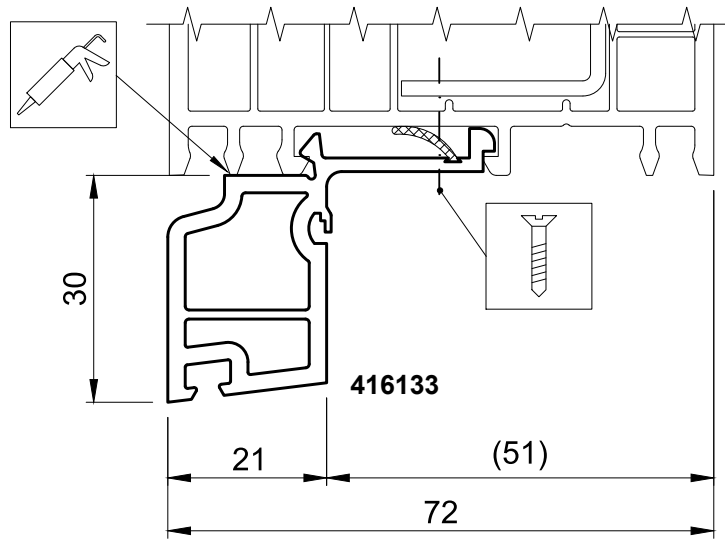
Sill connection

416142



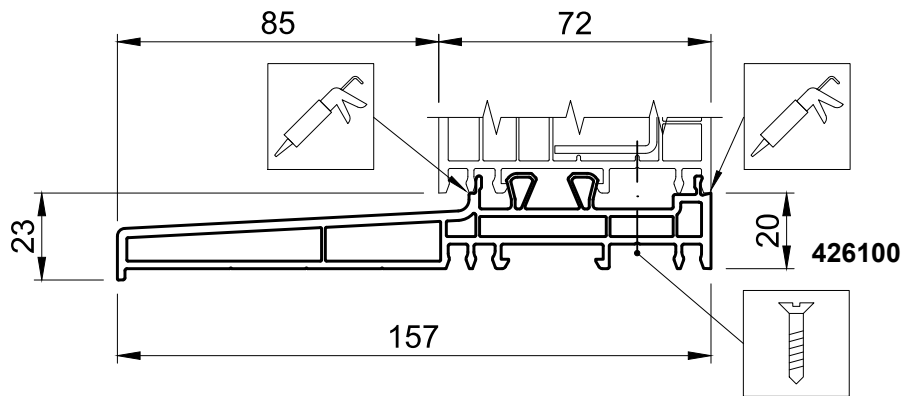
Stone sill connection

416133, 416135



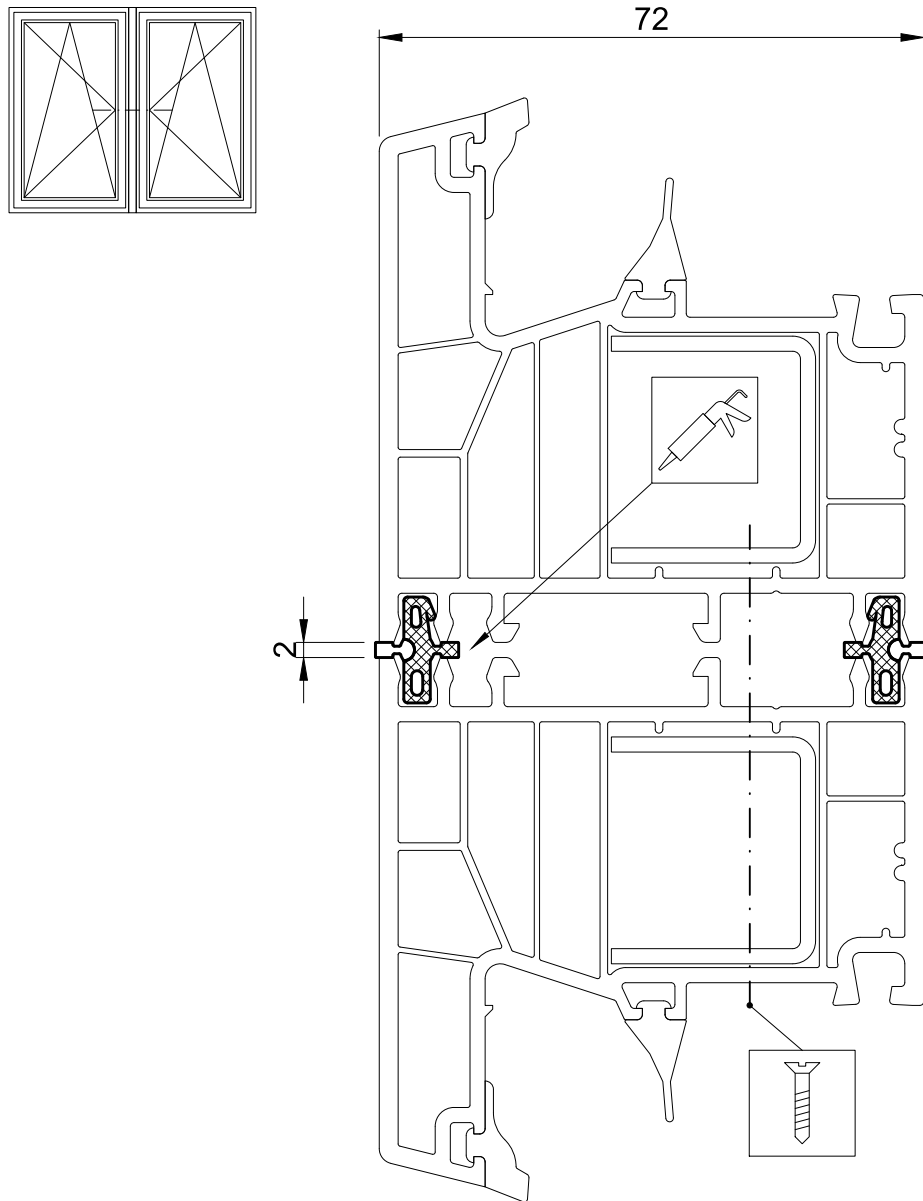
Window sill

426100



Coupling spring, vertical

414915

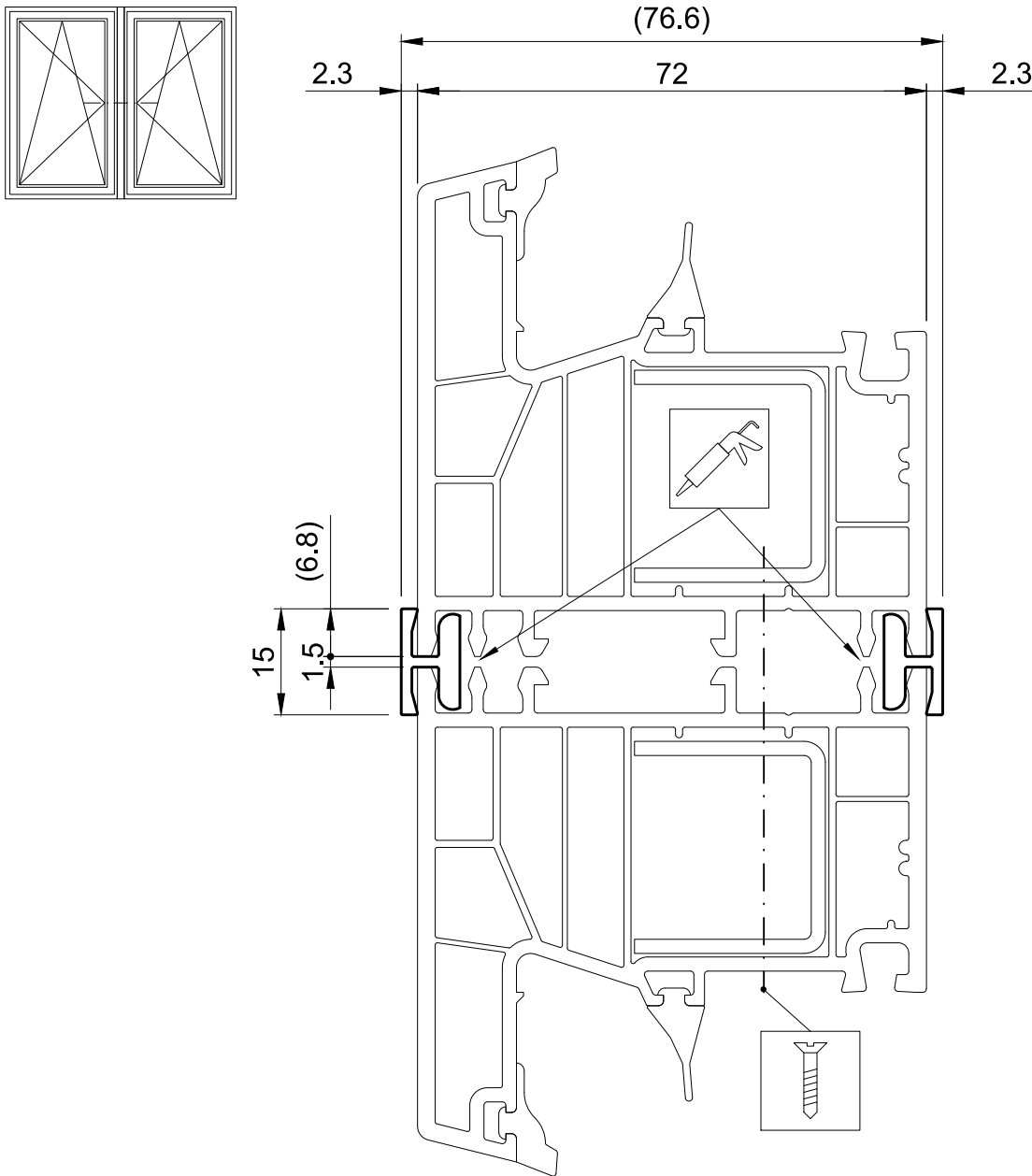


i INFO

Application vertical.

Coupling profile, vertical

406255

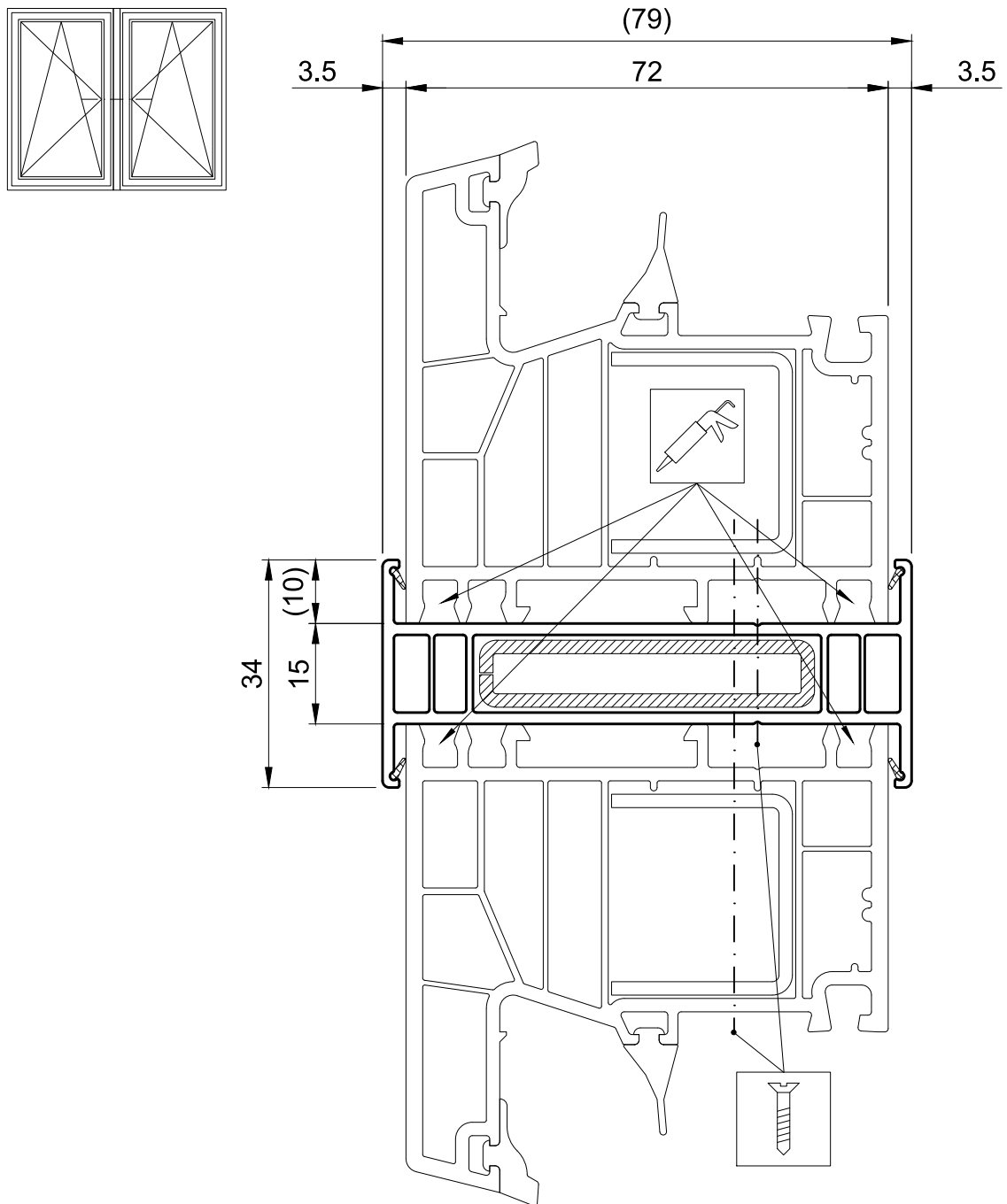


i INFO

Application vertical.

Coupling profile, vertical

426200

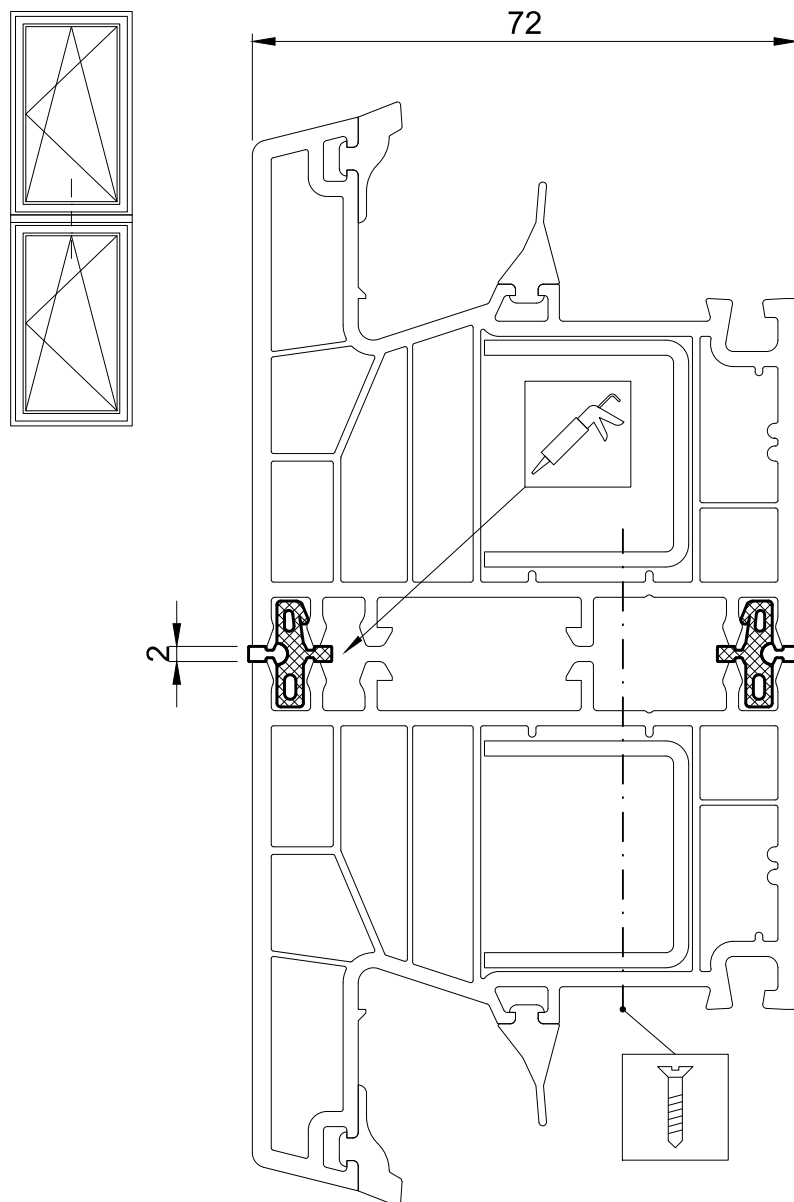


i INFO

Application vertical.

Coupling spring, horizontal

414915

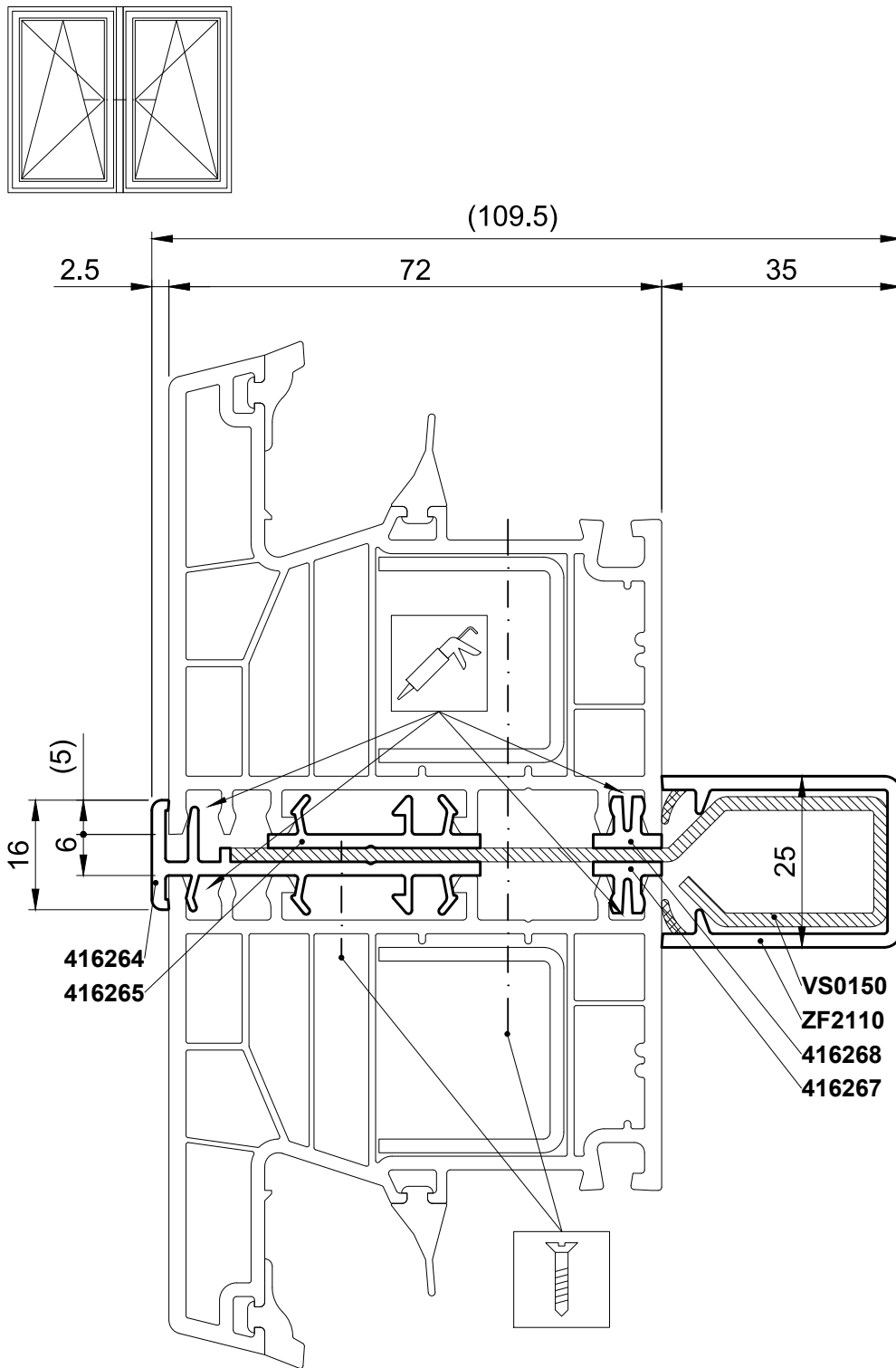
**i** INFO

Application horizontal.

Capillary joints and lateral connections to the building must be sealed professionally.

Coupling profile, vertical
VS0150, 416264

Cover profile
ZF2110

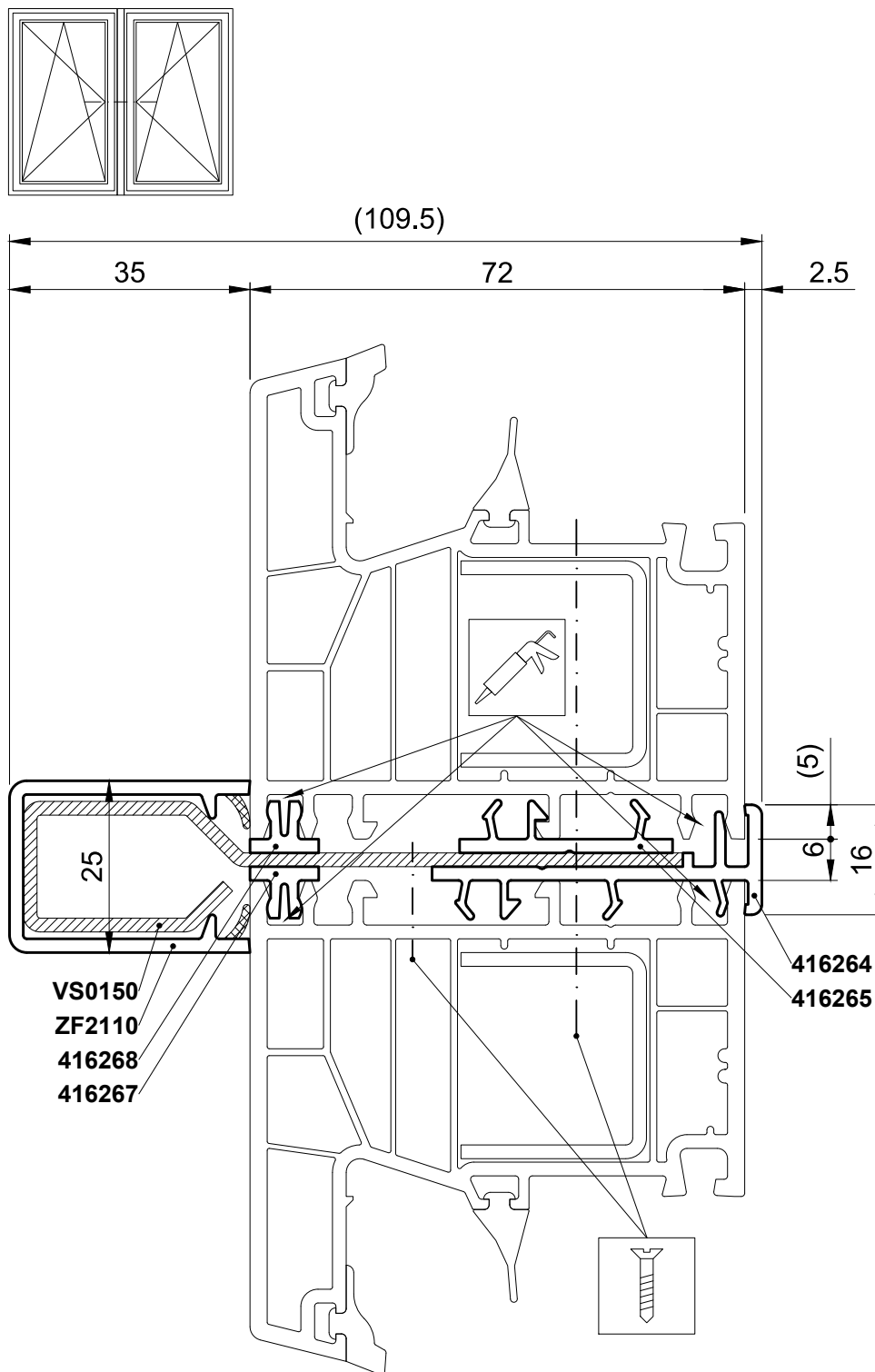


i INFO

Application vertical.

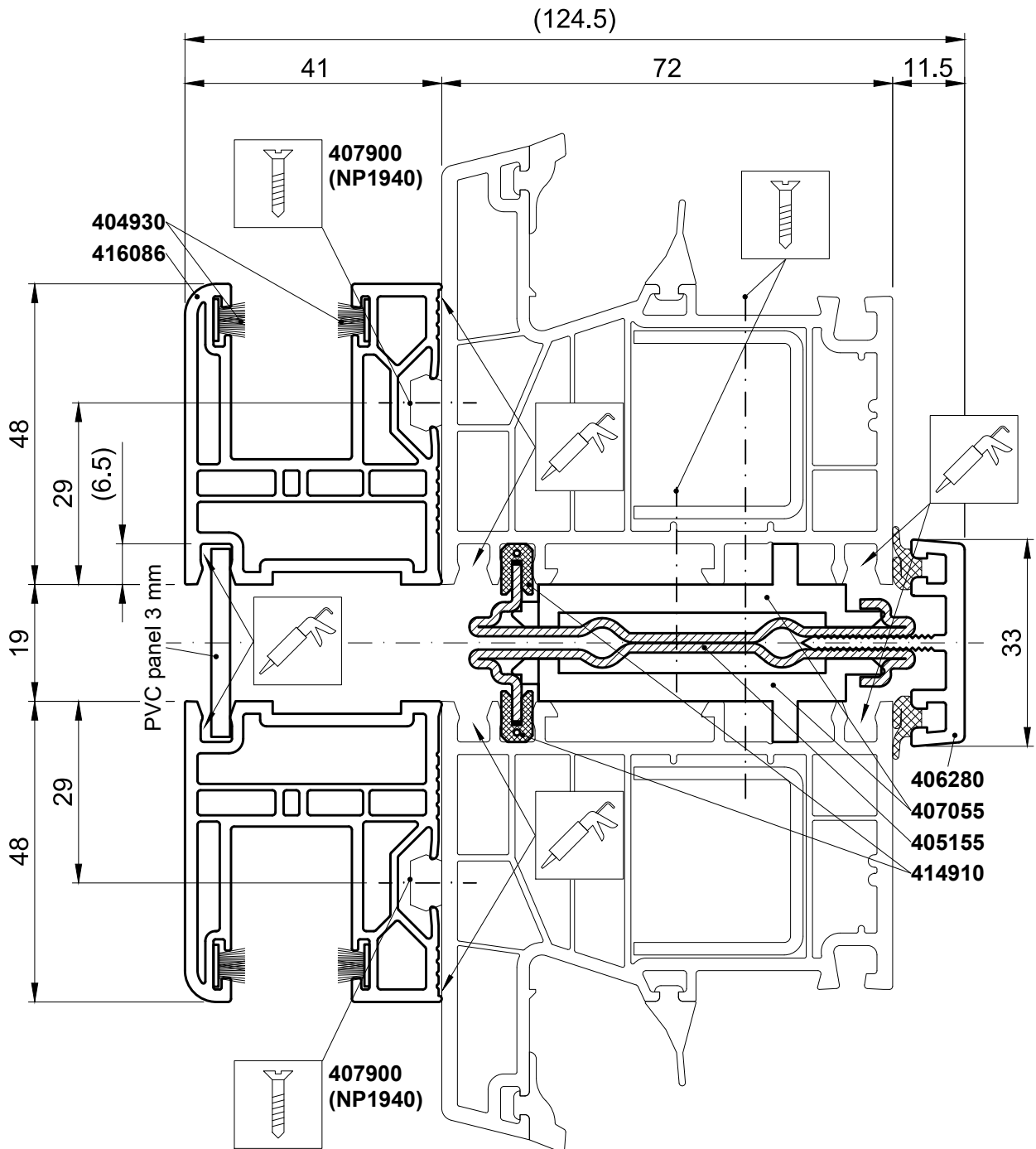
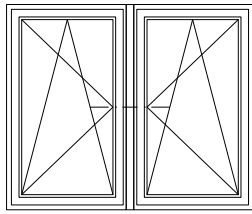
Coupling profile, vertical
VS0150, 416264

Cover profile, external
ZF2110



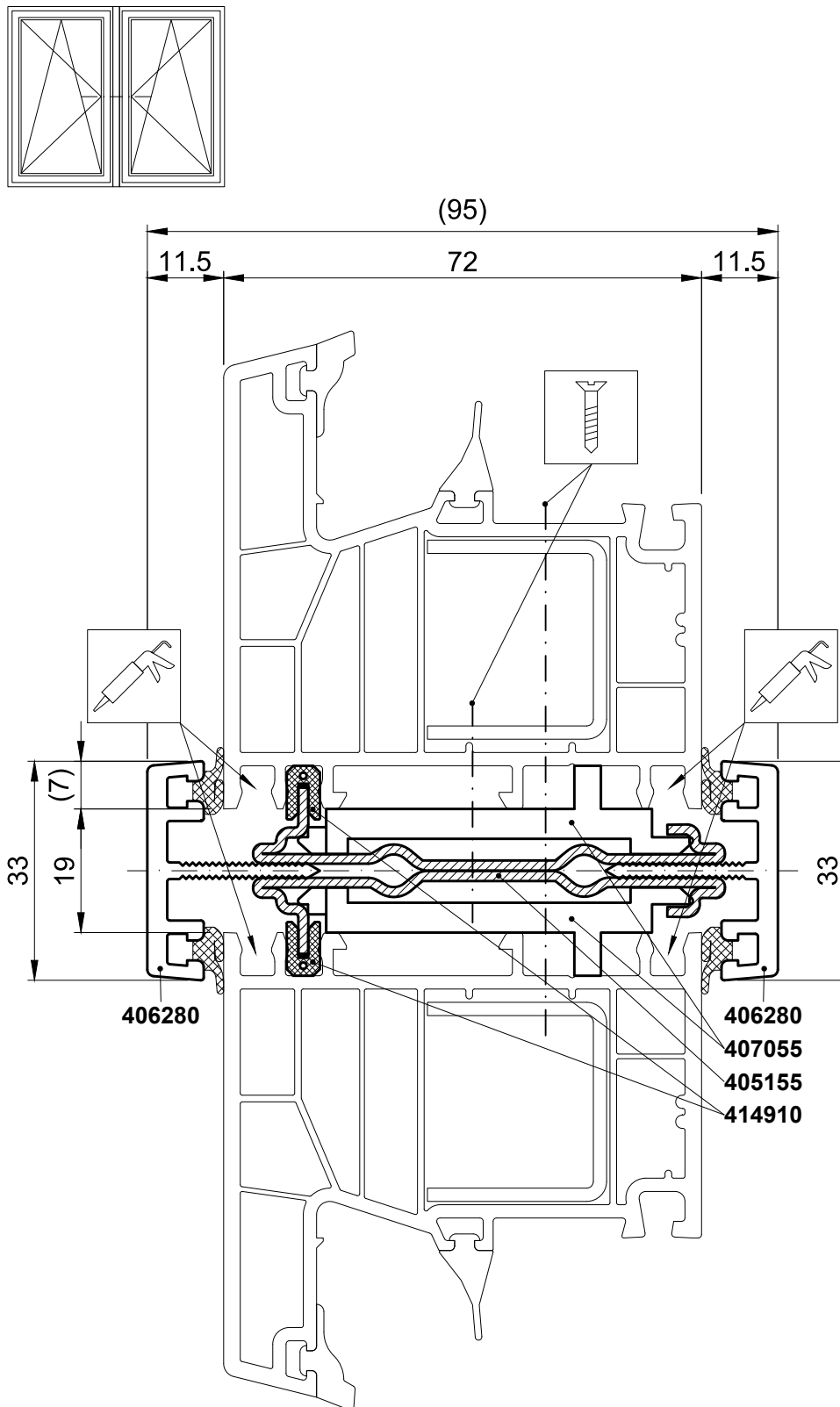
i INFO

Application vertical.



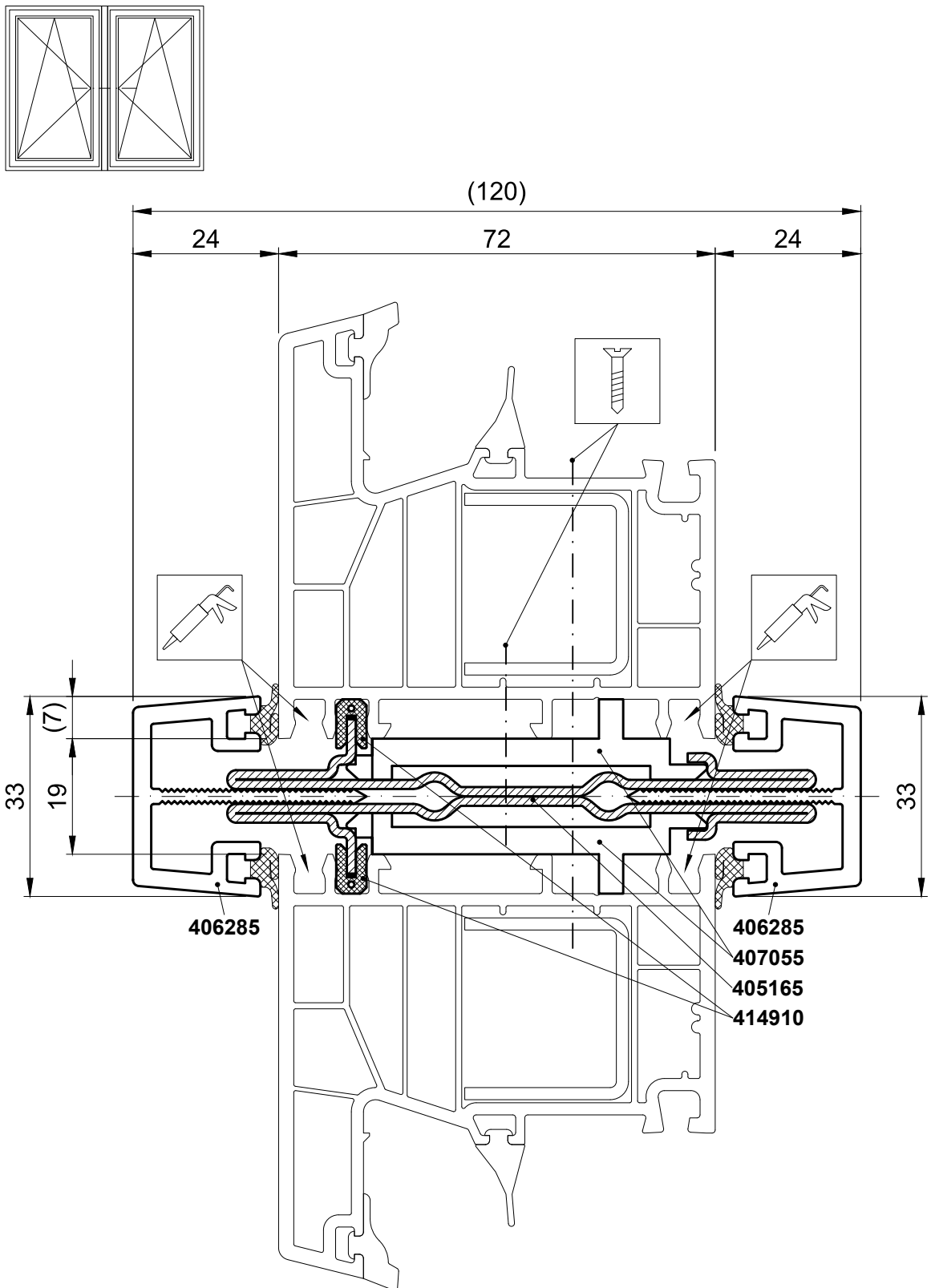
Static coupling, vertical

405155



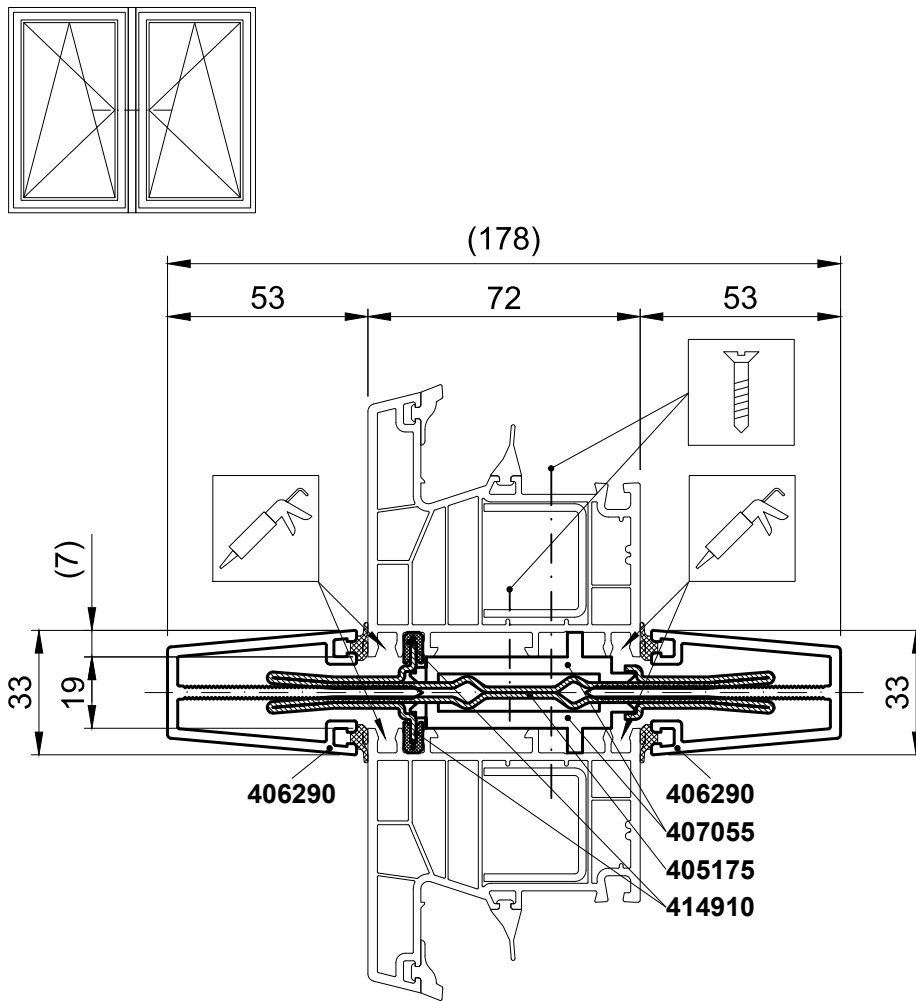
Static coupling, vertical

405165



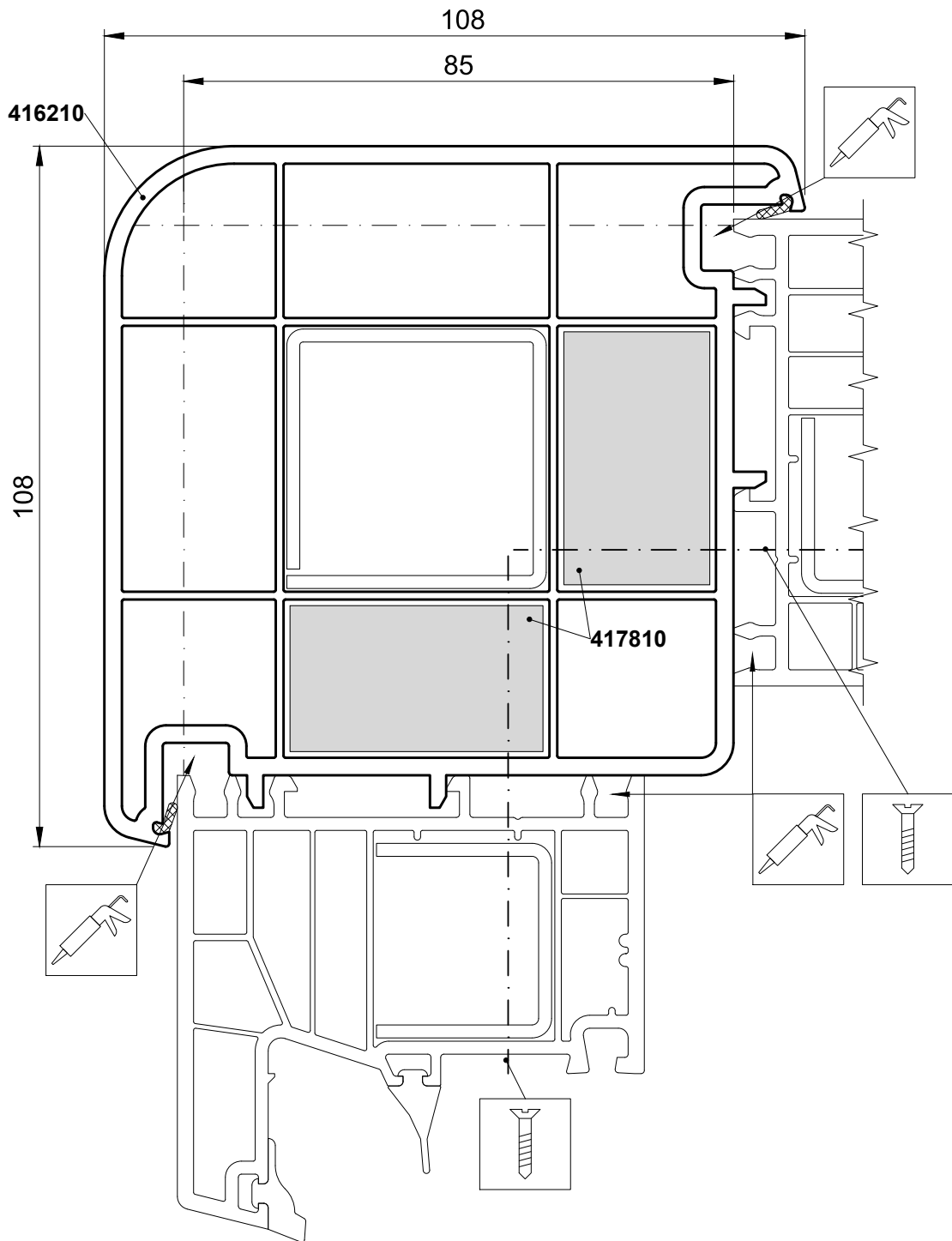
Static coupling, vertical

405175



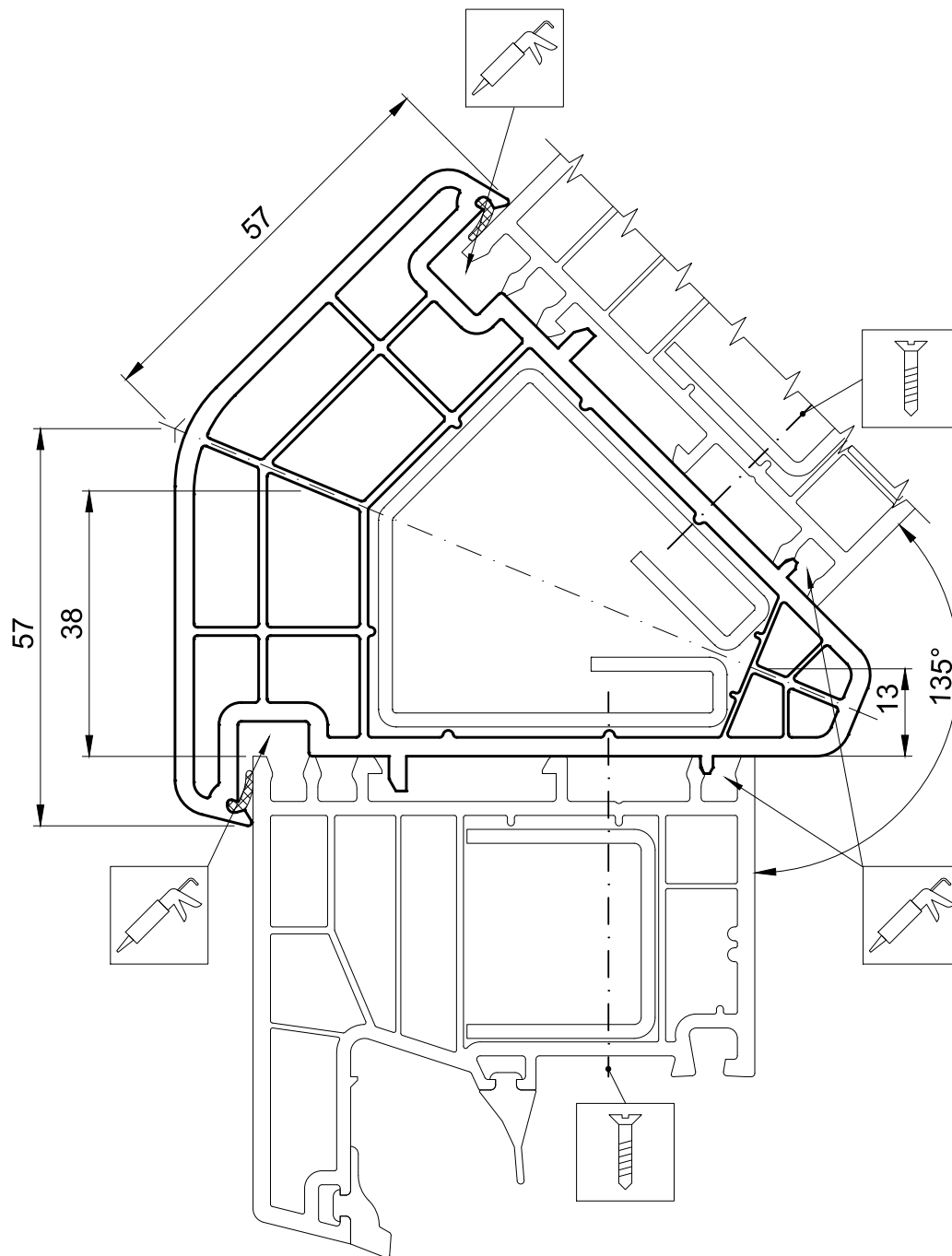
Corner connector 90°
416210

Insulating strip
417810



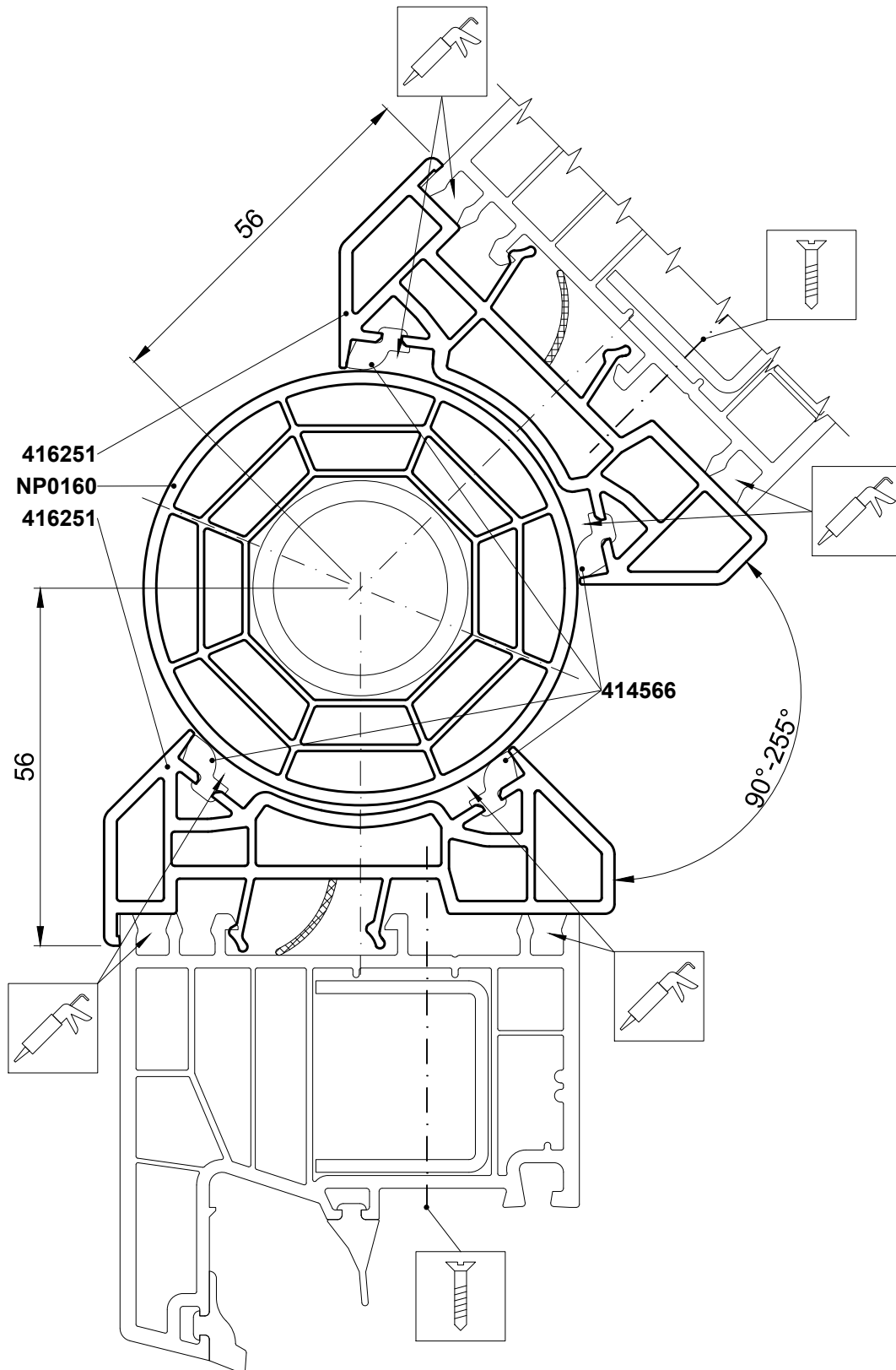
Corner connection, 135°

416240



Corner connector, variable

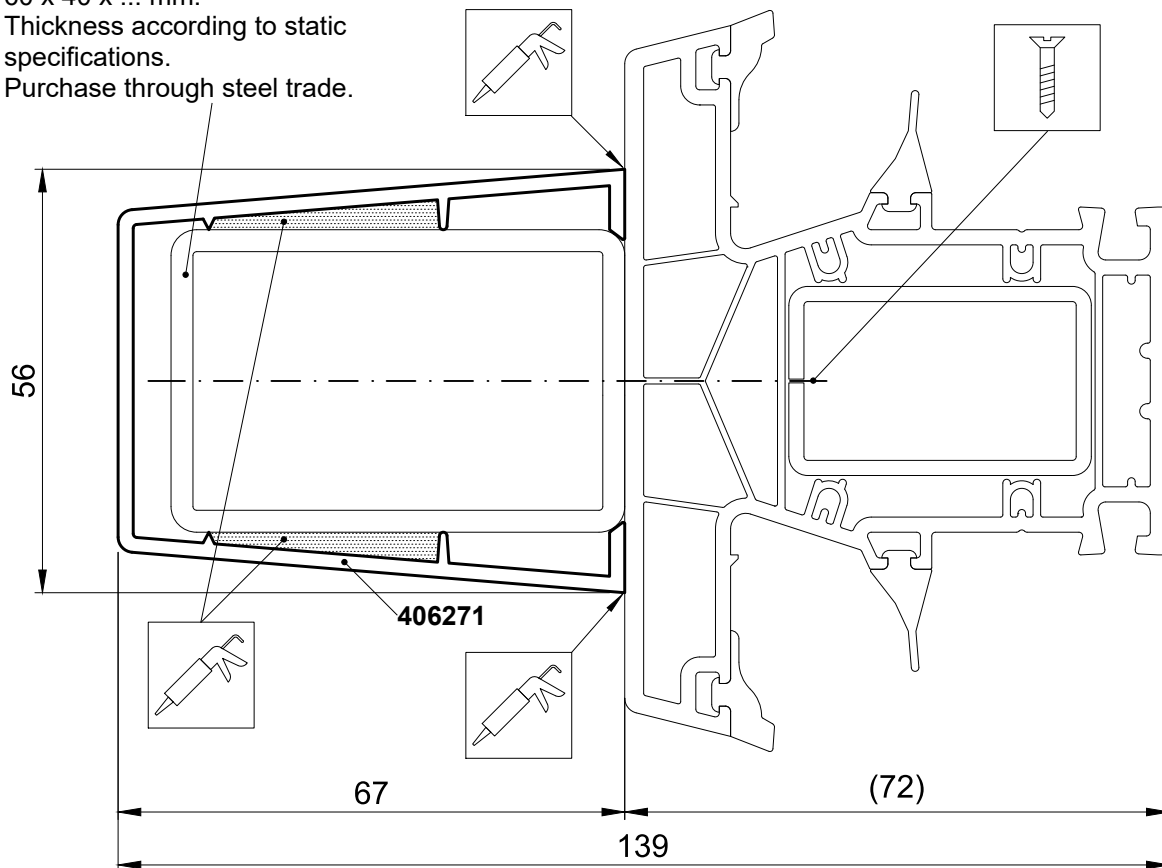
NP0160



Doorframe

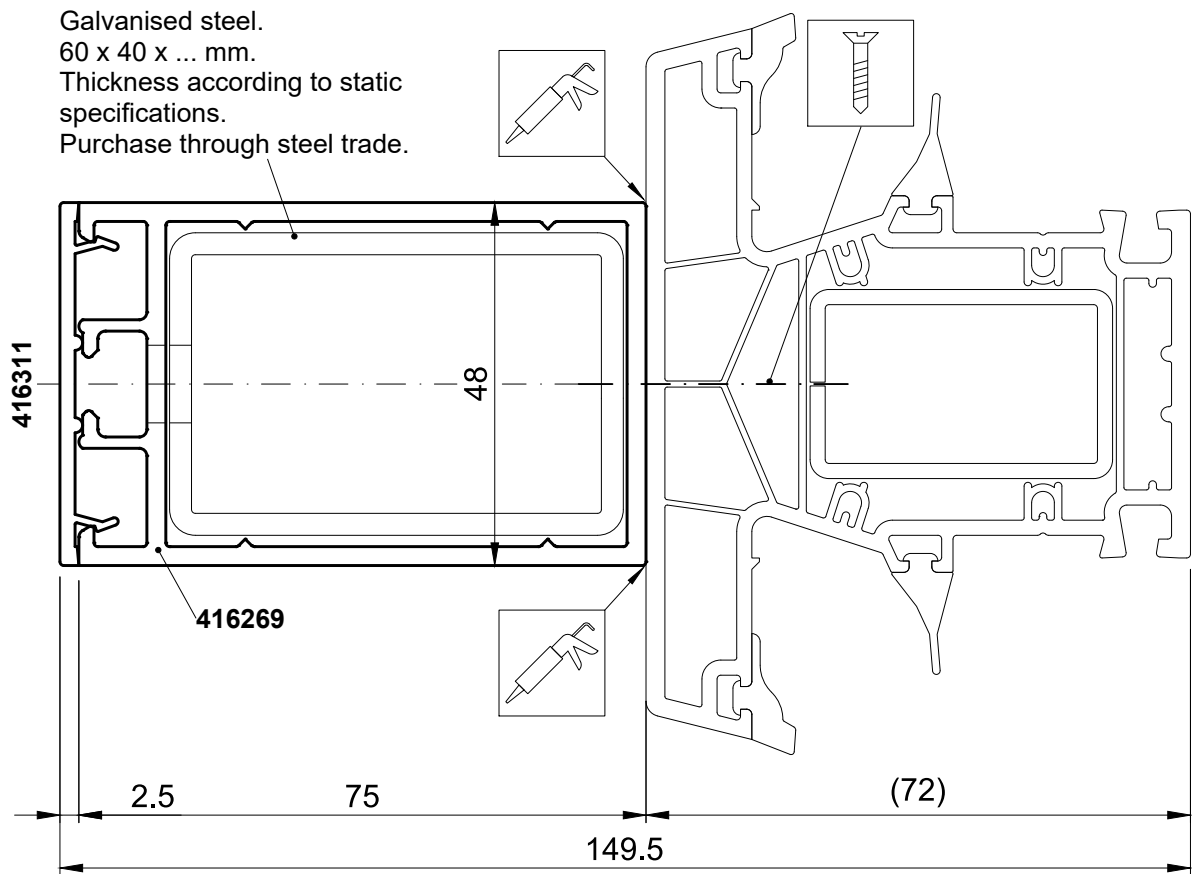
406271

Galvanised steel.
60 x 40 x ... mm.
Thickness according to static
specifications.
Purchase through steel trade.

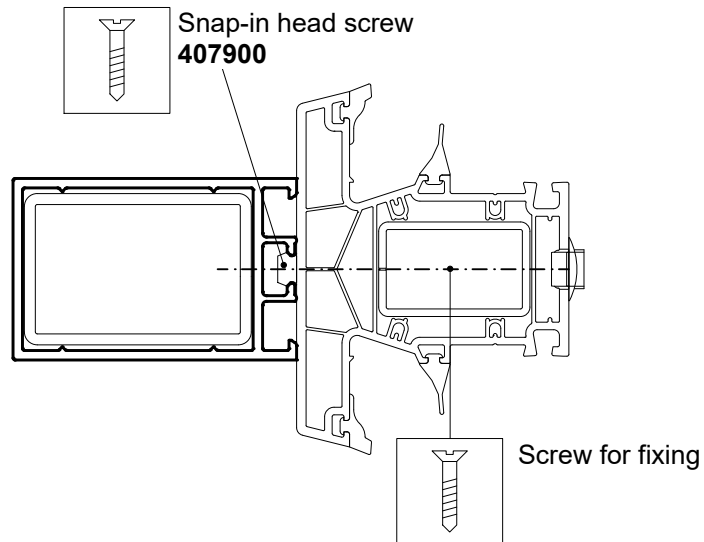


Sheathing profile
416269

Cover profile
416311

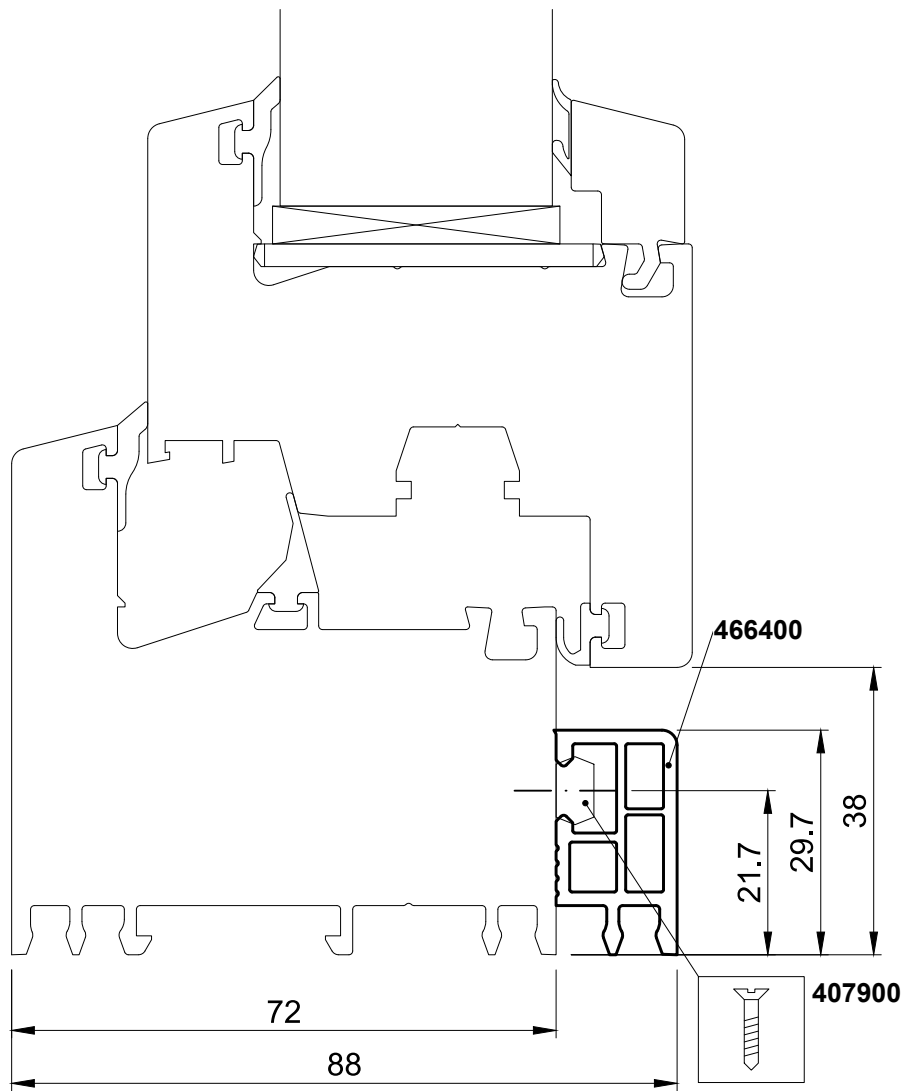


Alternative

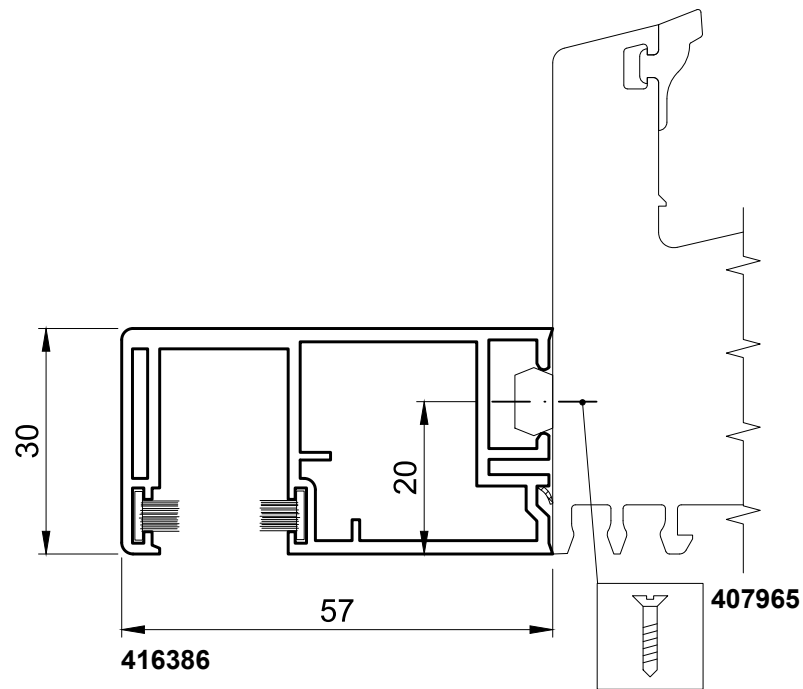


Snap-on profile

466400

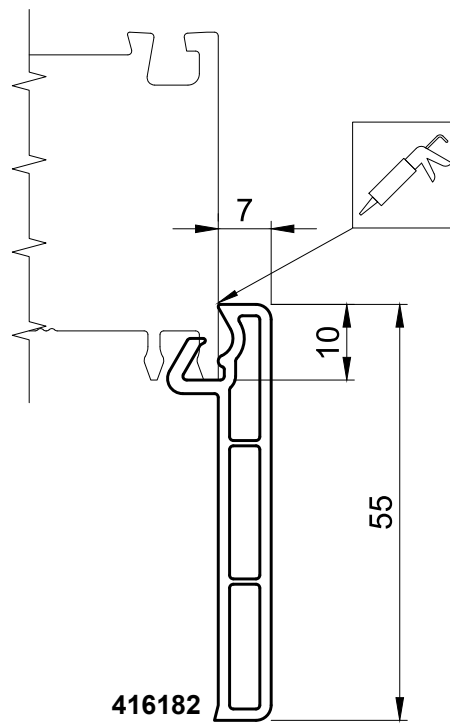


Tapee
416386

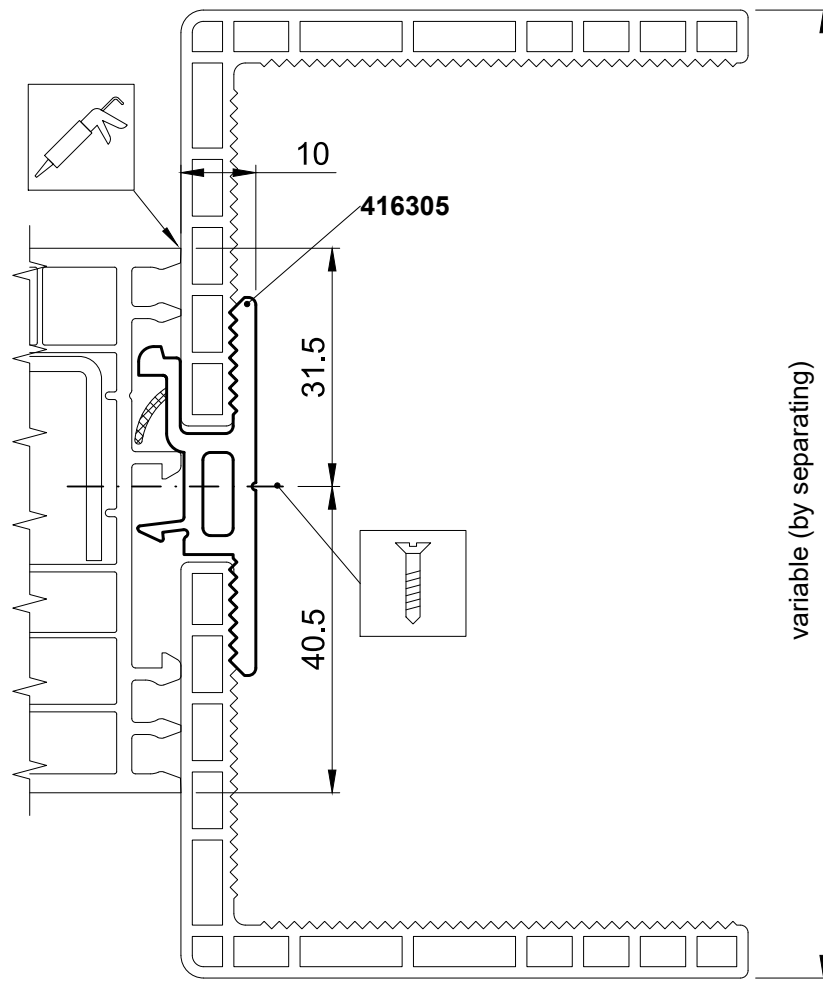


Cover profile

416182



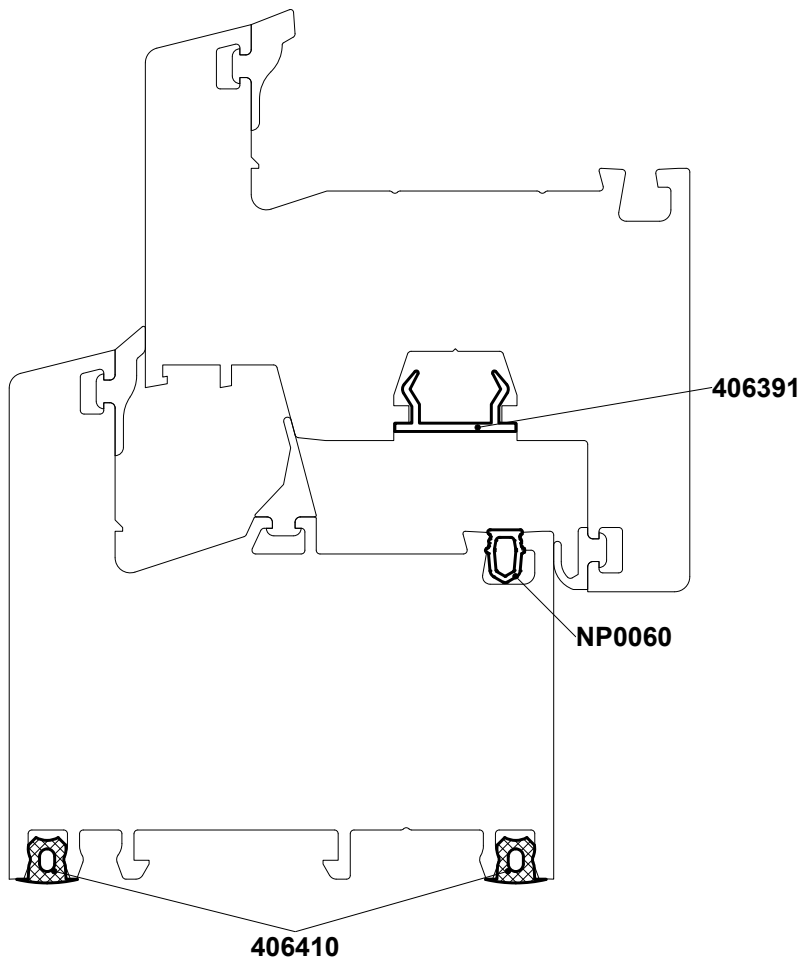
Adapter
416305



Clip profile
406391

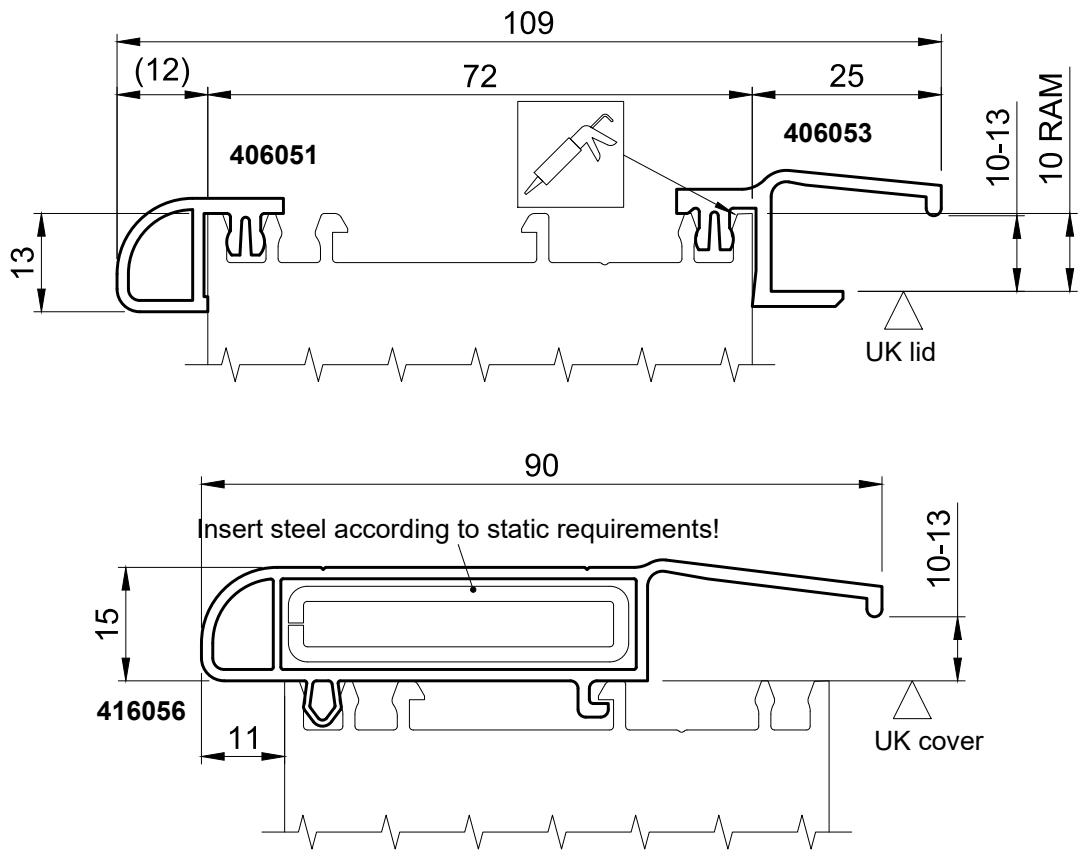
Edge trim
NP0060

Cover edge trim
406410



Roller shutter cross bar
406051, 416056

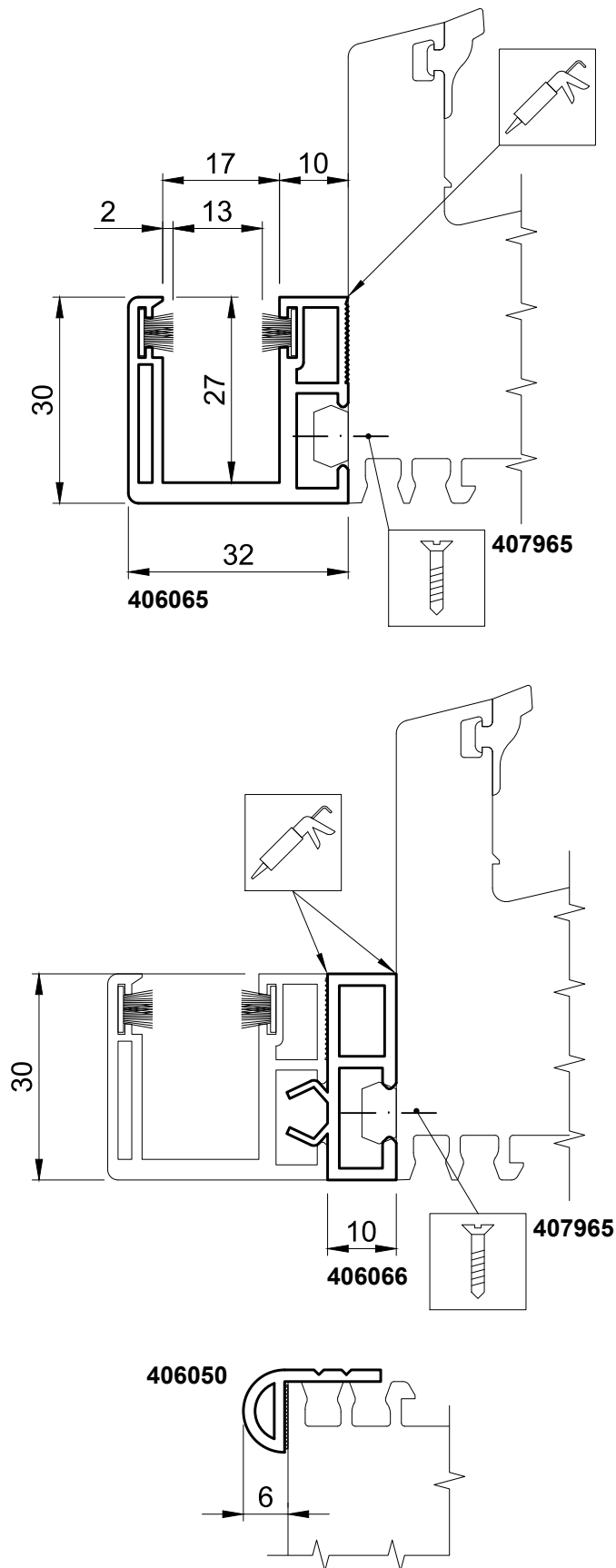
Lid connection
406053

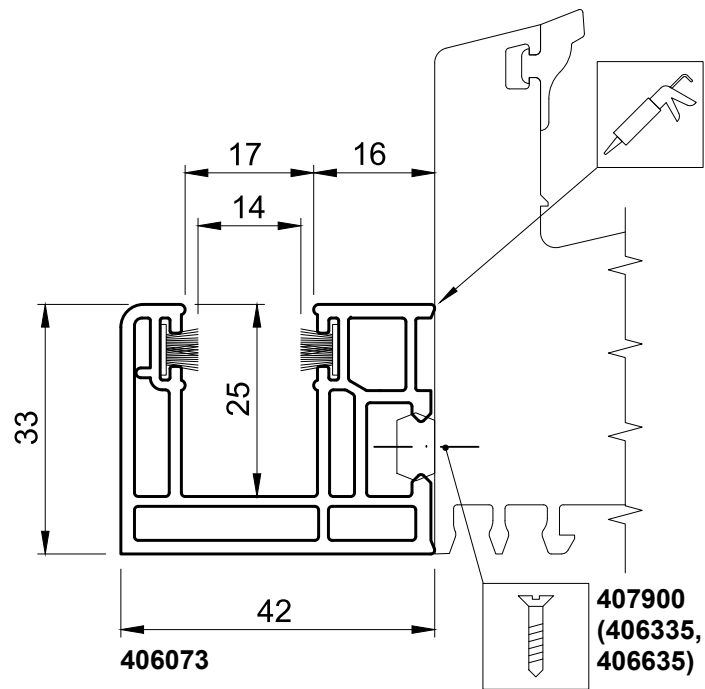


Roller shutter guide
406065

Reinforcement
406066

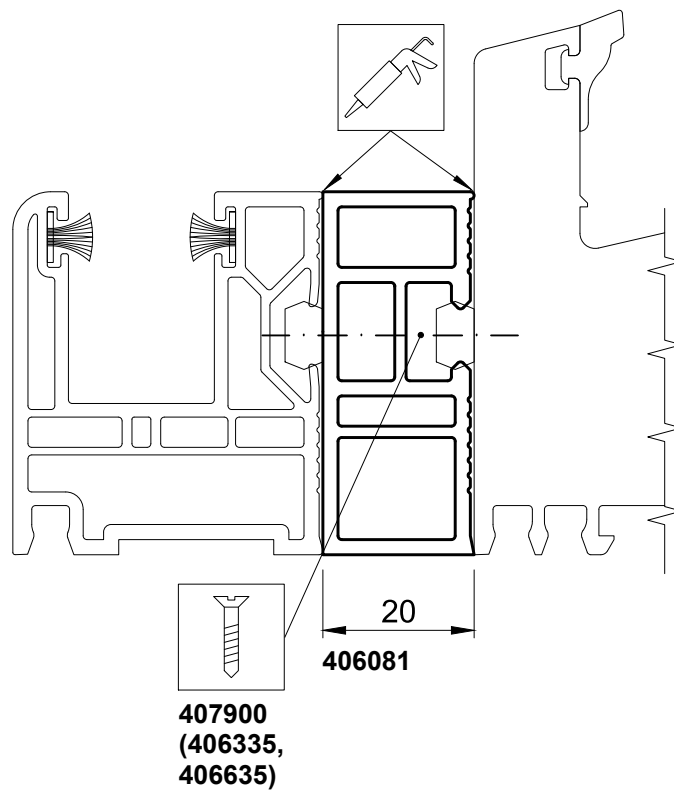
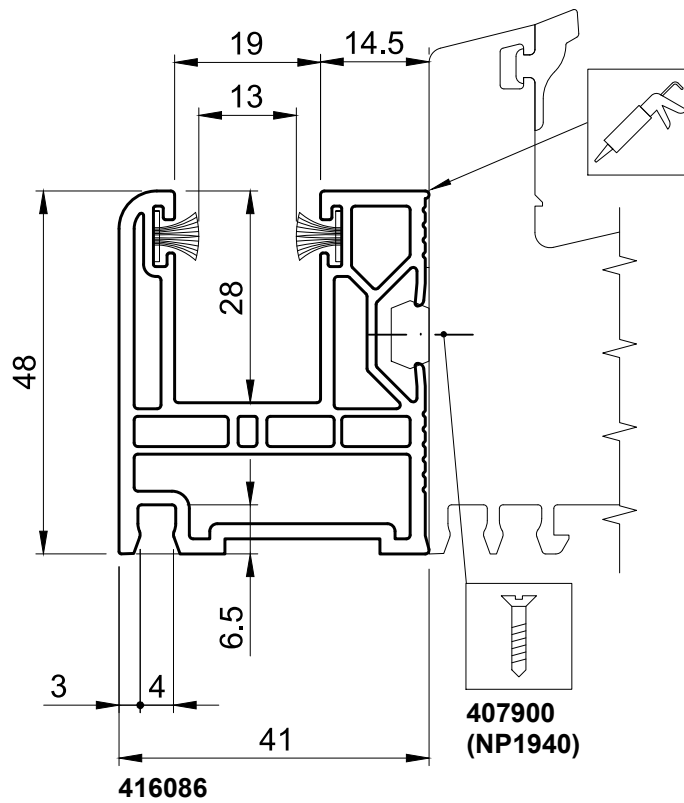
Roll-off slat
406050

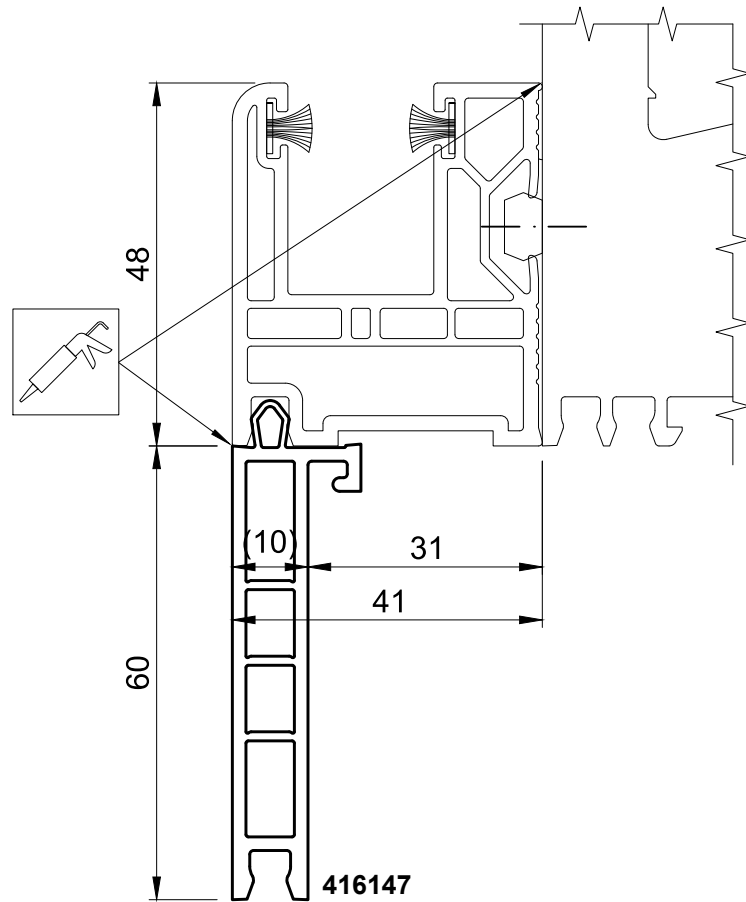
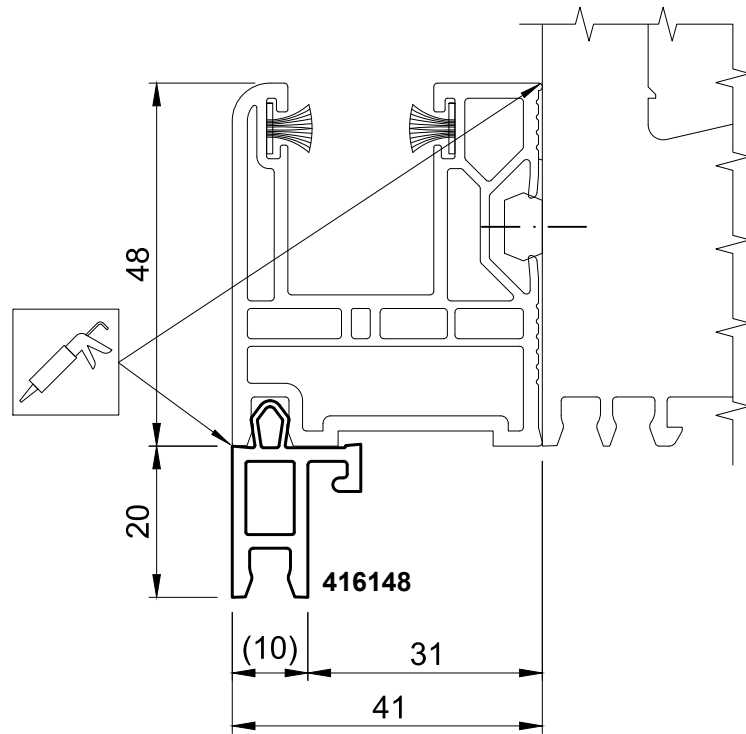




Roller shutter guide
416086

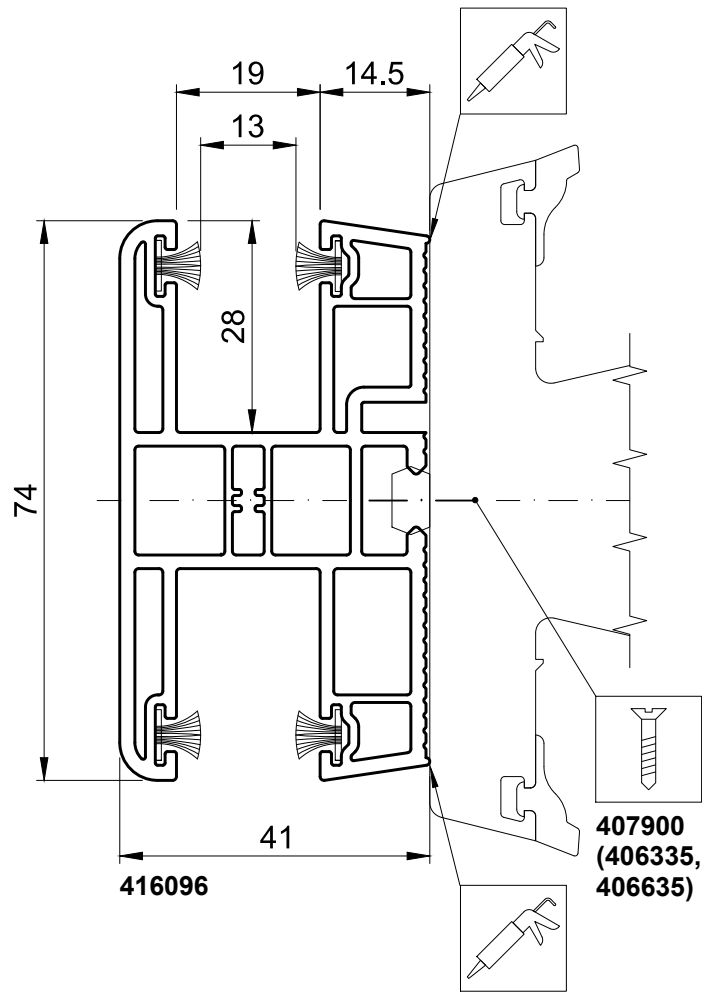
Reinforcement
406081

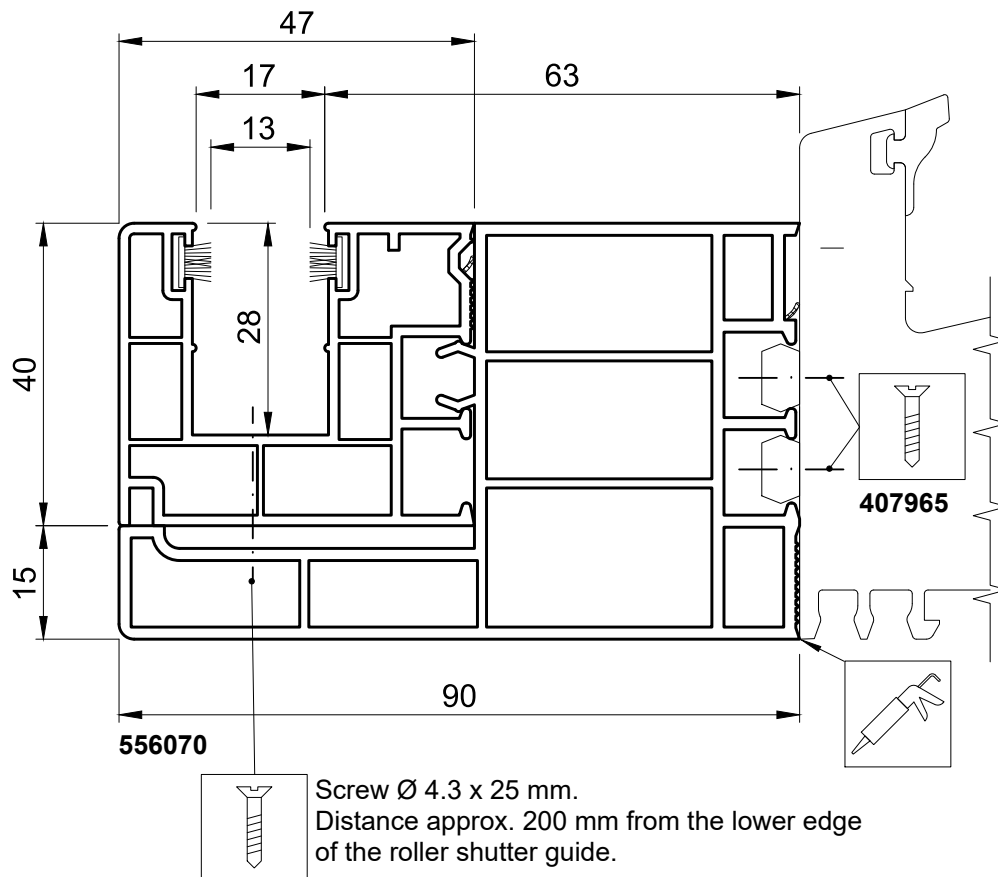




Roller shutter guide

416096

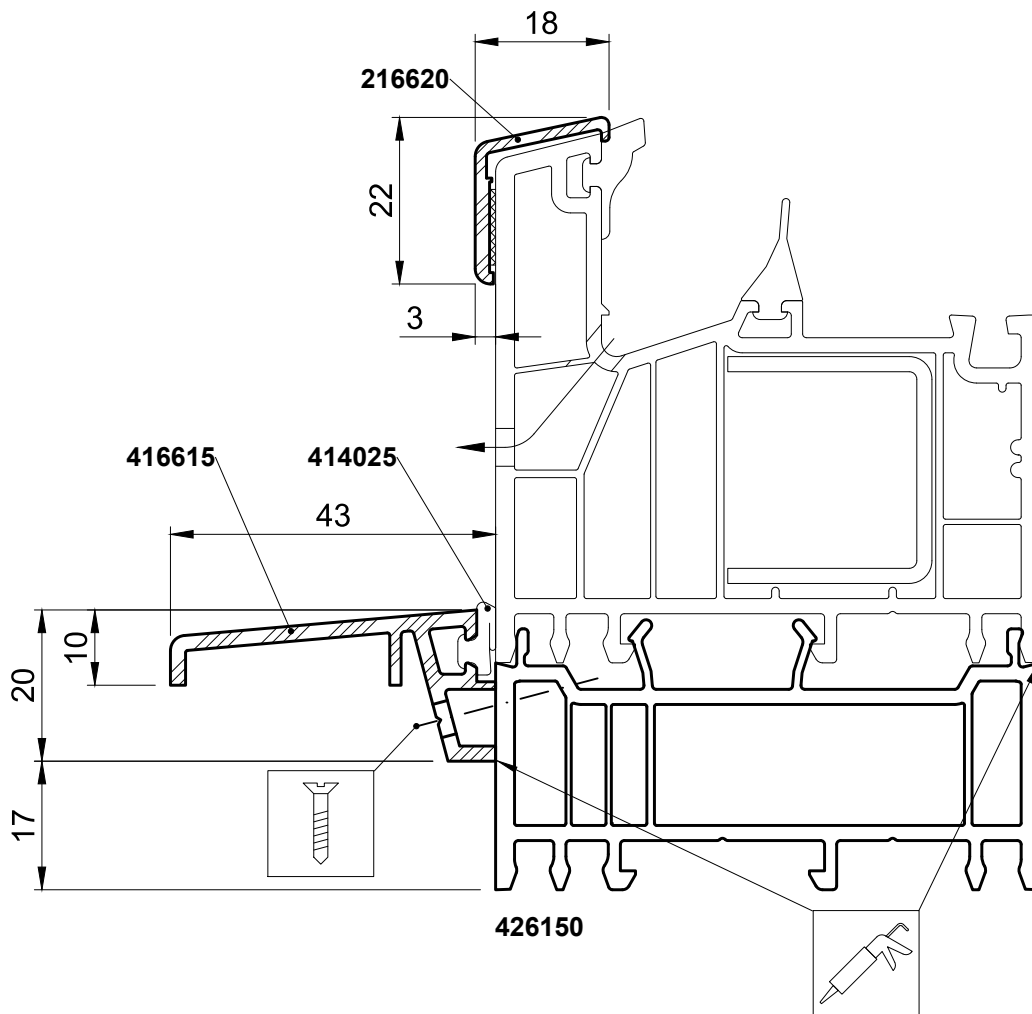




i INFO

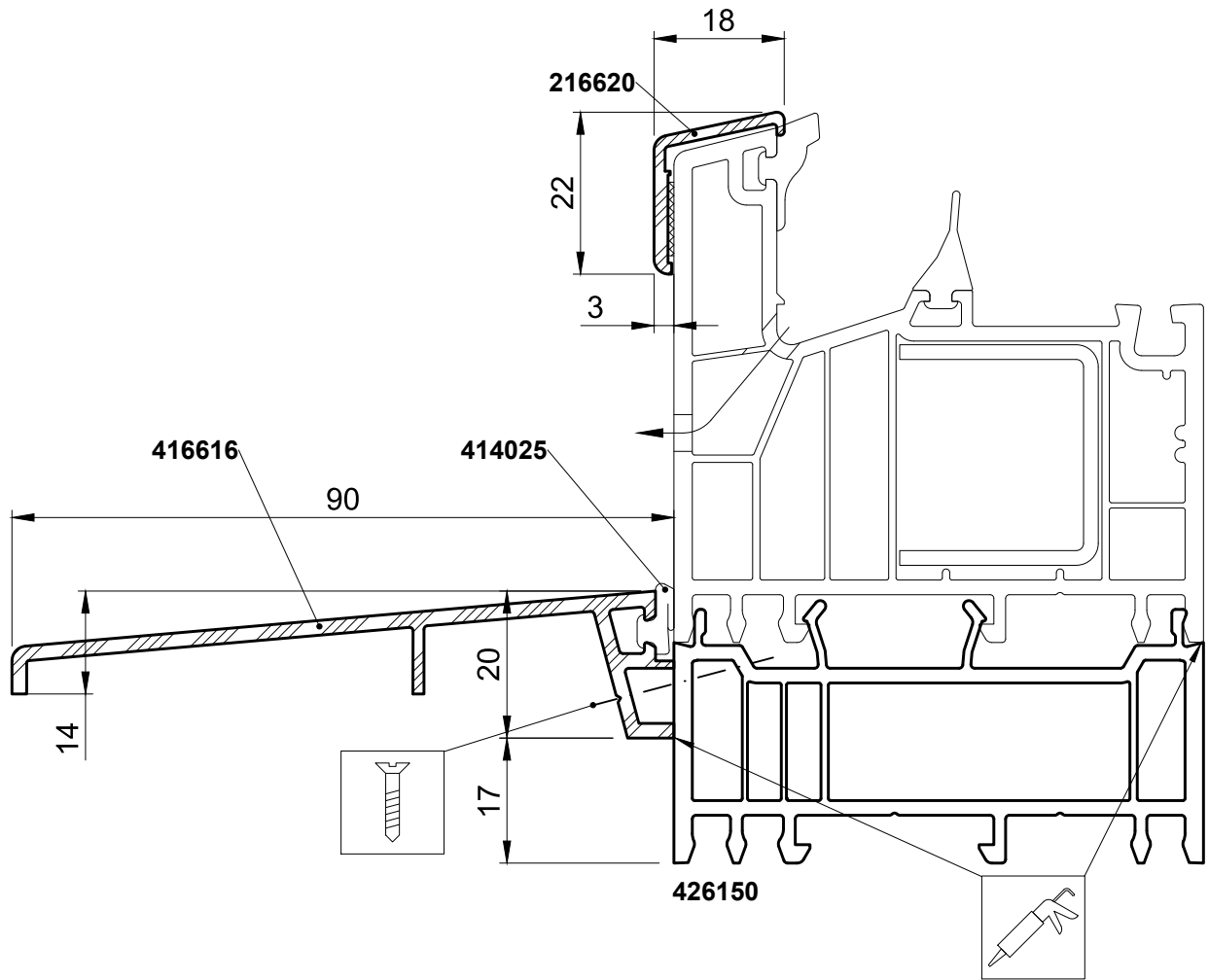
Screw the roller shutter guide above the window sill to the adapter profile.

Kick plate
216620, 416615



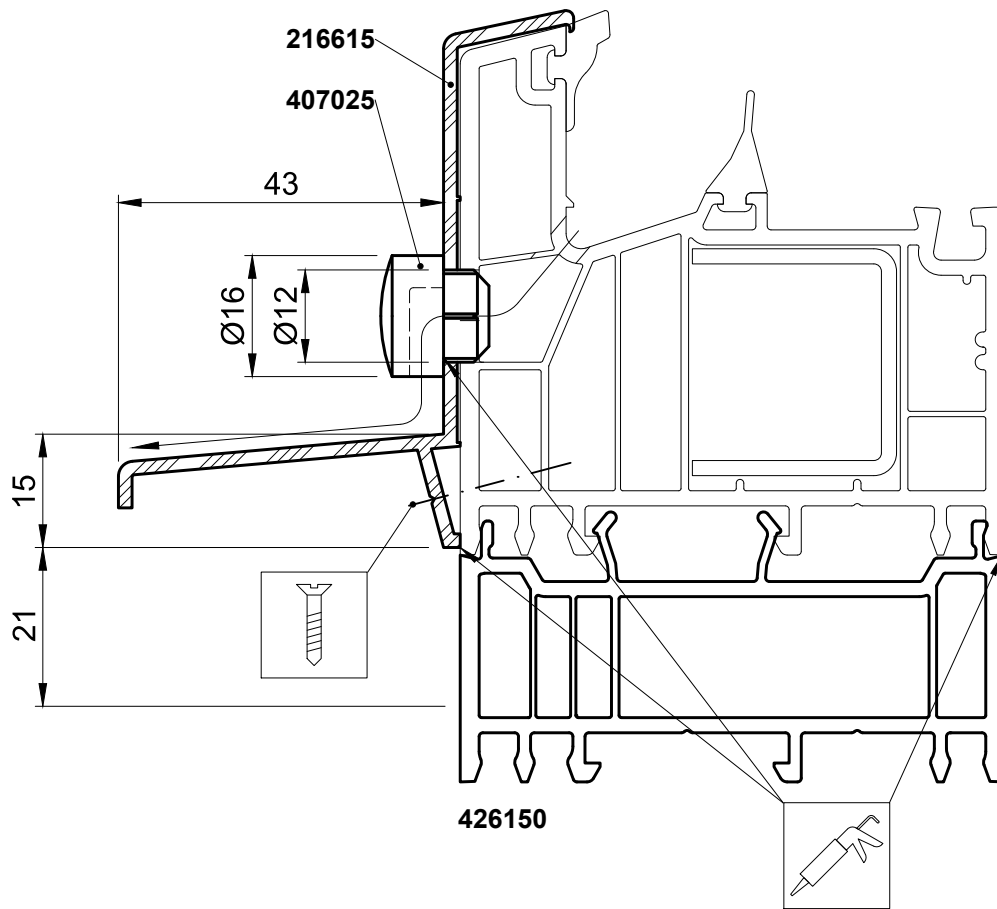
Kick plate

216620, 416616



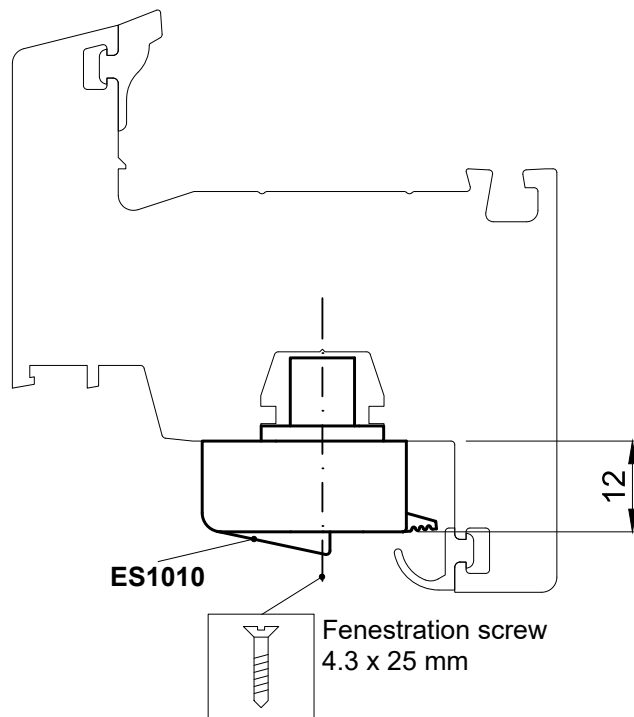
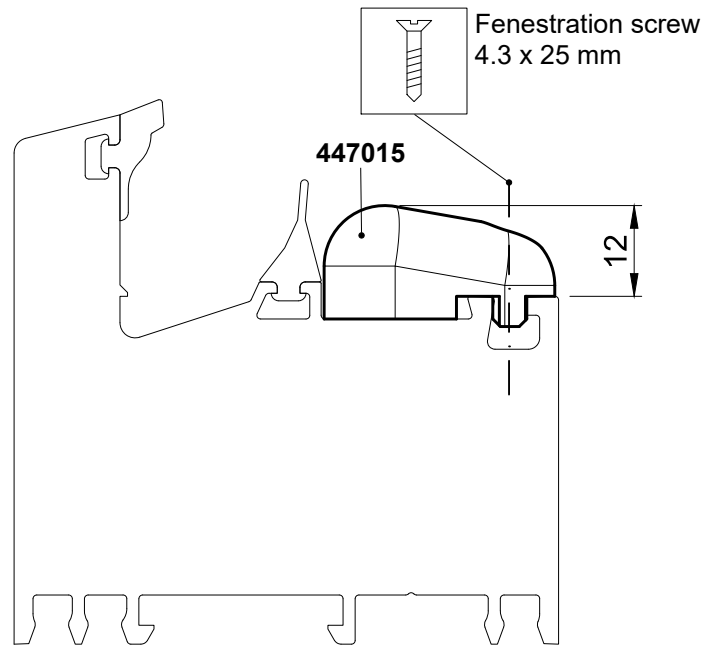
Kick plate

216615



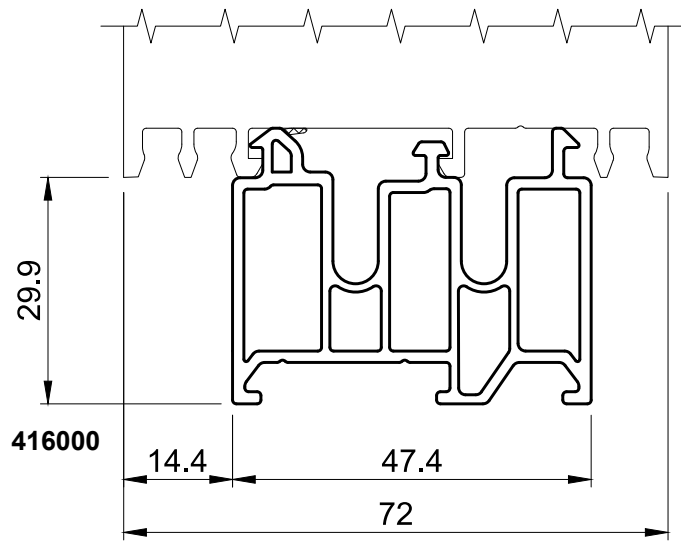
Sash-supporter component (run-up block)
407015

Fixed glazing clip
ES1010



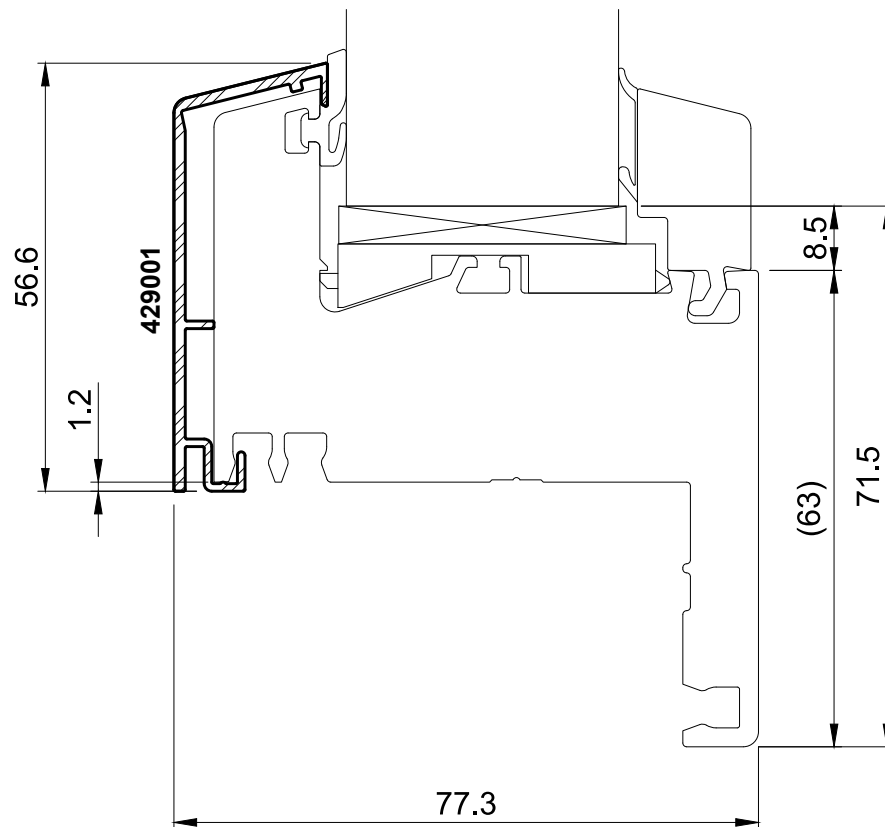
Transport protection profile

416000



Aluminium cover profile Fixed glazing frame

429001

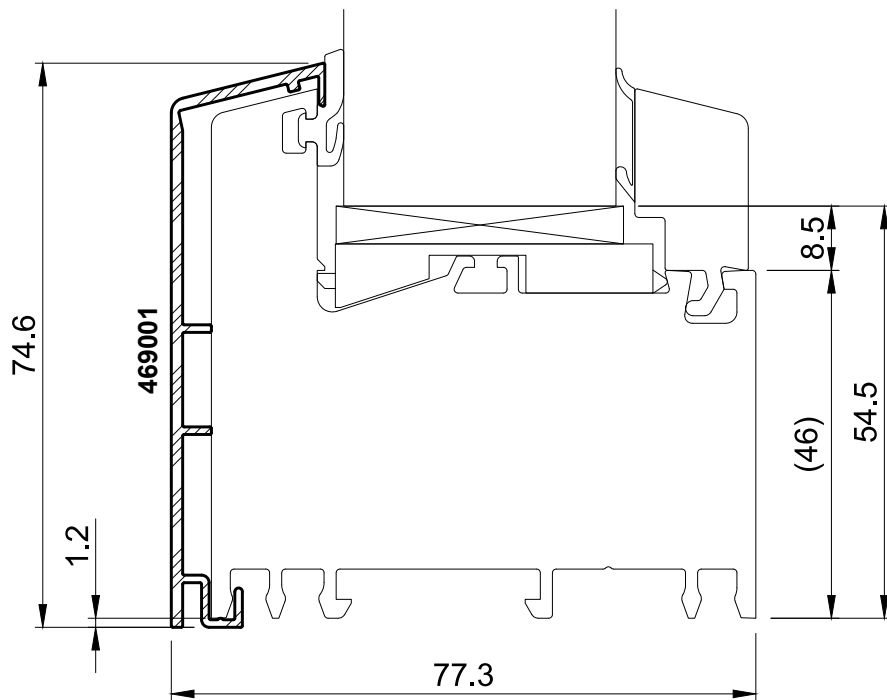


i INFO

Insert 429001 for frames 720022, 720024.

Aluminium cover profile Fixed glazing frame

469001

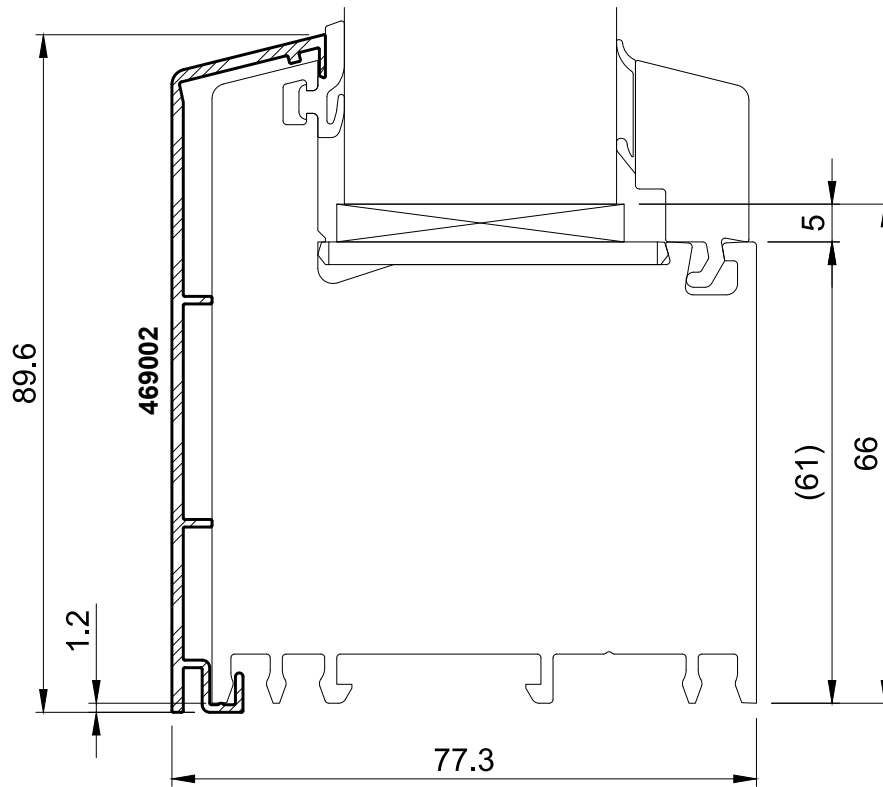


i INFO

Insert 469001 for frames 720003, 720004.

Aluminium cover profile Fixed glazing frame

469002

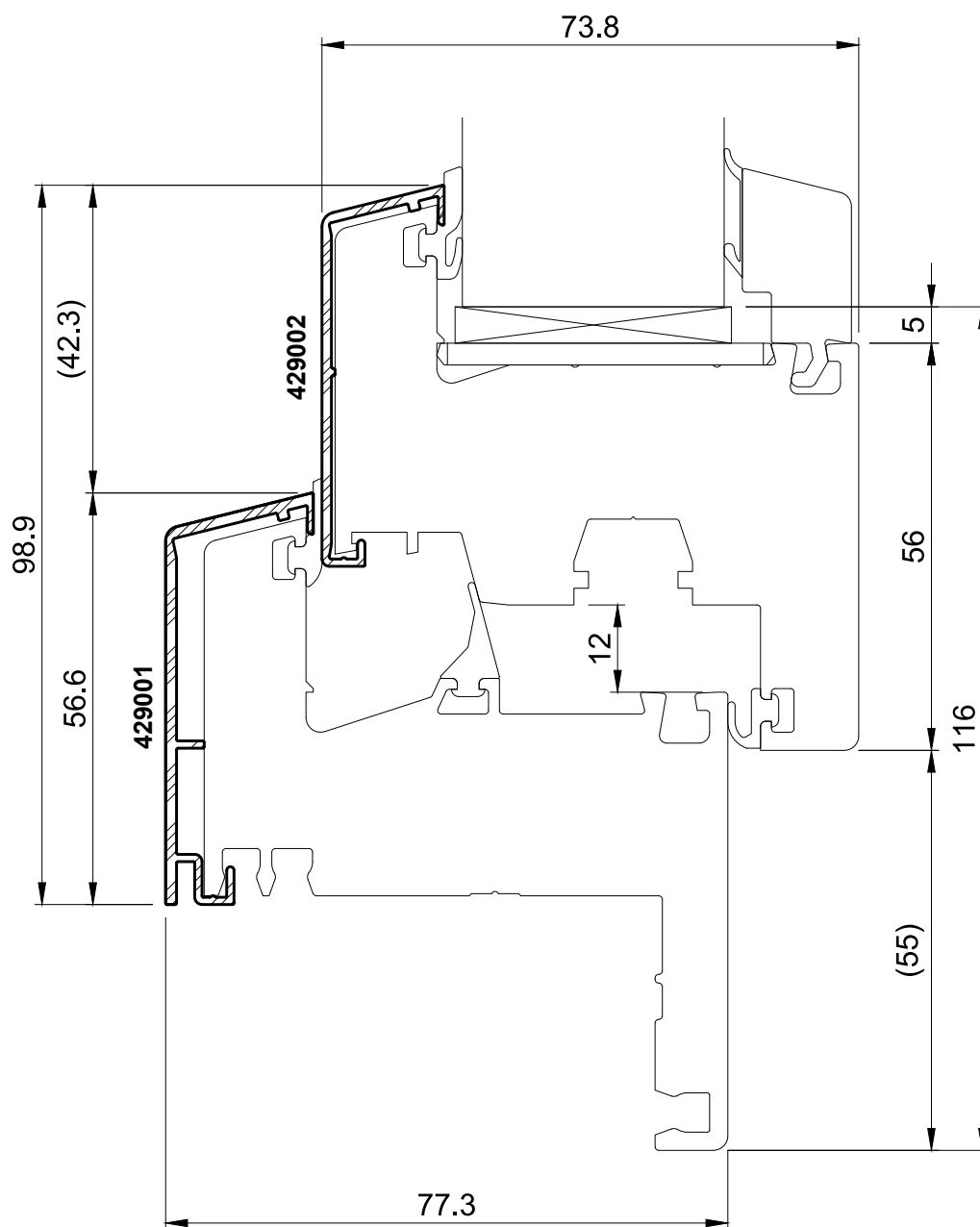


i INFO

Insert 469002 for frame 720023.

Aluminium cover profile Sash – Frame

429002, 429001



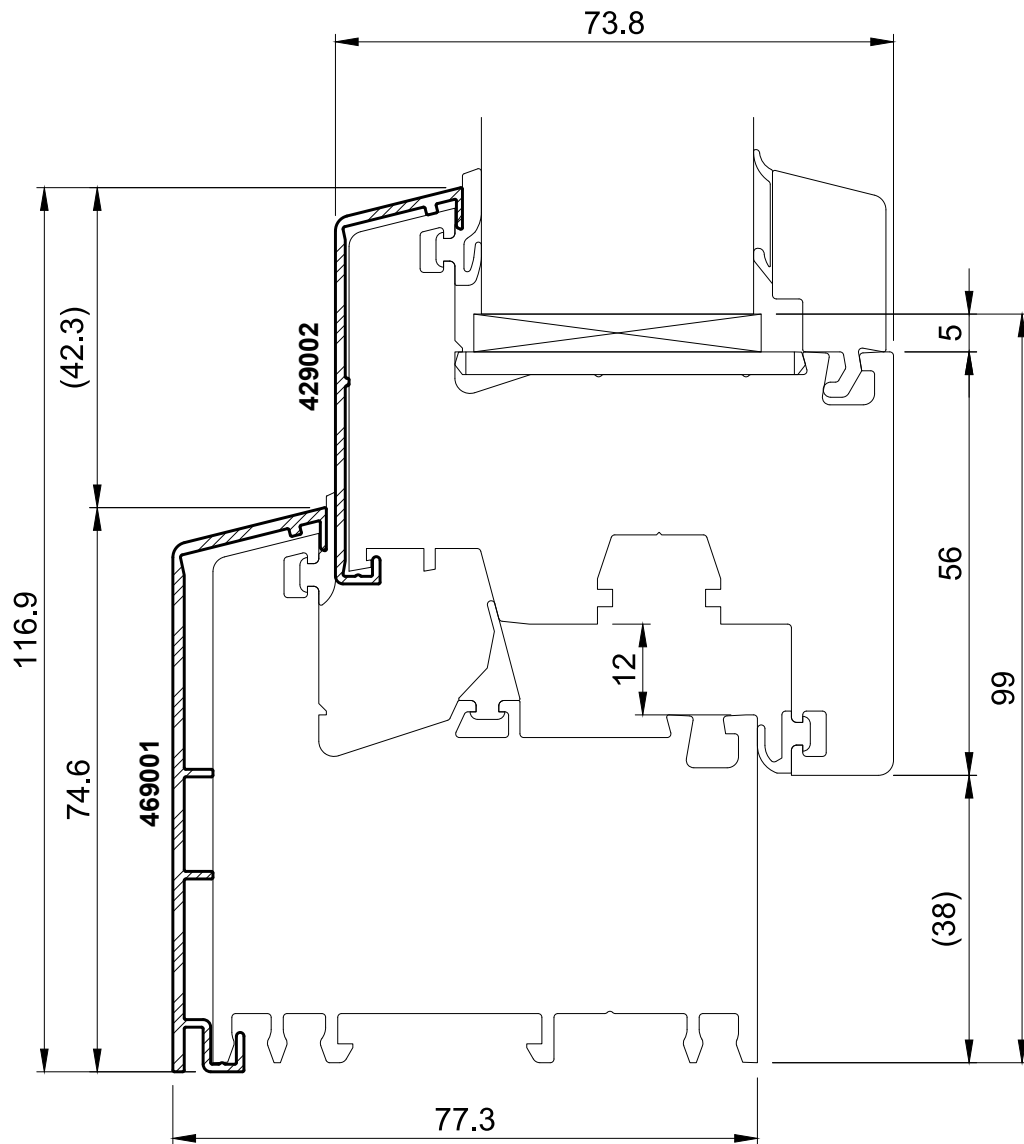
i INFO

Insert 429002 for sash 721001.

Insert 429001 for frames 720022, 720024.

Aluminium cover profile Sash – Frame

429002, 469001



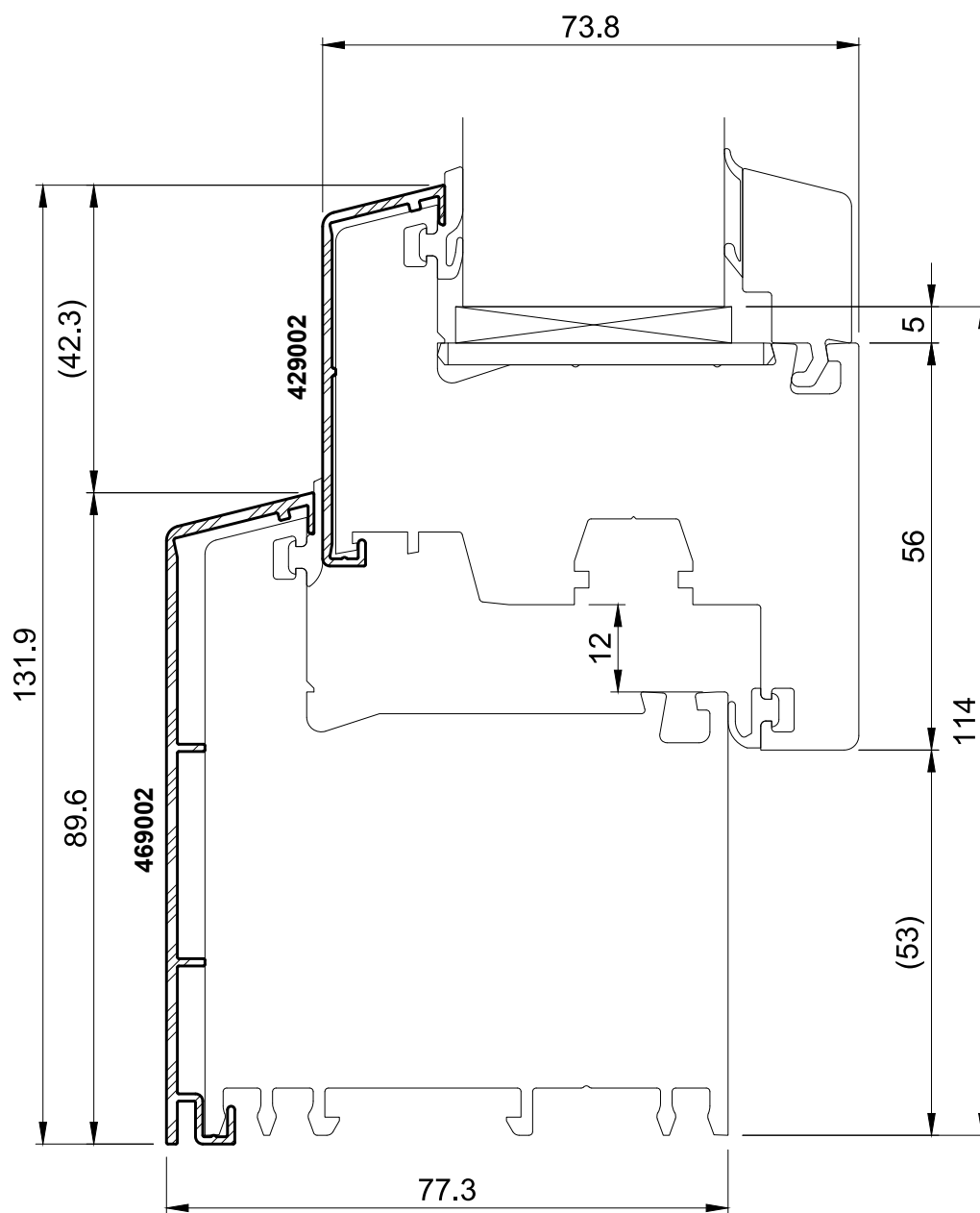
i INFO

Insert 429002 for sash 721001.

Insert 469001 for frames 720003, 720004.

Aluminium cover profile Sash – Frame

429002, 469002



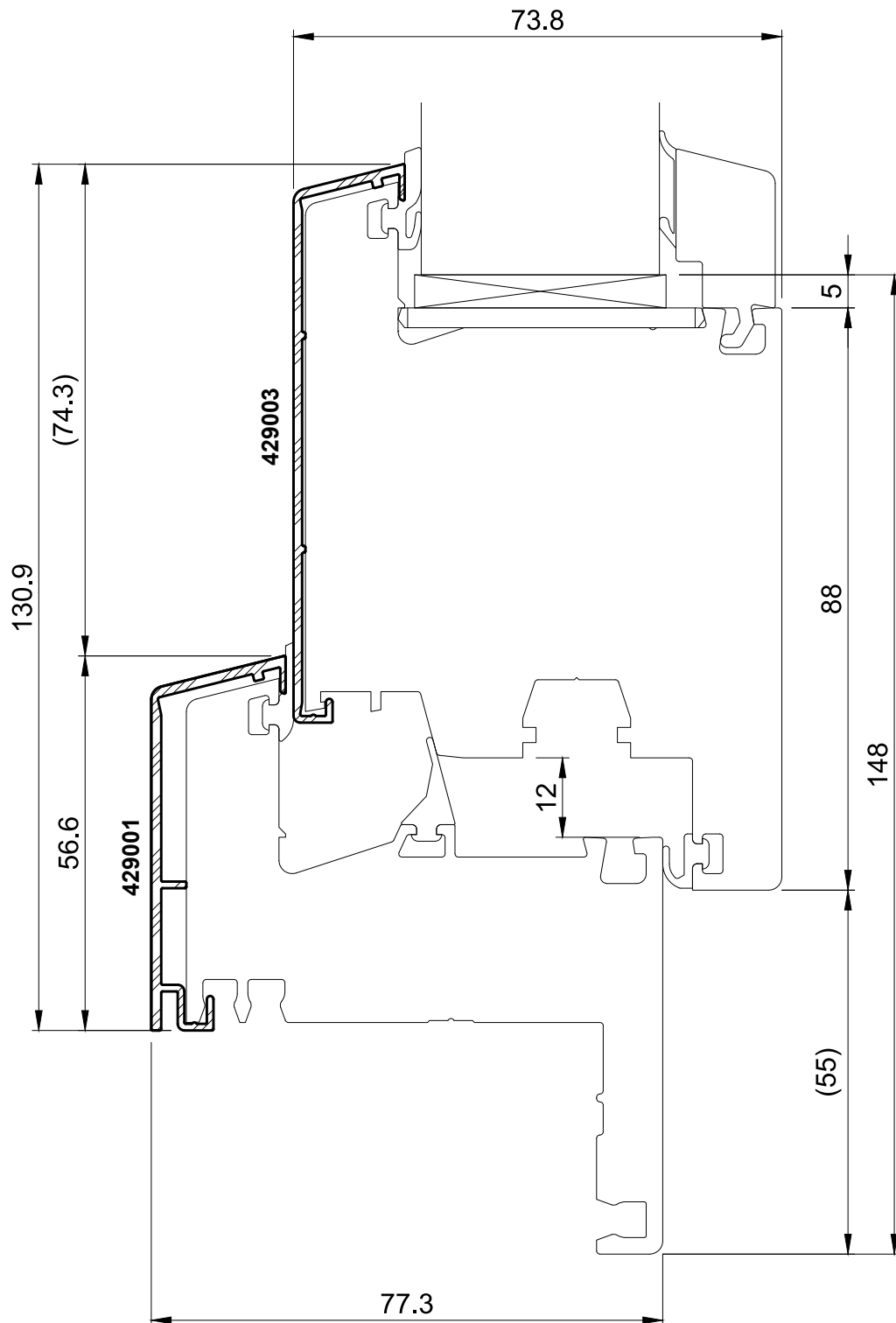
i INFO

Insert 429002 for sash 721001.

Insert 469002 for frame 720023.

Aluminium cover profile Sash – Frame

429003, 429001



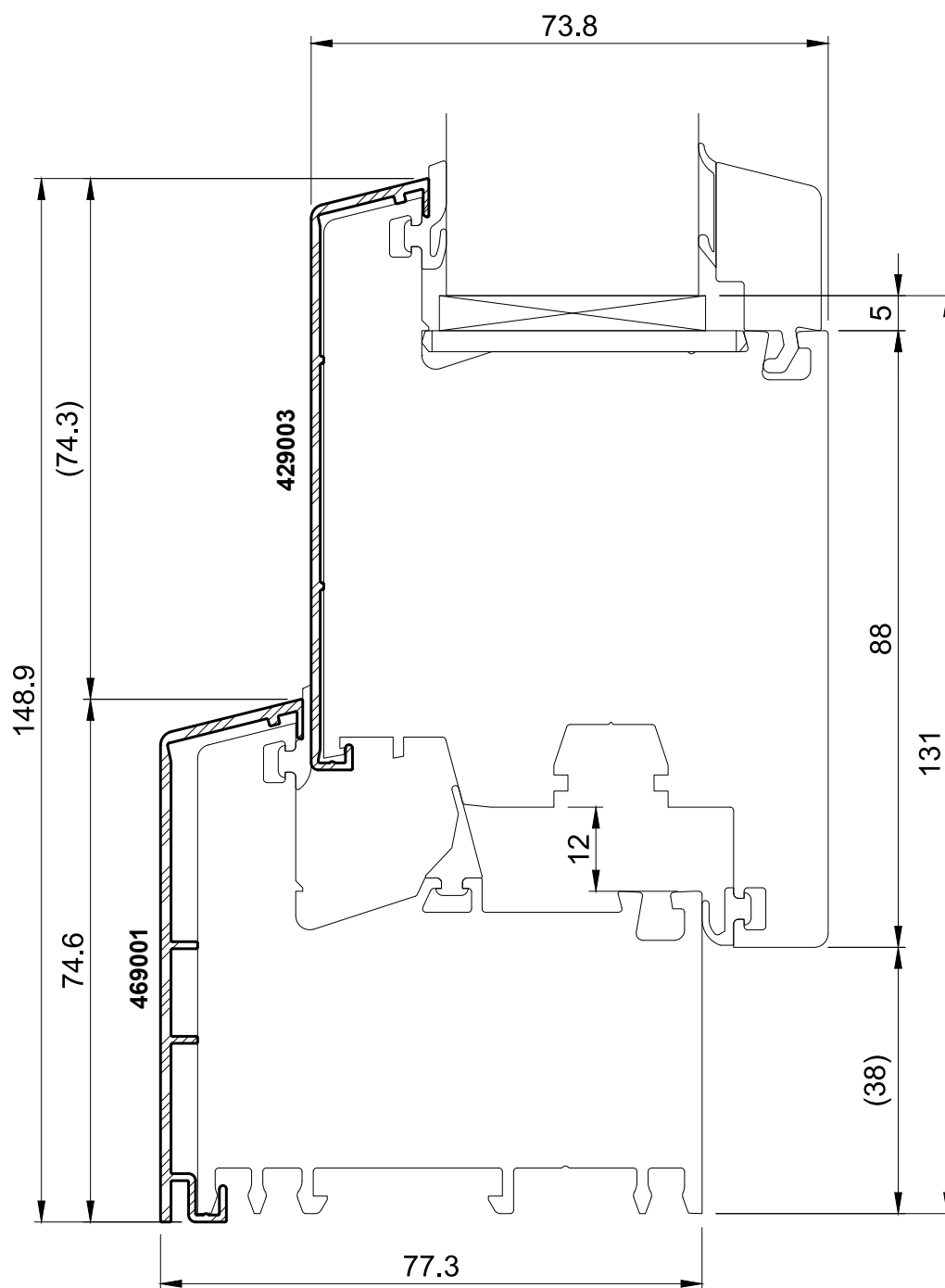
i INFO

Insert 429003 for sash 721008.

Insert 429001 for frames 720022, 720024.

Aluminium cover profile Sash – Frame

429003, 469001



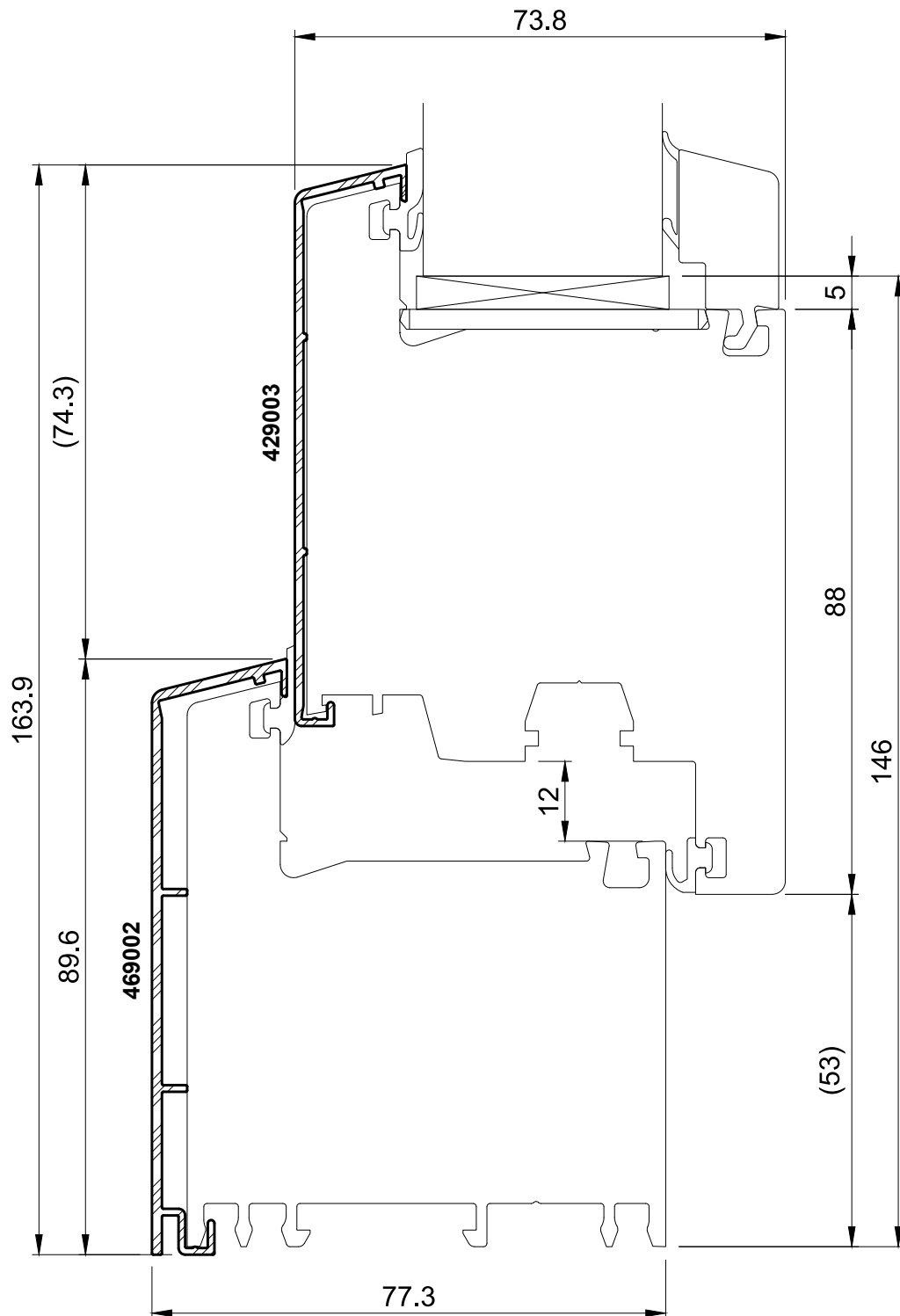
i INFO

Insert 429003 for sash 721008.

Insert 469001 for frames 720003, 720004.

Aluminium cover profile Sash – Frame

429003, 469002



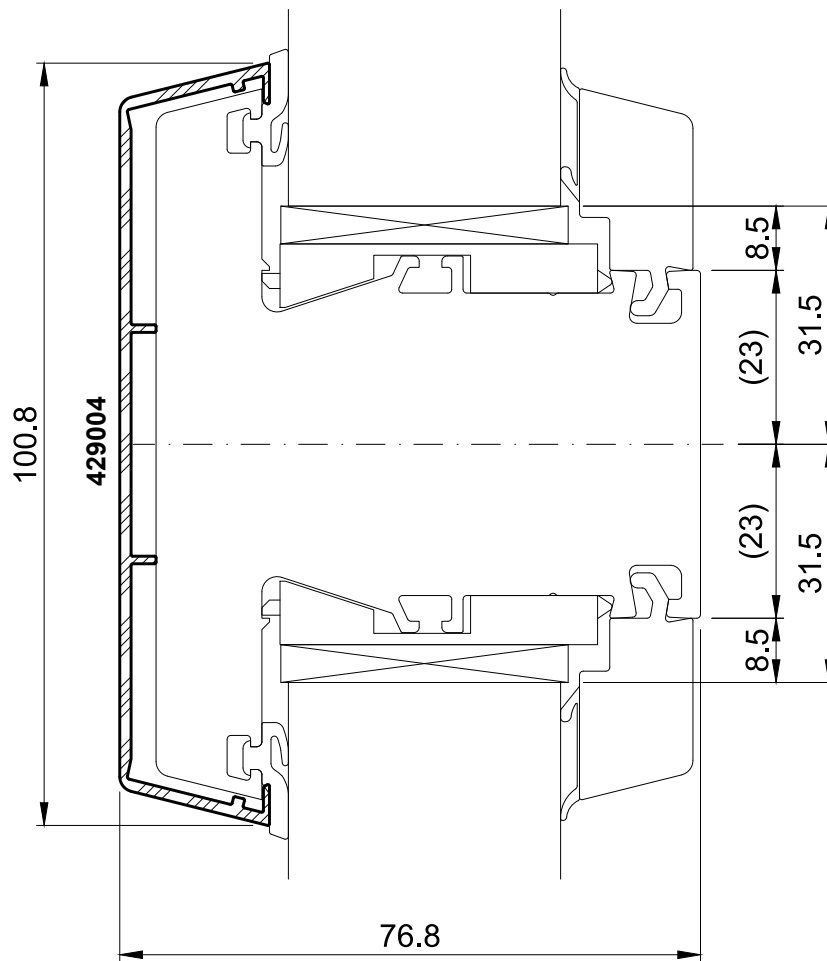
i INFO

Insert 429003 for sash 721008.

Insert 469002 for frame 720023.

Aluminium cover profile Fixed mullion, glazing bar

429004

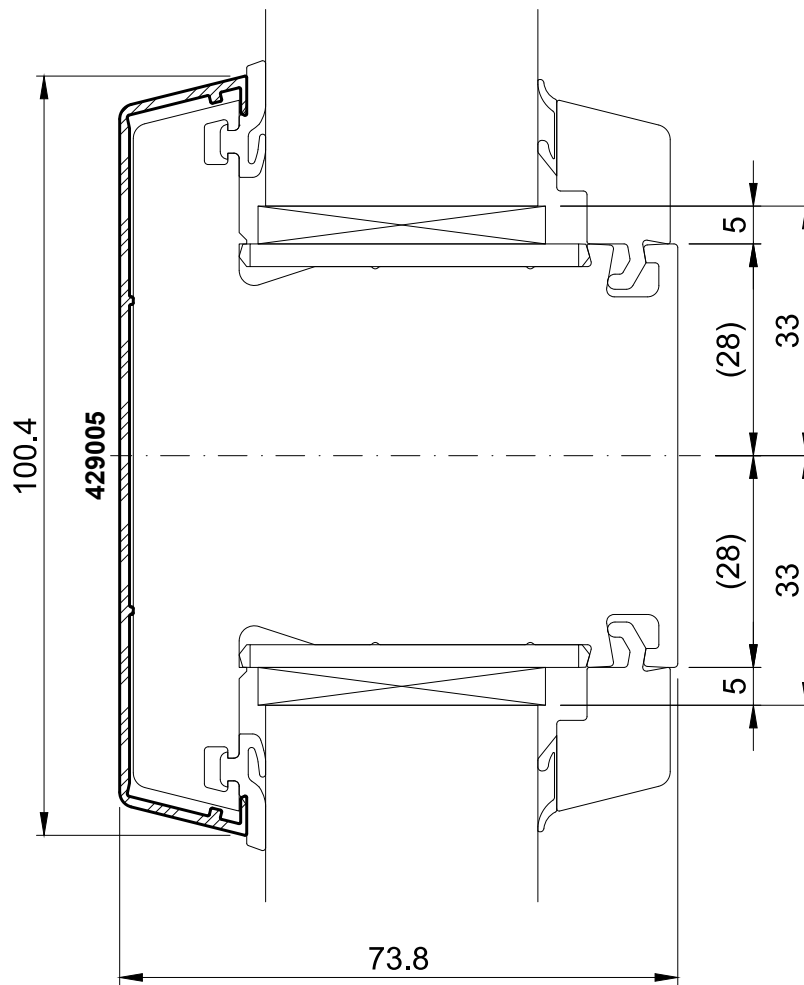
**i** INFO

Insert 429004 for fixed mullions 722005, 722006 and glazing bar 722000.

For application as fixed mullion in frame.

Aluminium cover profile Fixed mullion, glazing bar

429005



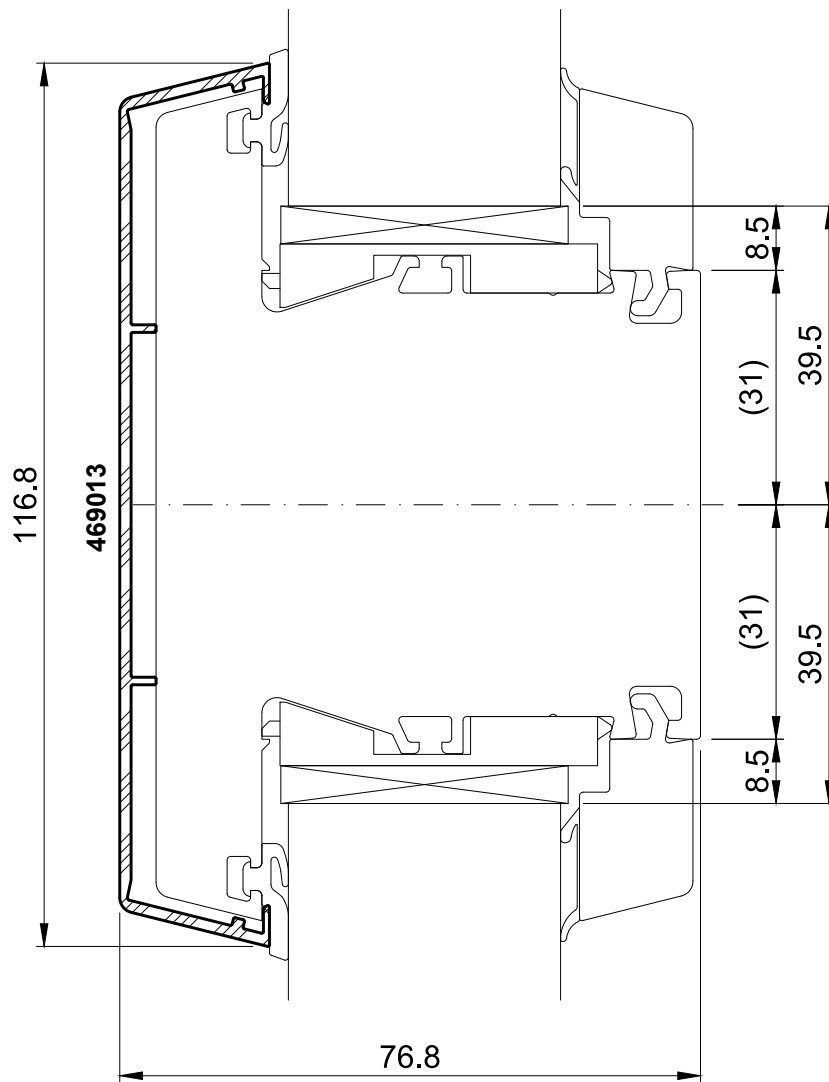
i INFO

Insert 429005 for glazing bar 722000.

For application as glazing bar in sash.

Aluminium cover profile Fixed mullion, glazing bar

469013



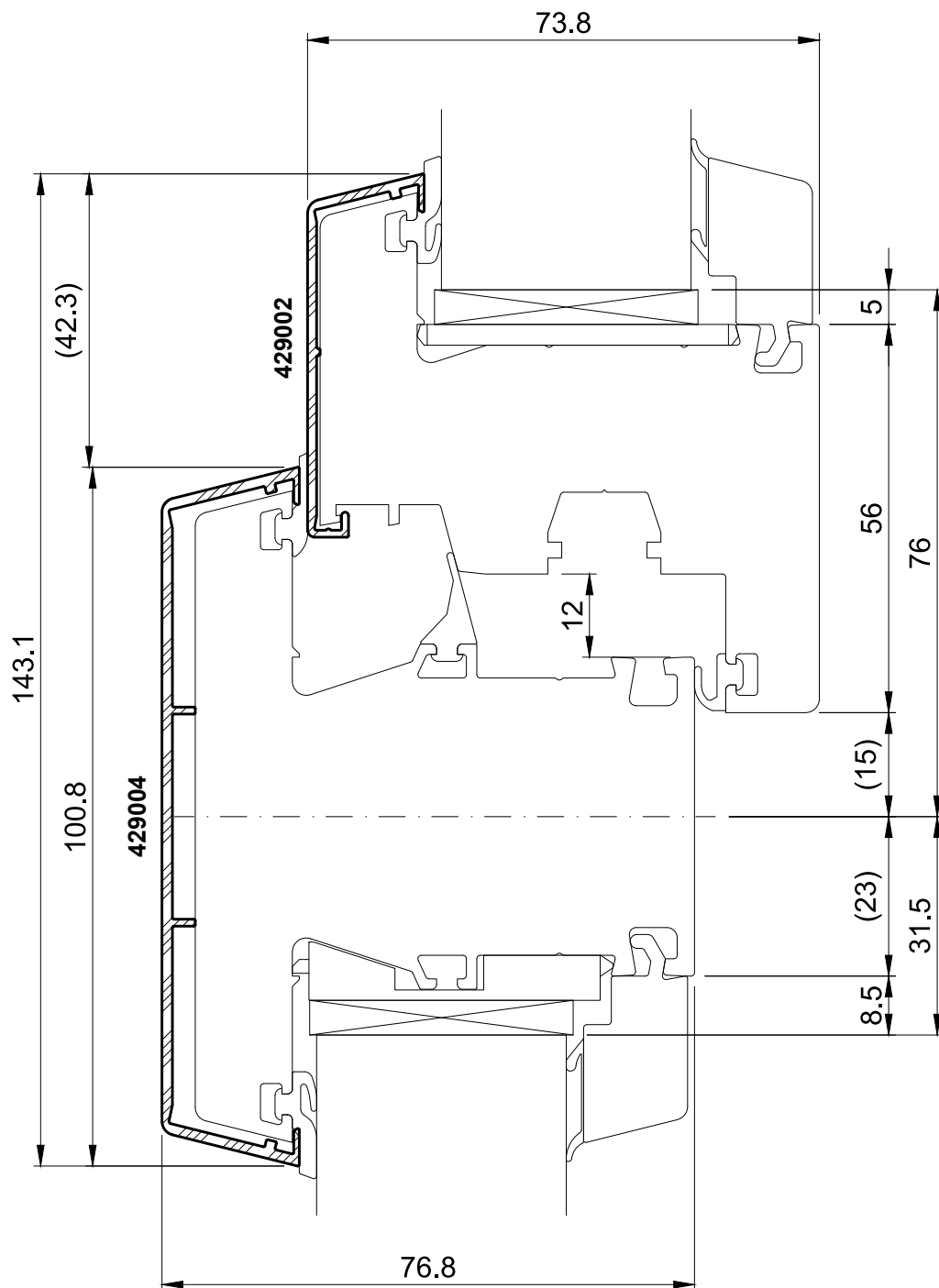
i INFO

Insert 469013 for fixed mullions 722010.

For application as fixed mullion in frame.

Aluminium cover profile Sash – Fixed mullion

429002, 429004



i INFO

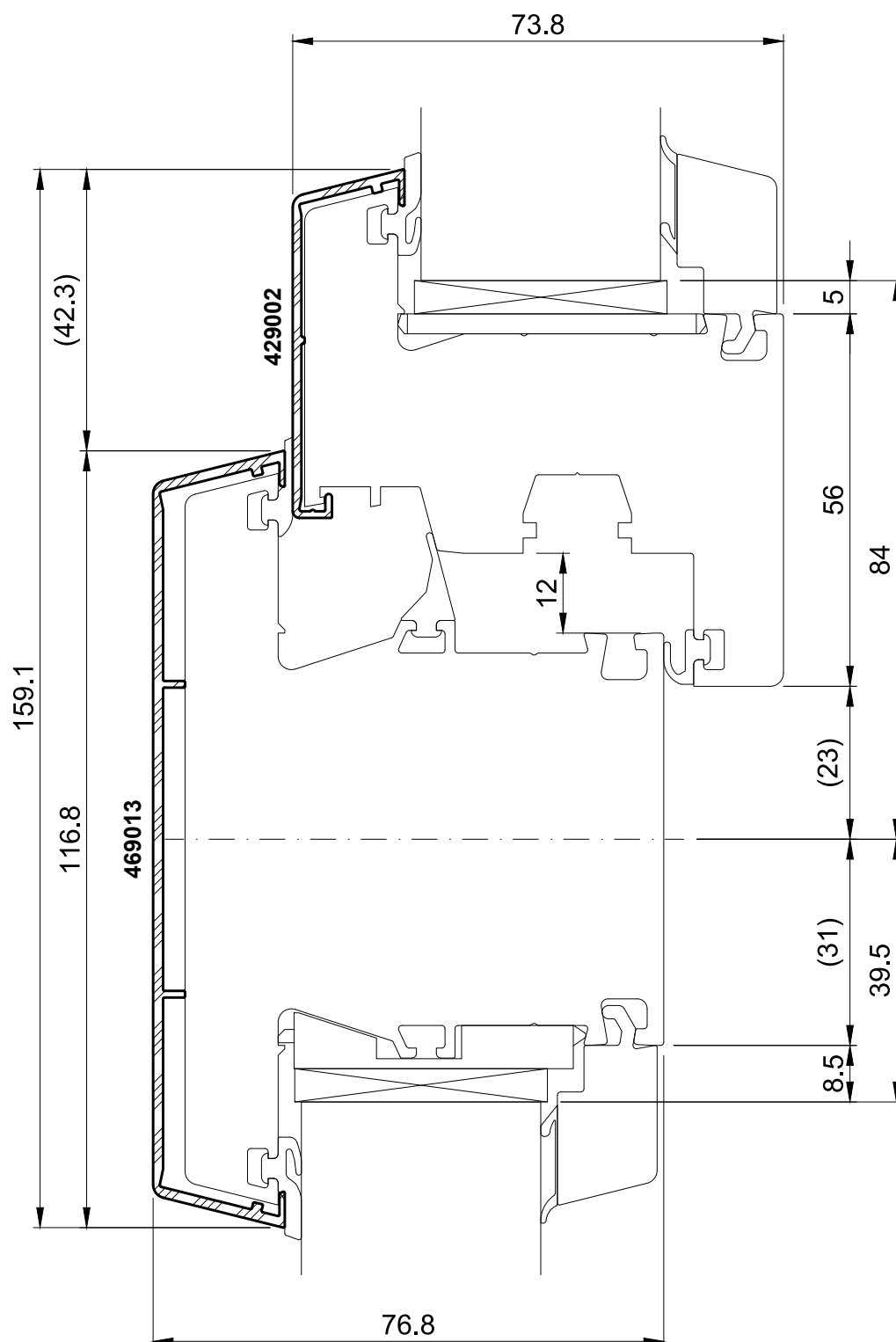
Insert 429002 for sash 721001.

Insert 429004 for fixed mullions 722005, 722006 and glazing bar 722000.

For application as fixed mullion in frame.

Aluminium cover profile Sash – Fixed mullion

429002, 469013



i INFO

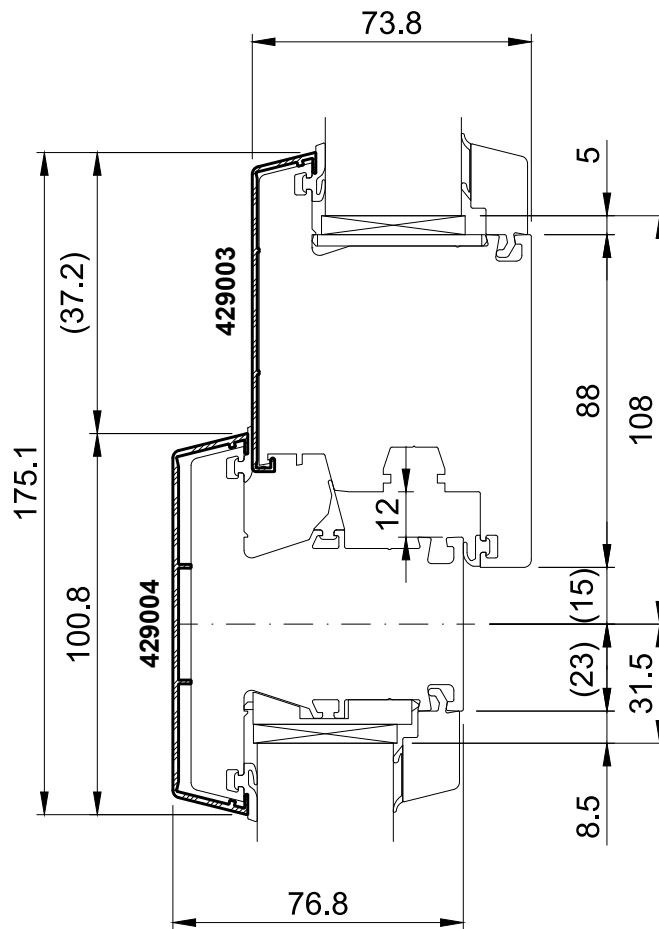
Insert 429002 for sash 721001.

Insert 469013 for fixed mullions 722010.

For application as fixed mullion in frame.

Aluminium cover profile Sash – Fixed mullion

429003, 429004



i INFO

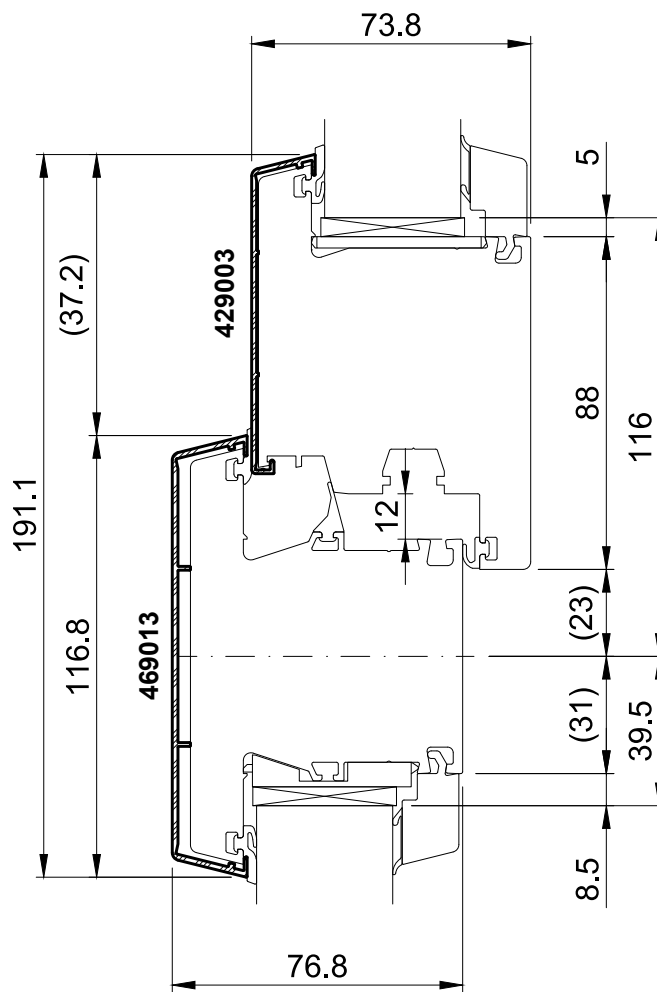
Insert 429003 for sash 721008.

Insert 429004 for fixed mullions 722005, 722006 and glazing bar 722000.

For application as fixed mullion in frame.

Aluminium cover profile Sash – Fixed mullion

429003, 469013



i INFO

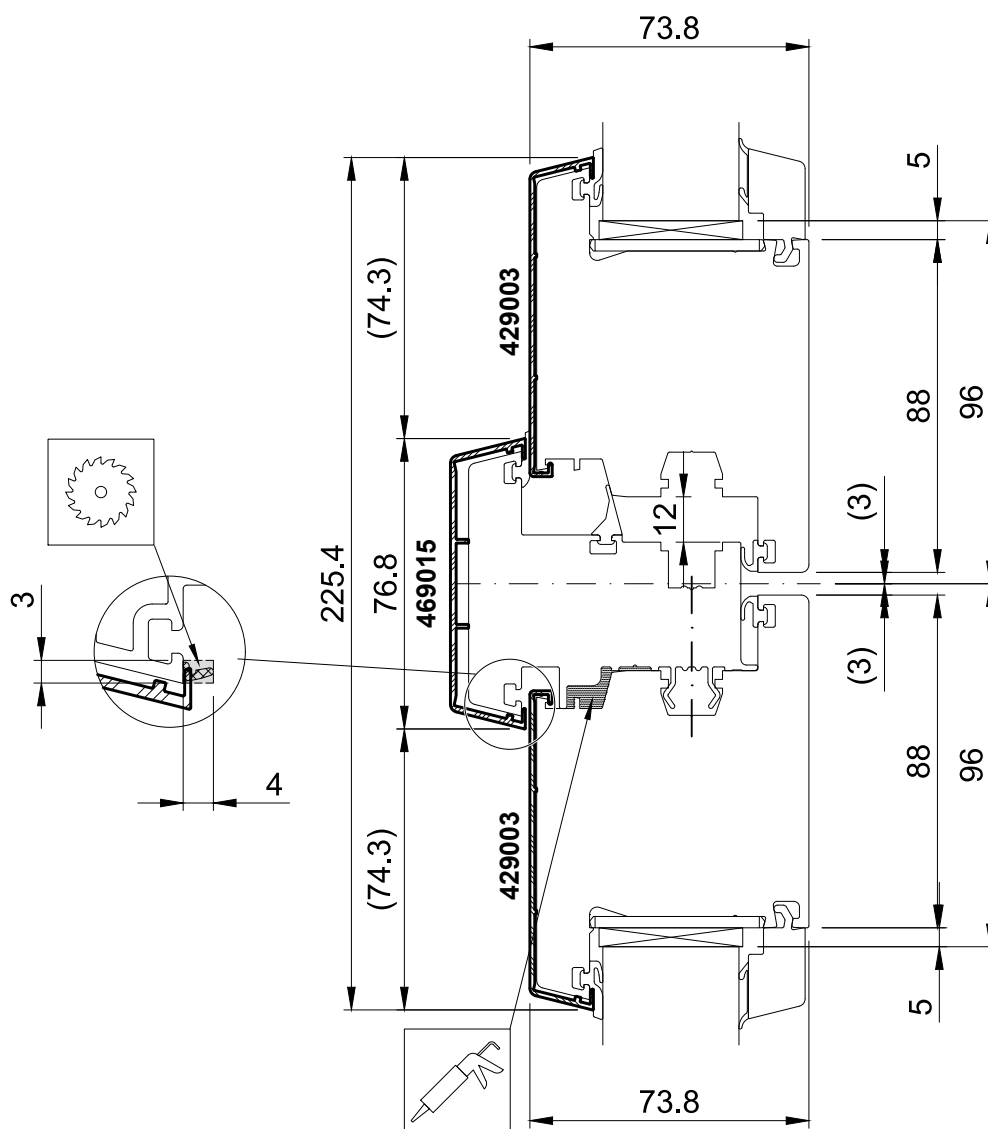
Insert 429003 for sash 721008.

Insert 469013 for fixed mullions 722010.

For application as fixed mullion in frame.

Aluminium cover profile Faceplate

429003, 469015



i INFO

Insert 429003 for sash 721008.

Insert 469015 for floating mullions 726003, 726004.

Chapter 5

Window statics

Designation	Page
Reinforcement guidelines	1
Maximum frame sizes	2
Sash sizes	3
Wind load	50
Driving rain tightness	56

Why brace?

The bending strength of PVC-U window profiles and PVC-U door profiles is relatively low. Additional bracing profiles made of steel or aluminium must be used in many cases. In this way, elements can be built that function smoothly and permanently.

Frames

- ▶ Brace all frames.

Exceptions:

- White frames without pattern up to a maximum profile length of 80 cm. Condition:
 - Proper fastening of the frame to the building structure.
 - No security components
 - No installation of add-on parts, e.g. shading elements.
 - Maximum sash weight 40 kg, and/or glass weight for fixed glazing / fixed light.

Fixed mullions and glazing bars / mullions

- ▶ Strengthen all fixed mullions and glazing bars / mullions.

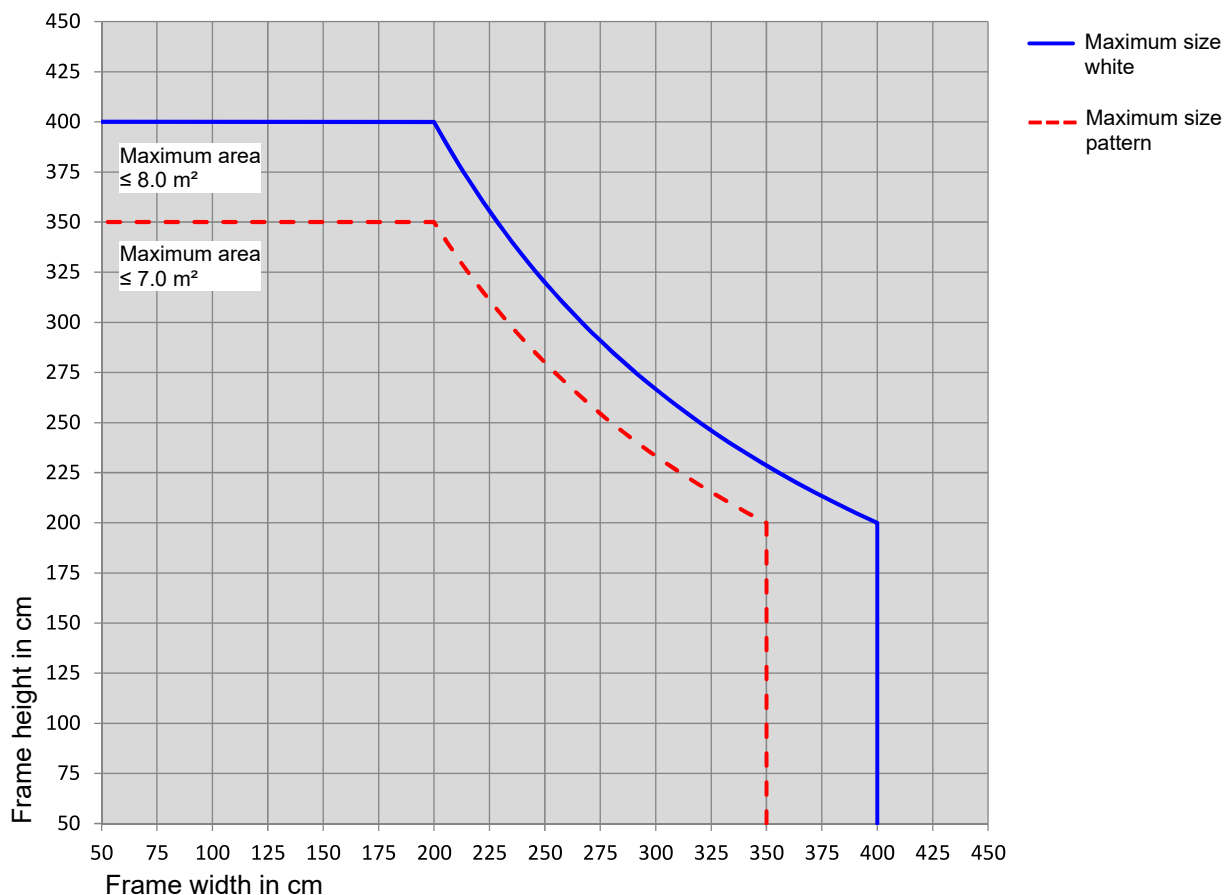
Sashes and floating mullions / faceplates

- ▶ Strengthen sashes and floating mullions / faceplates according to the following size diagrams.

Exceptions:

- White sashes without pattern up to 60 cm x 80 cm (width x height).

Maximum frame sizes, white and pattern



i INFO

- ▶ Maximum 350 kg glass weight for fixed glazing.
- ▶ Match the installation to:
 - structural substrates,
 - structural requirements, e.g.
 - wind load,
 - fall protection,
 - element weight,
 - position of the window element, e.g.
 - prewall installation,
 - on the reveal edge,
 - in the reveal,
 - fixing material,
 - use and type of reinforcing profile.

To the size diagrams

The following size diagrams show the outer dimensions of the sashes.

The sash size is determined by:

- the static values (l_x , l_y) of the bracing used
- the total glass thickness and the pane weight
- the acting loads, e.g. wind load and thermal load
- the fittings used and the specifications of the fittings manufacturer.

Determination of total glass thickness

- ▶ Add up the glass thicknesses of the individual glass panes.
- ▶ Do not take gasp into account.

Example:

- Per pane = 4 mm glass thickness.
- Each gap = 12 mm.
- Structure 4 – 12 – 4 – 12 – 4.

Total glass thickness: **4 + 4 + 4 = 12 mm.**

Calculation of pane weight

- ▶ Area (m^2) x total glass thickness x 2.5

Example:

1 m^2 glass weighs 30 kg.

- Density of glass = 2.5 g/cm^3 .
- Mass for flat glass = 2.5 kg per m^2 and mm thickness.

Pane weight: **1 m^2 x 12 x 2.5 = 30 kg.**

Wind loading

For French window sashes (sashes with floating mullion), wind loading is according to grades 1 – 5 as per DIN EN 12210, permissible relative frontal deflection: $B (l/200)$, shown in the size diagram.

The l_y value of the steel used determines the resistance to wind loading.

Wind load lines are computed based on a symmetrical element structure and based on the real deflection at the test element and are only used for static pre-dimensioning. This does not replace an object-related static calculation in any case.

The wind zones for Germany are given in the following.

→ **see** [Chapter 5 Page 51](#)

i INFO

Different rules may apply for other countries.

- ▶ Check and if necessary apply these rules as a priority.

Hardware

Fittings must be suitable for leaf/casement size and leaf/casement weight.

- ▶ Observe the specifications of the hardware manufacturer.

Screw fastening of corner and stay hinge bearings in frame and fixed mullion:

- Up to 80 kg casement weight at least 2 screws in the reinforcing profile.
- Up to 100 kg casement weight at least 3 screws in the reinforcement profile.
- Up to 130 kg casement weight at least 4 screws in the reinforcing profile.

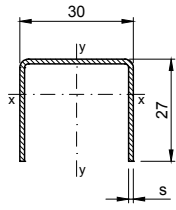
 INFO

For further information, e.g. our planning tool and our statics calculator, please visit the log-in area of our homepage [salamander-windows.com](https://www.salamander-windows.com).

Turn-only / Tilt&turn sash

465001-72

Size diagram for reinforcement 465001, 1.25 mm - single sash



Use for sashes



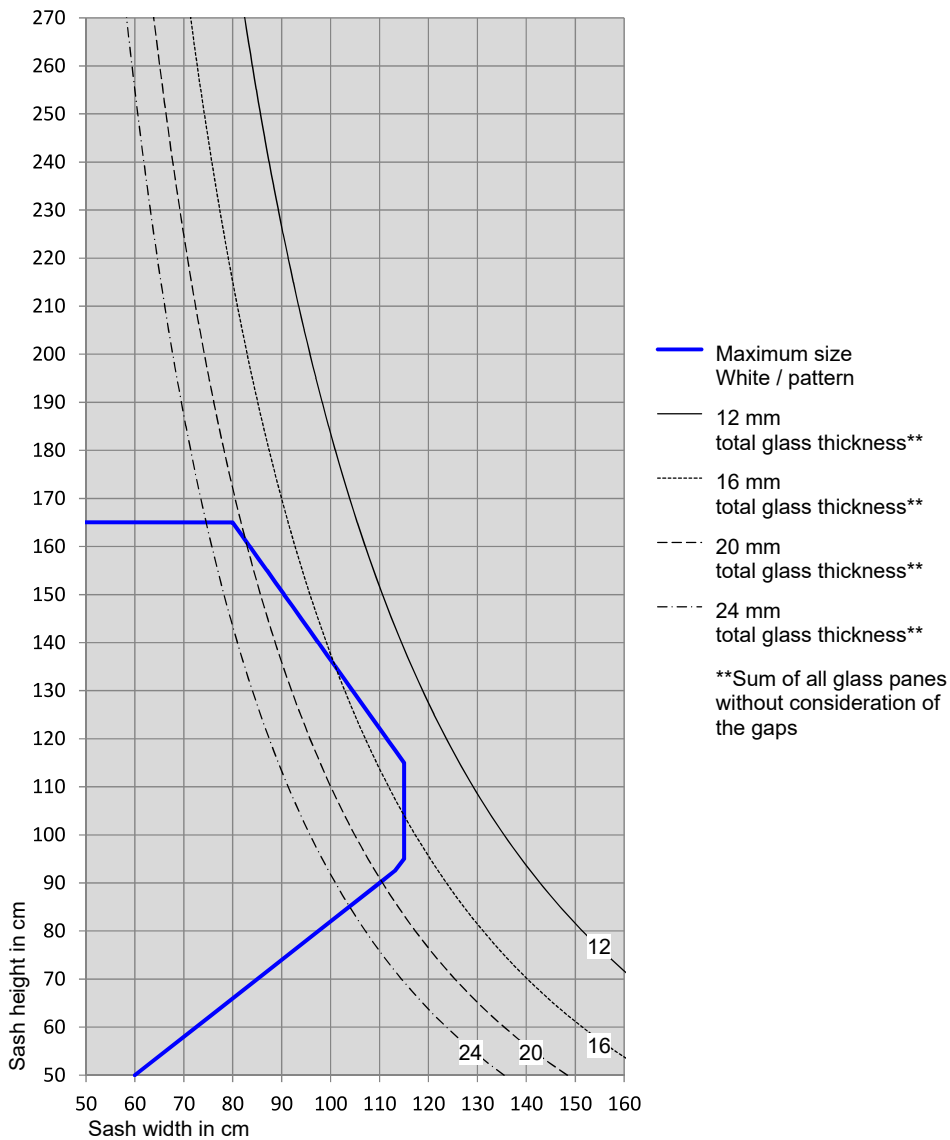
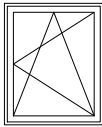
721001



721005

465001-72
thickness
1.25 mm
 $I_x = 0.77 \text{ cm}^4$
 $I_y = 1.57 \text{ cm}^4$

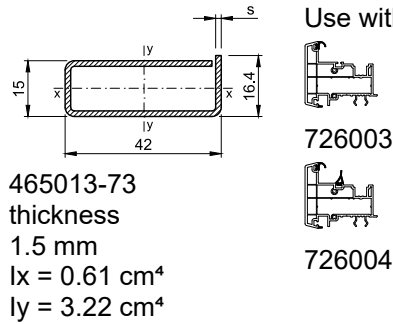
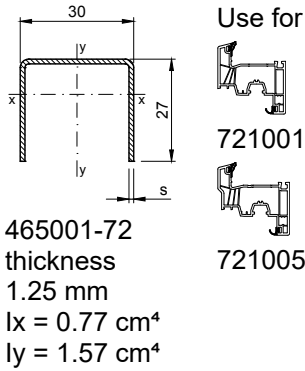
Window type 1.1 Turn-only / bottom-hung window/door



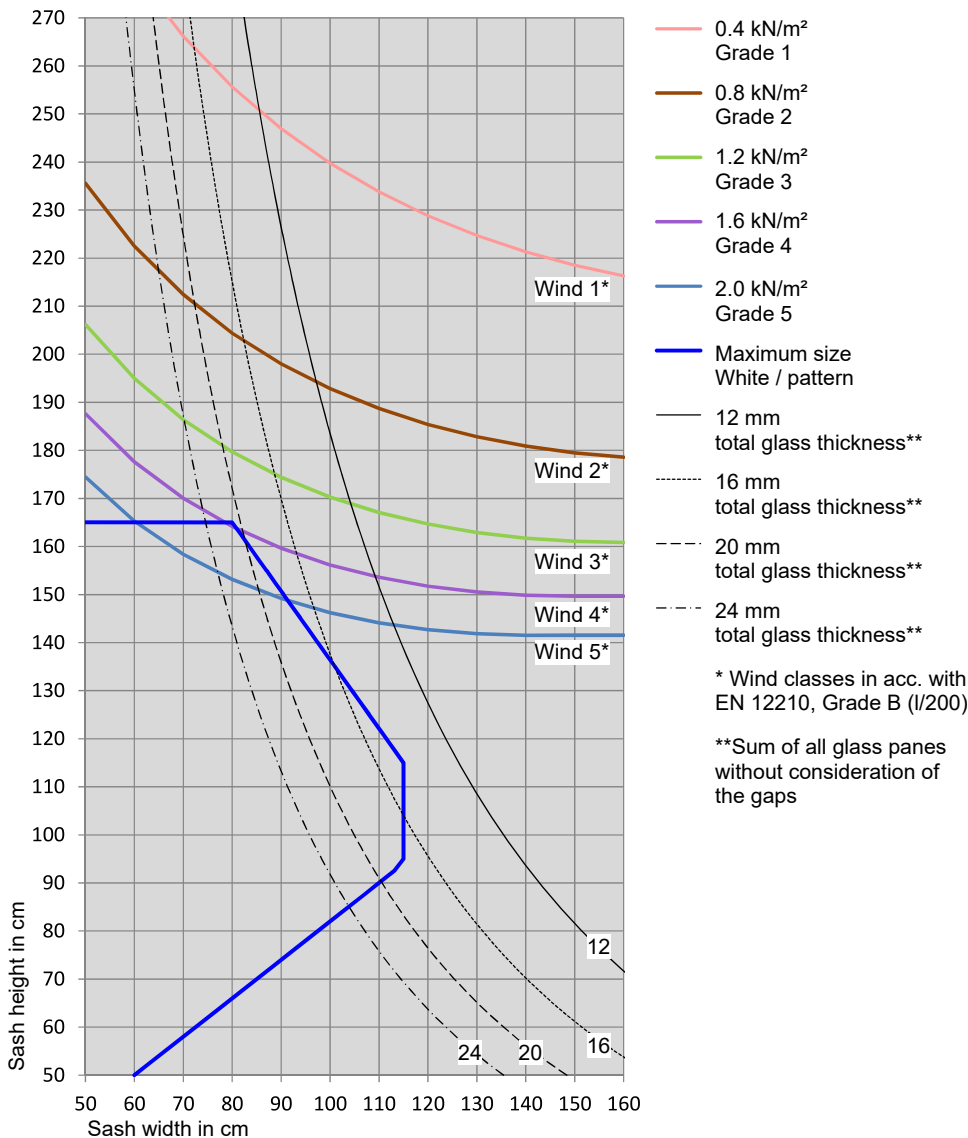
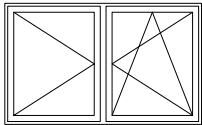
Turn-only / Tilt&turn sash

465001-72

Size diagram for reinforcement 465001, 1.25 mm - French window sash with broad faceplate, steel small



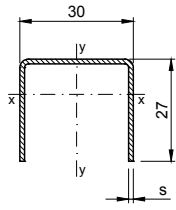
Window type 1.2 Turn-only / bottom-hung window/door



Turn-only / Tilt&turn sash

465001-72

Size diagram for reinforcement 465001, 1.25 mm - French window sash with broad faceplate, steel large



Use for sashes

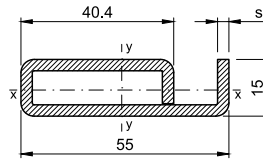


721001



721005

465001-72
thickness
1.25 mm
 $I_x = 0.77 \text{ cm}^4$
 $I_y = 1.57 \text{ cm}^4$



Use with faceplate



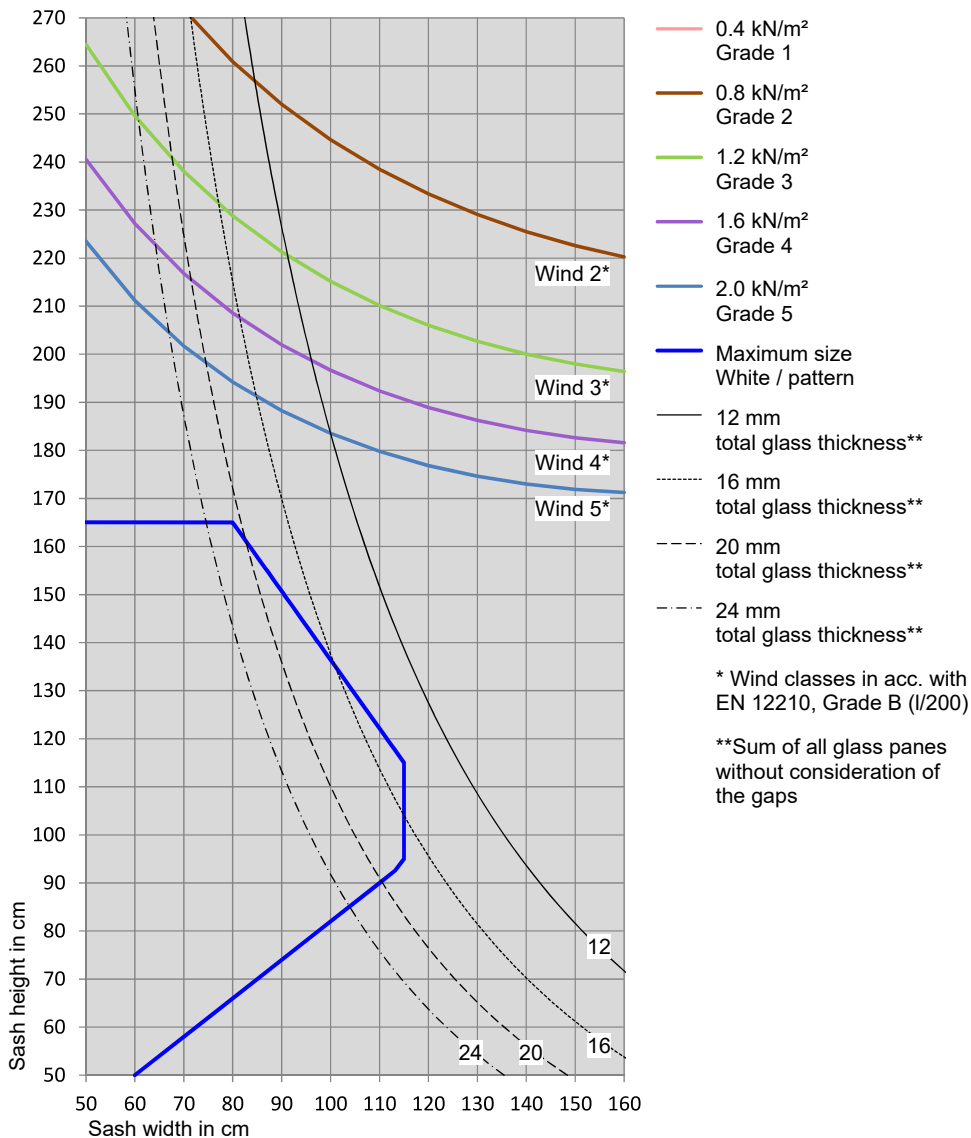
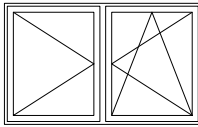
726003



726004

415136-76
thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

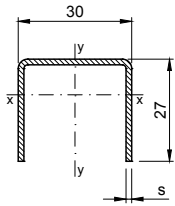
Window type 1.2 Turn-only / bottom-hung window/door



Turn-only / Tilt&turn sash

465001-73

Size diagram for reinforcement 465001, 1.5 mm - single sash



Use for sashes



721001



721005

465001-73

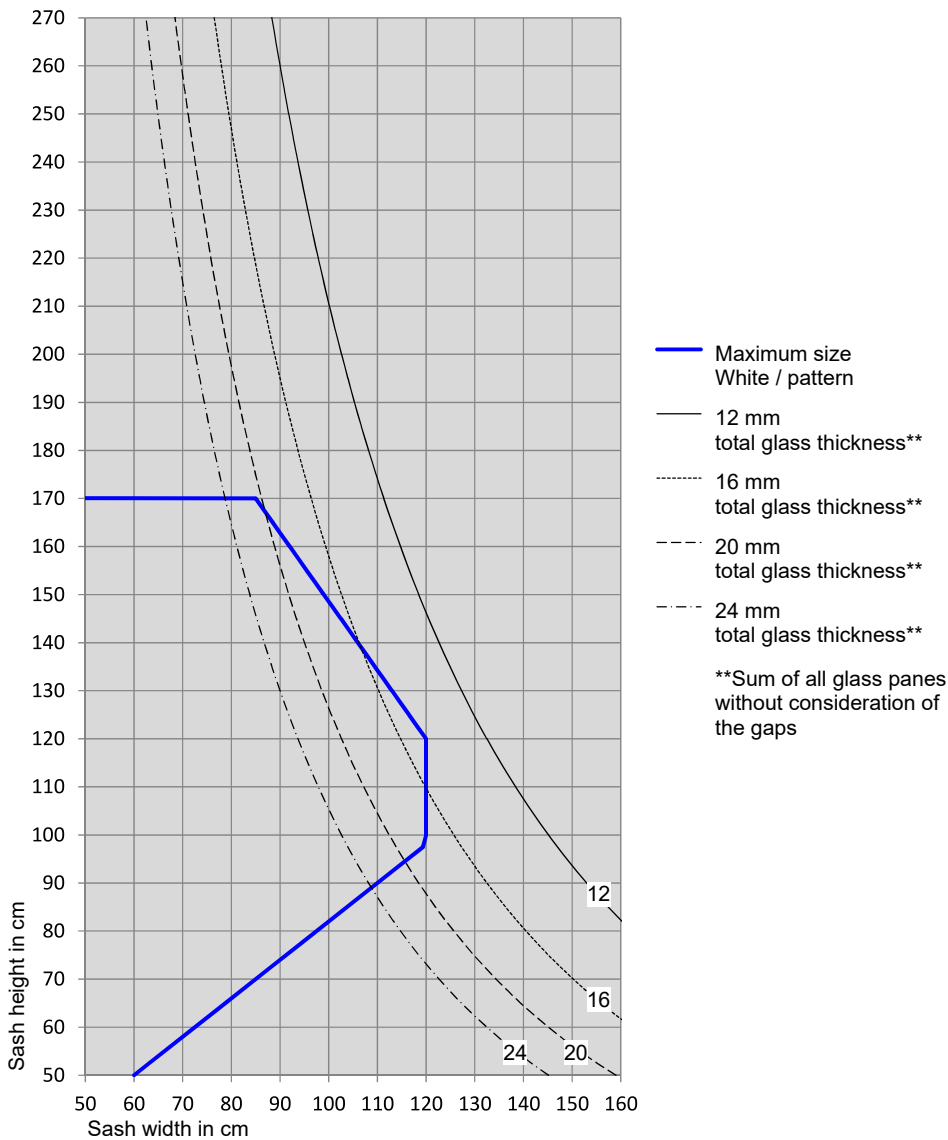
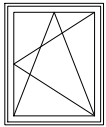
Thickness

1.5 mm

$I_x = 0.91 \text{ cm}^4$

$I_y = 1.84 \text{ cm}^4$

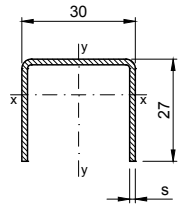
Window type 1.1 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465001-73

Size diagram for reinforcement 465001, 1.5 mm - French window sash with broad faceplate



Use for sashes

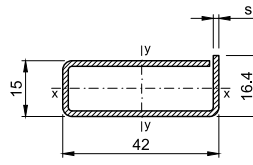


721001



721005

465001-73
thickness
1.5 mm
 $I_x = 0.91 \text{ cm}^4$
 $I_y = 1.84 \text{ cm}^4$



Use with faceplate



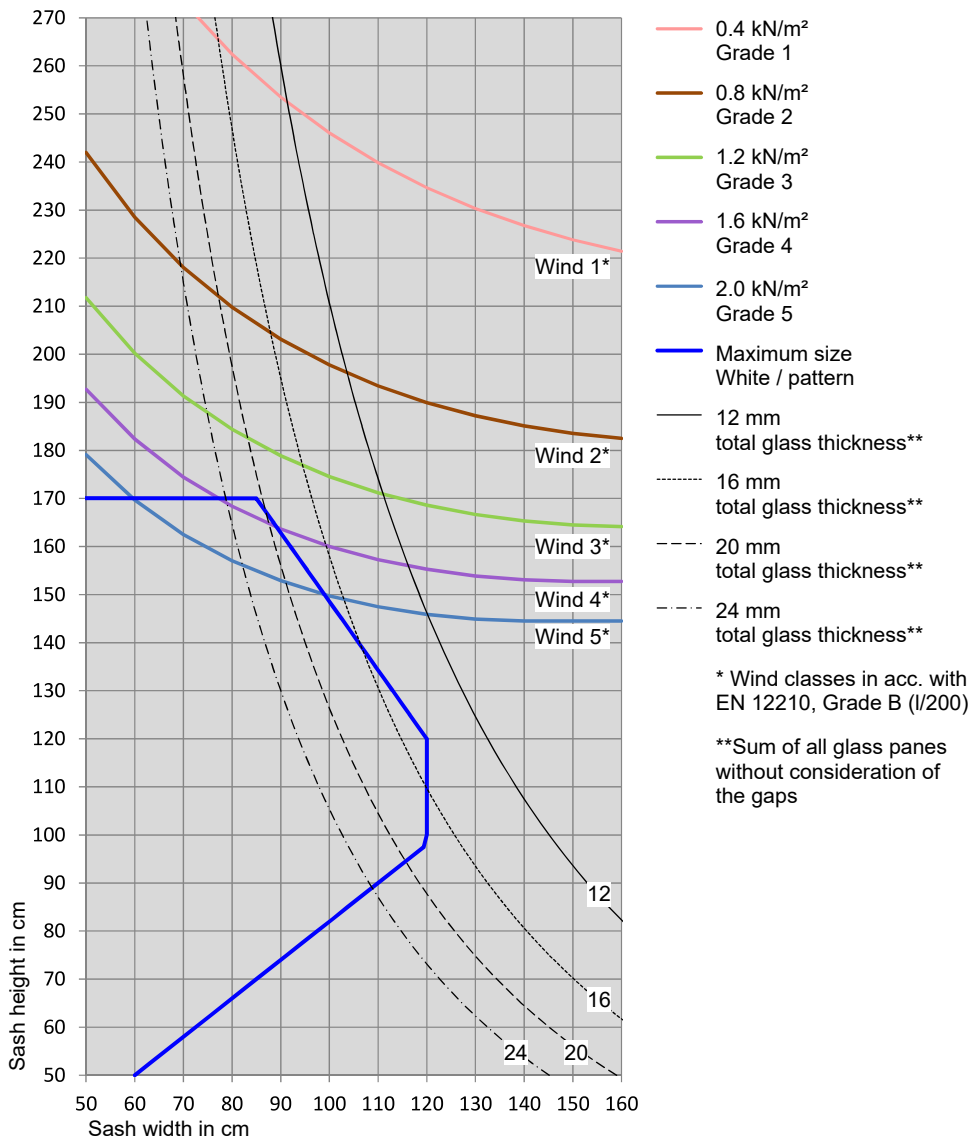
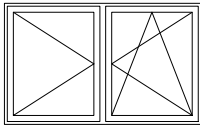
726003



726004

465013-73
thickness
1.5 mm
 $I_x = 0.61 \text{ cm}^4$
 $I_y = 3.22 \text{ cm}^4$

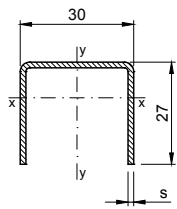
Window type 1.2 Turn-only / tilt &turn window/door



Turn-only / Tilt&turn sash

465001-73

Size diagram for reinforcement 465001, 1.5 mm - French window sash with broad faceplate



Use for sashes

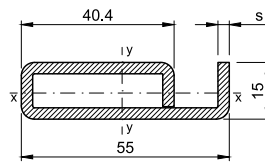


721001



721005

465001-73
thickness
1.5 mm
 $I_x = 0.91 \text{ cm}^4$
 $I_y = 1.84 \text{ cm}^4$



Use with faceplate



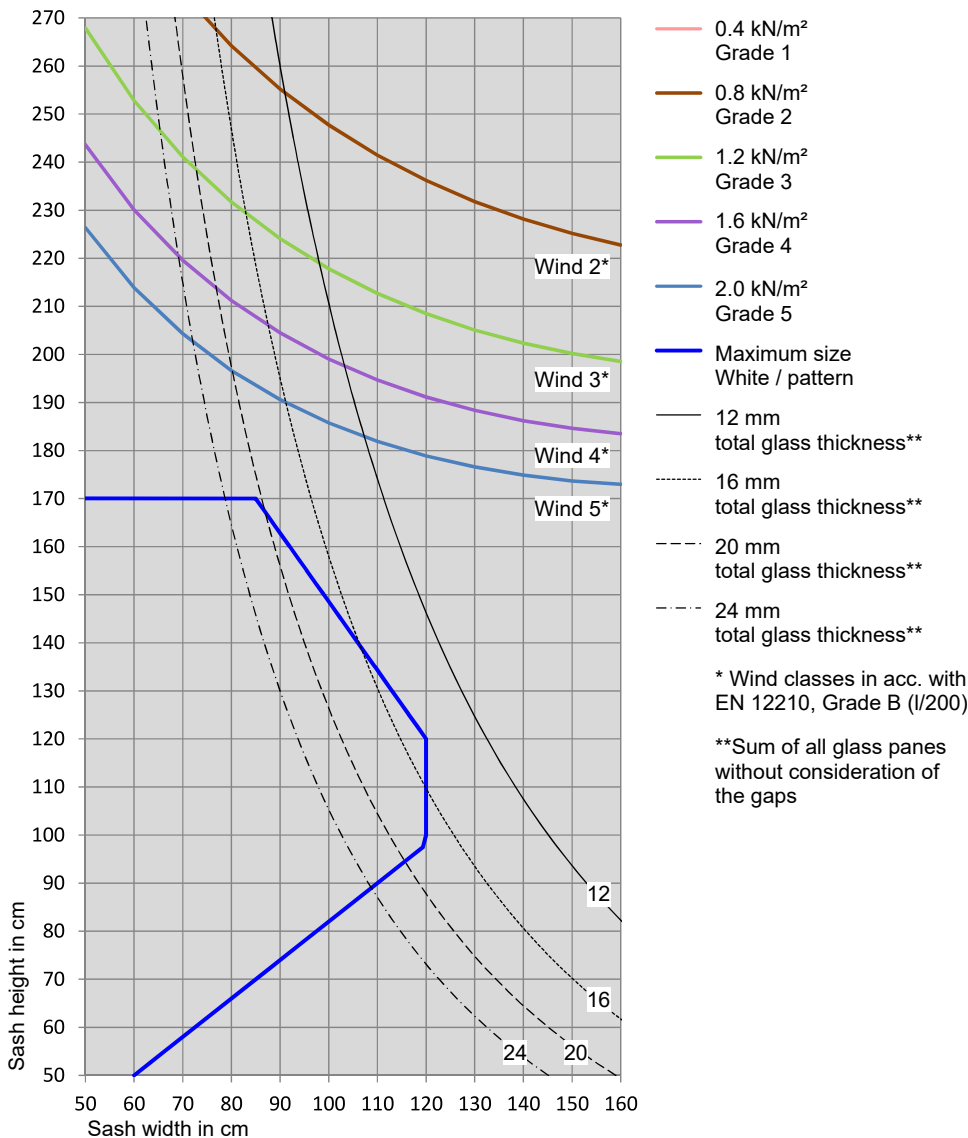
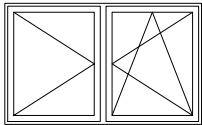
726003



726004

415136-76
thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

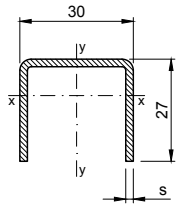
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465001-74

Size diagram for reinforcement 465001, 2 mm - single sash



Use for sashes



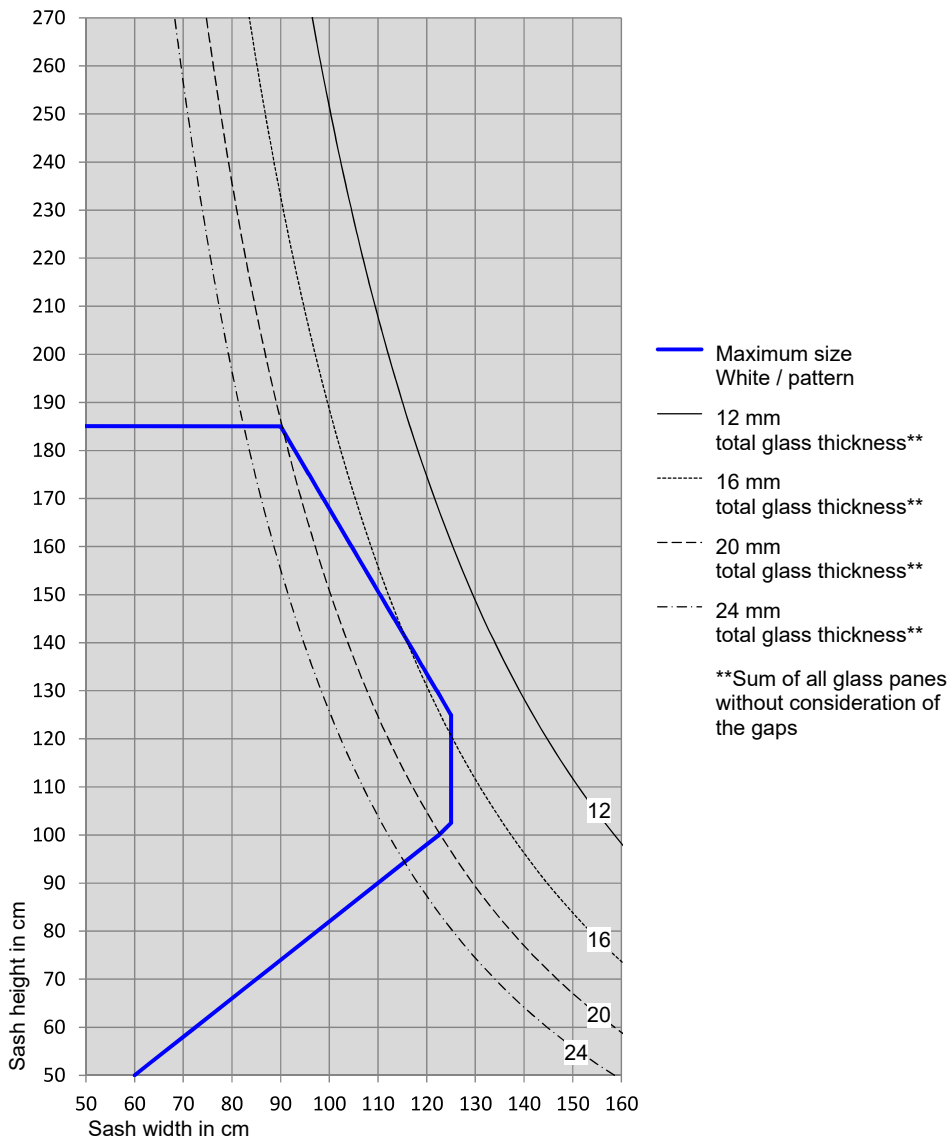
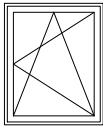
721001



721005

465001-74
thickness
2.0 mm
 $I_x = 1.18 \text{ cm}^4$
 $I_y = 2.34 \text{ cm}^4$

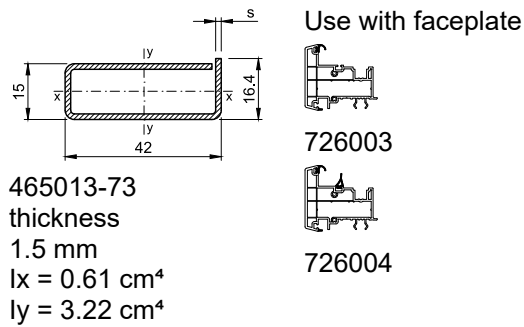
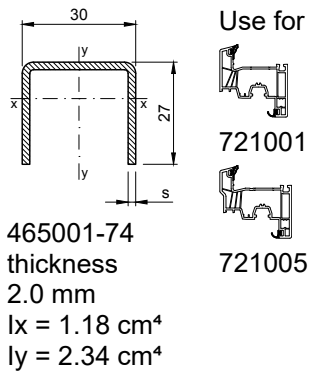
Window type 1.1 Turn-only / tilt & turn window/door



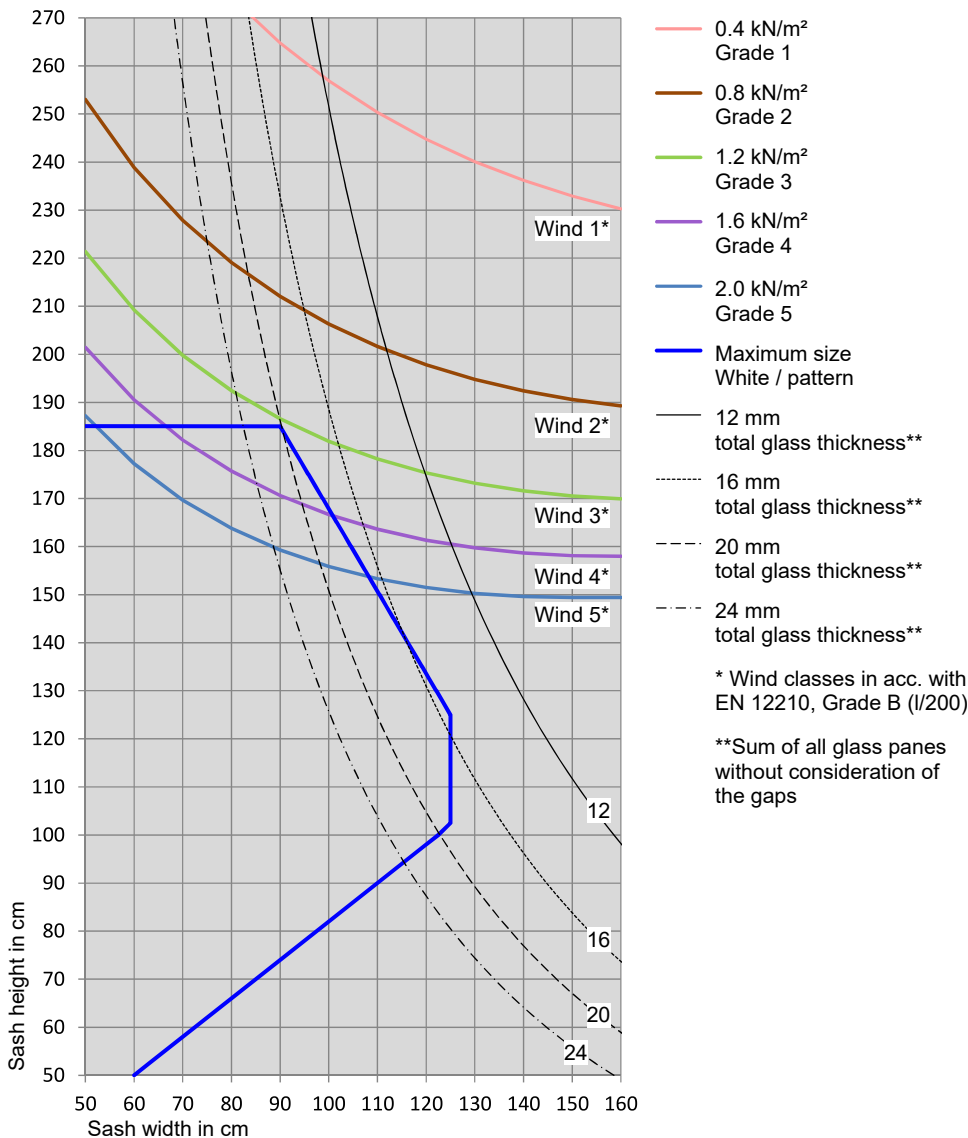
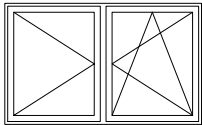
Turn-only / Tilt&turn sash

465001-74

Size diagram for reinforcement 465001, 2 mm - French window sash with broad faceplate



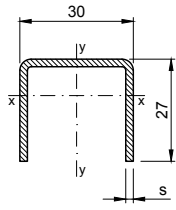
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465001-74

Size diagram for reinforcement 465001, 2 mm - French window sash with broad faceplate



Use for sashes

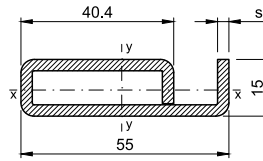


721001



721005

465001-74
thickness
2.0 mm
 $I_x = 1.18 \text{ cm}^4$
 $I_y = 2.34 \text{ cm}^4$



Use with faceplate



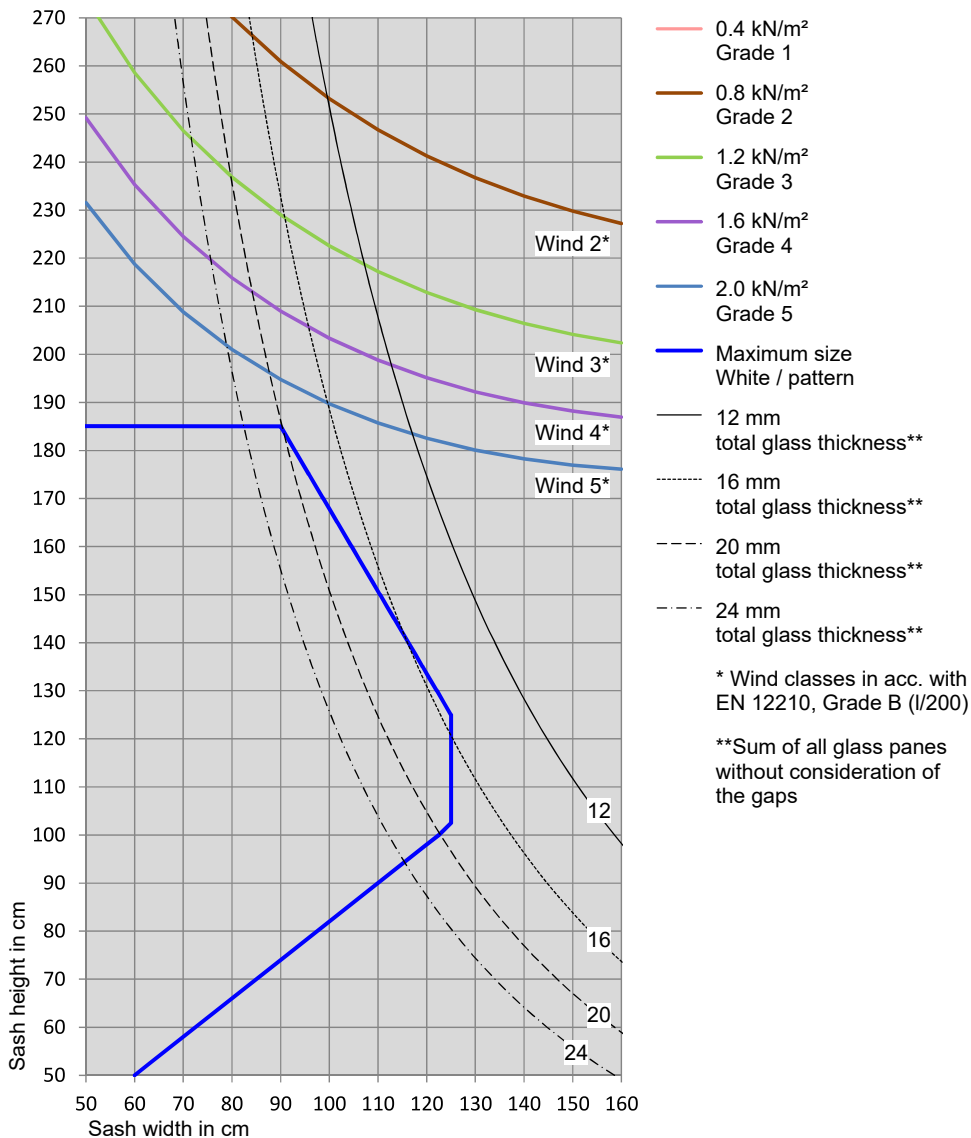
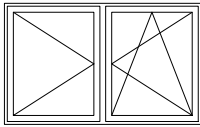
726003



726004

415136-76
thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

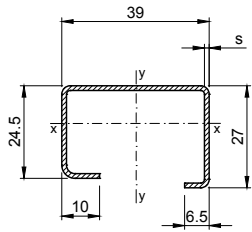
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-72

Size diagram for reinforcement 465006, 1.25 mm - single sash



Use for sashes



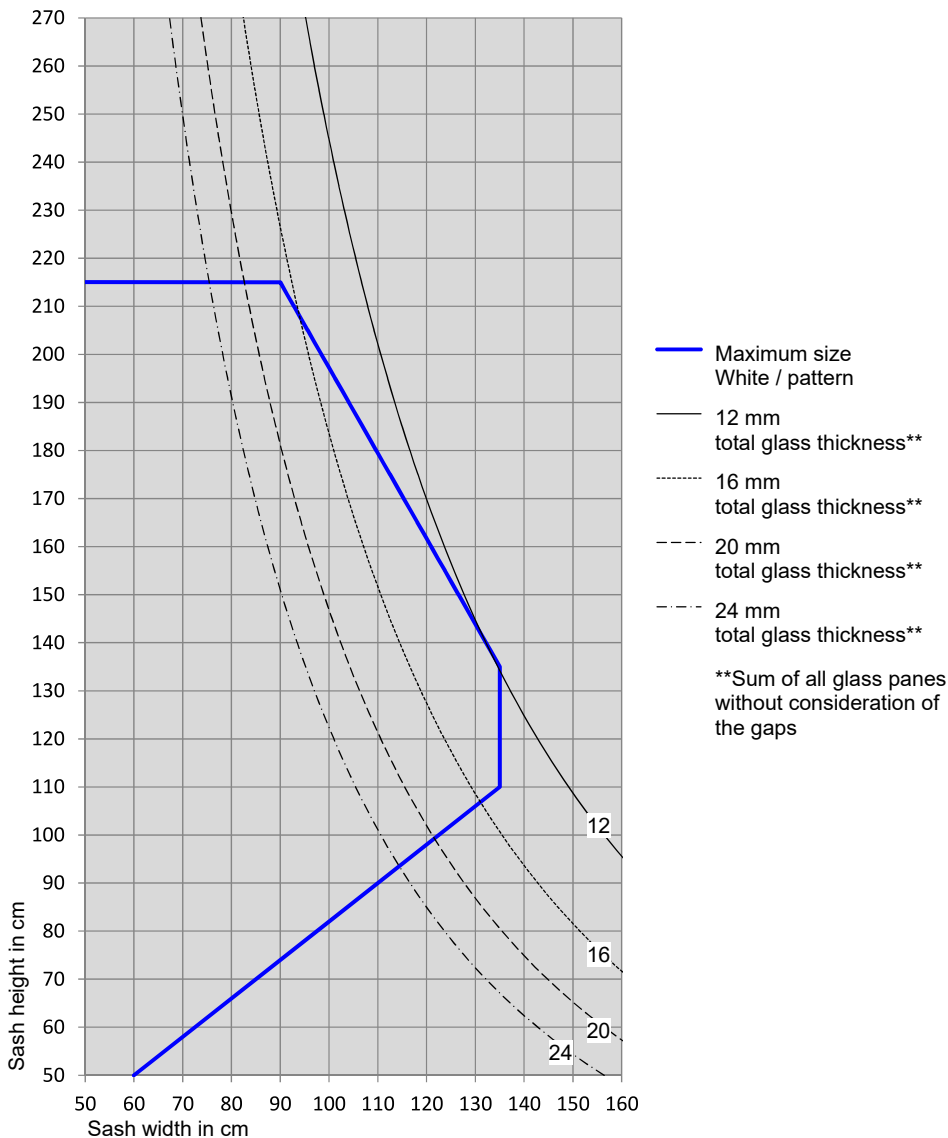
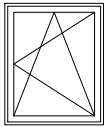
721001



721005

465006-72
thickness
1.25 mm
 $I_x = 1.13 \text{ cm}^4$
 $I_y = 3.02 \text{ cm}^4$

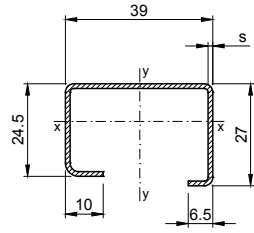
Window type 1.1 Turn-only / bottom-hung window/door



Turn-only / Tilt&turn sash

465006-72

Size diagram for reinforcement 465006, 1.25 mm - French window sash with broad faceplate



465006-72
thickness
1.25 mm
 $l_x = 1.13 \text{ cm}^4$
 $l_y = 3.02 \text{ cm}^4$

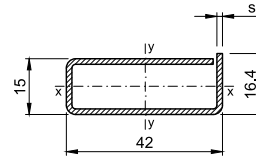
Use for sashes



721001



721005



465013-73
thickness
1.5 mm
 $l_x = 0.61 \text{ cm}^4$
 $l_y = 3.22 \text{ cm}^4$

Use with faceplate

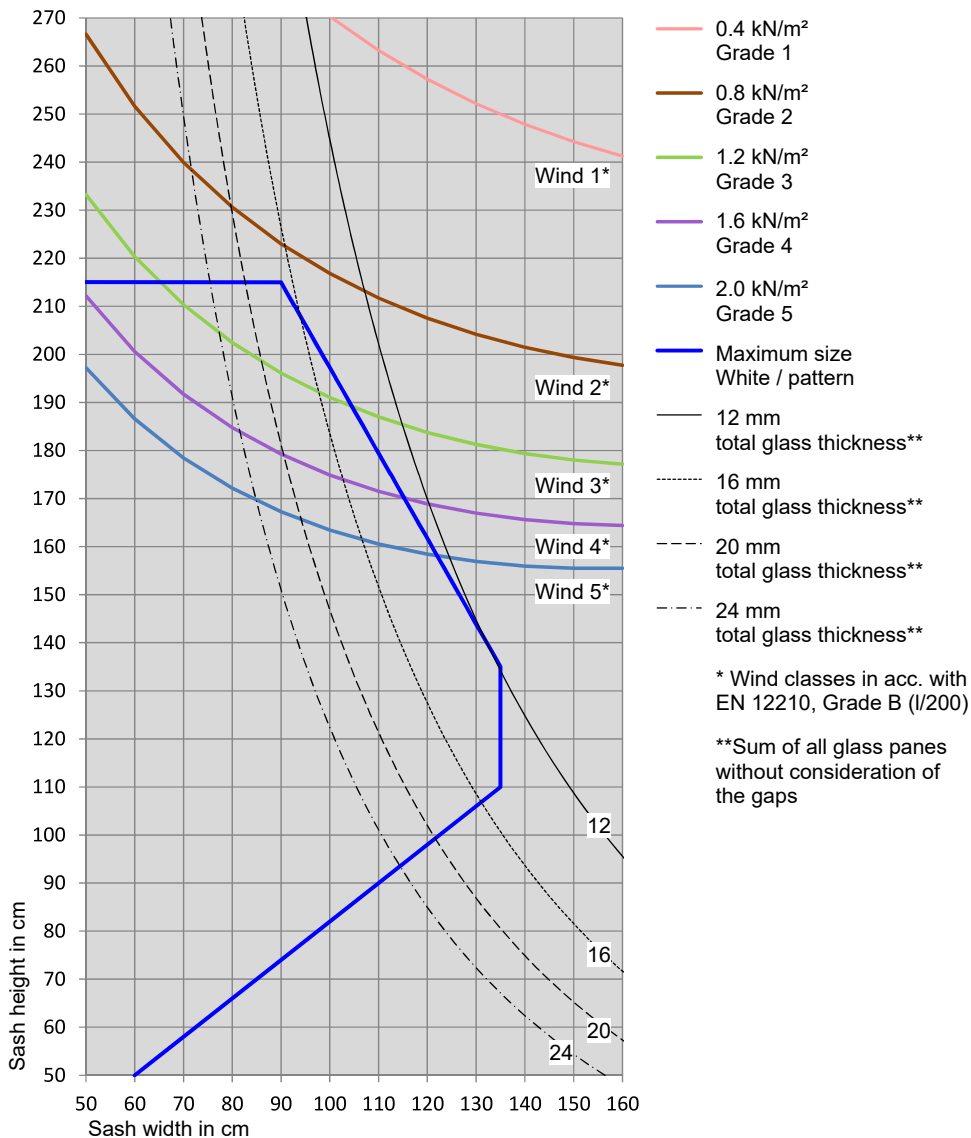
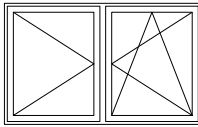


726003



726004

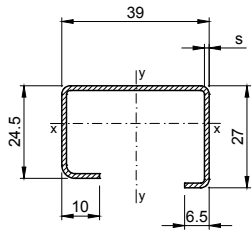
Window type 1.2 Turn-only / bottom-hung window/door



Turn-only / Tilt&turn sash

465006-72

Size diagram for reinforcement 465006, 1.25 mm - French window sash with broad faceplate



465006-72
thickness
1.25 mm
 $I_x = 1.13 \text{ cm}^4$
 $I_y = 3.02 \text{ cm}^4$

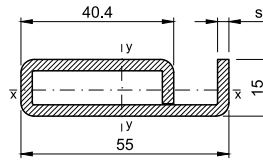
Use for sashes



721001



721005



415136-76
thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

Use with faceplate

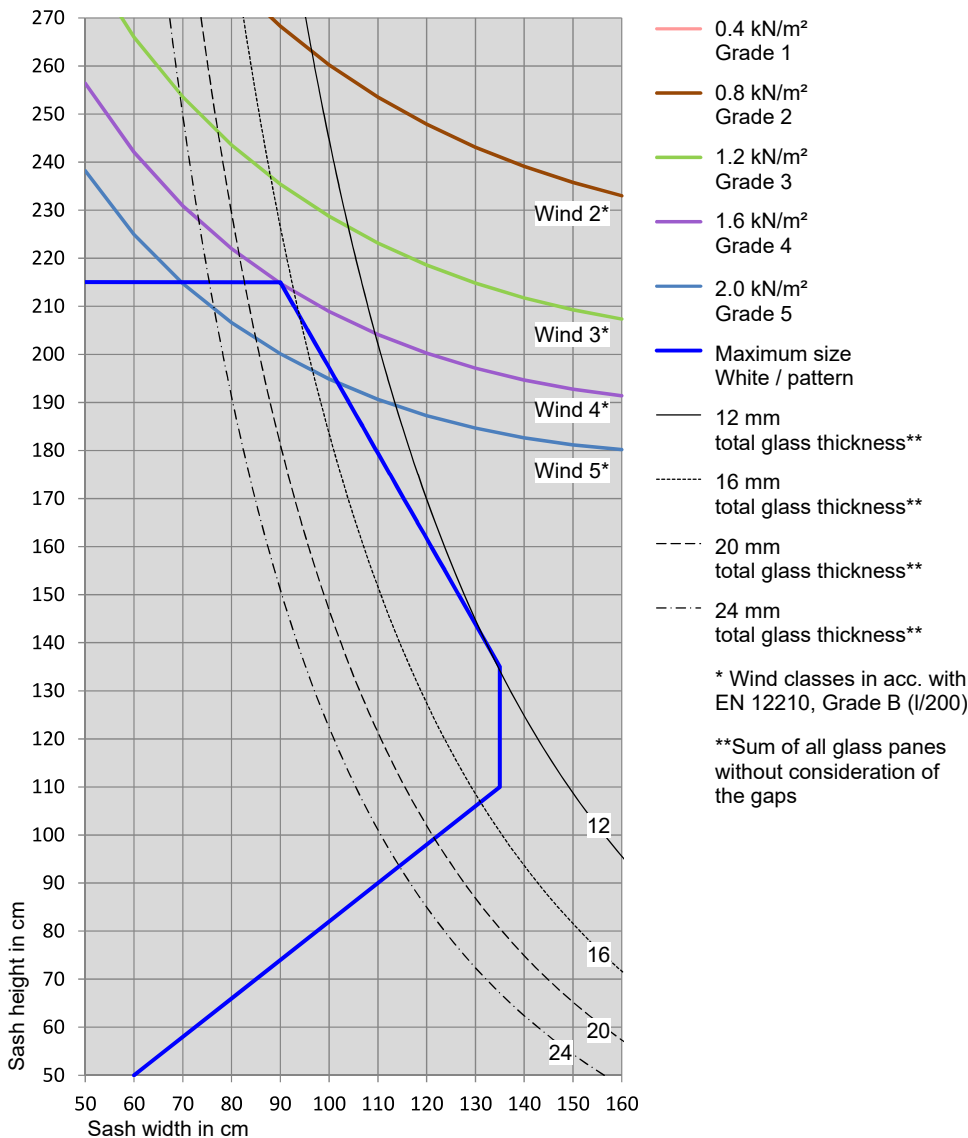
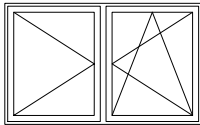


726003



726004

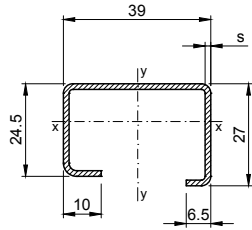
Window type 1.2 Turn-only / bottom-hung window/door



Turn-only / Tilt&turn sash

465006-73

Size diagram for reinforcement 465006, 1.5 mm - single sash



Use for sashes



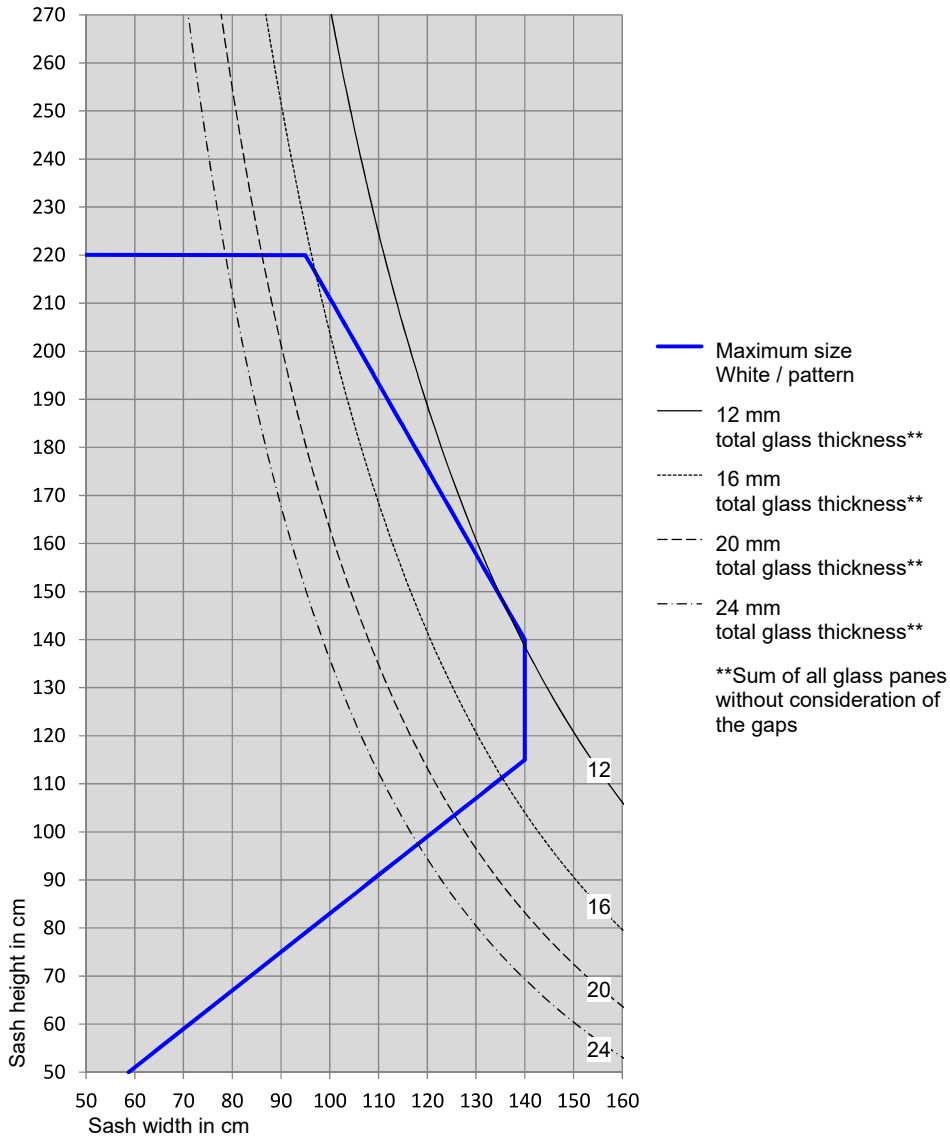
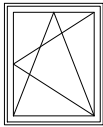
721001



721005

465006-73
thickness
1.5 mm
 $I_x = 1.31 \text{ cm}^4$
 $I_y = 3.54 \text{ cm}^4$

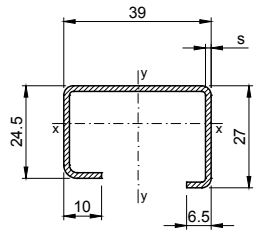
Window type 1.1 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-73

Size diagram for reinforcement 465006, 1.5 mm - French window sash with broad faceplate



465006-73
thickness
1.5 mm
 $I_x = 1.31 \text{ cm}^4$
 $I_y = 3.54 \text{ cm}^4$

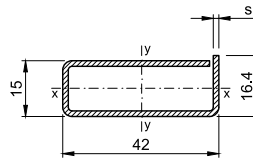
Use for sashes



721001



721005



465013-73
thickness
1.5 mm
 $I_x = 0.61 \text{ cm}^4$
 $I_y = 3.22 \text{ cm}^4$

Use with faceplate

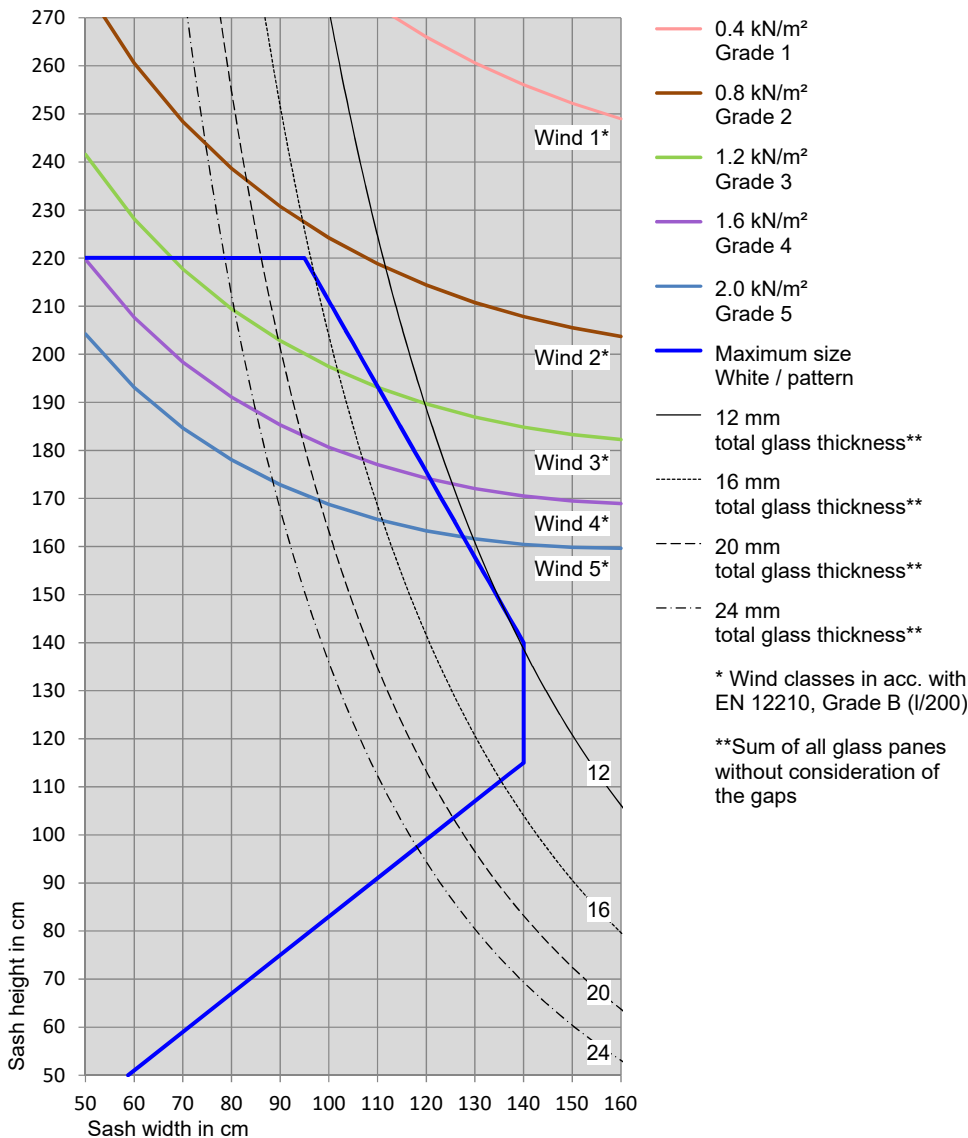
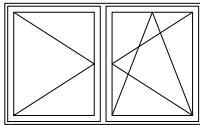


726003



726004

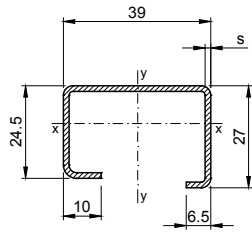
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-73

Size diagram for reinforcement 465006, 1.5 mm - French window sash with broad faceplate



465006-73
thickness
1.5 mm
 $I_x = 1.31 \text{ cm}^4$
 $I_y = 3.54 \text{ cm}^4$

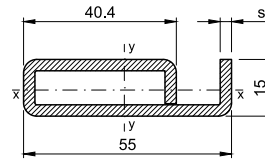
Use for sashes



721001



721005



415136-76
thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

Use with faceplate

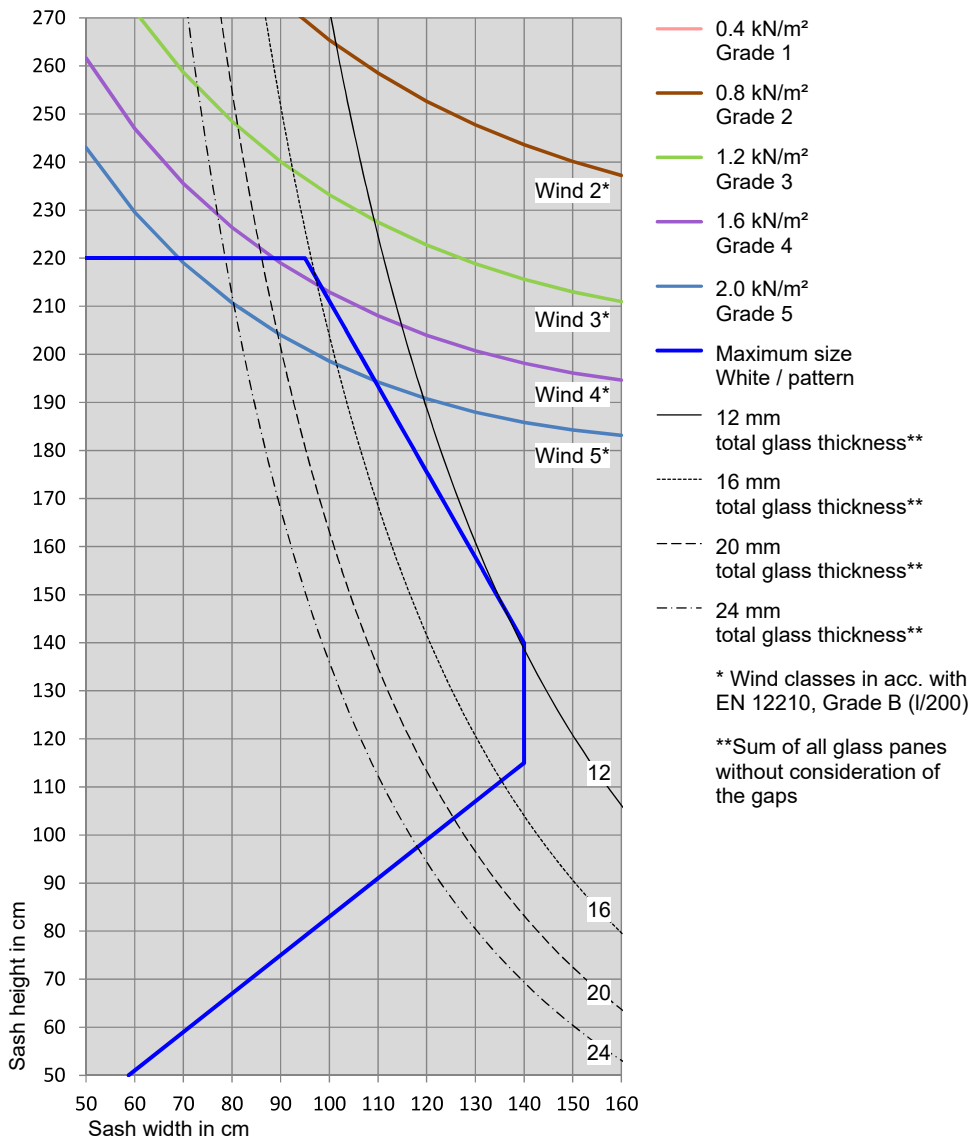
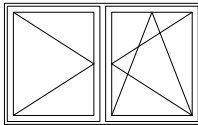


726003



726004

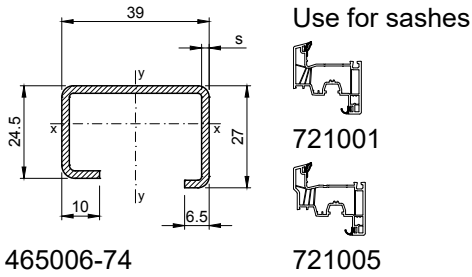
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

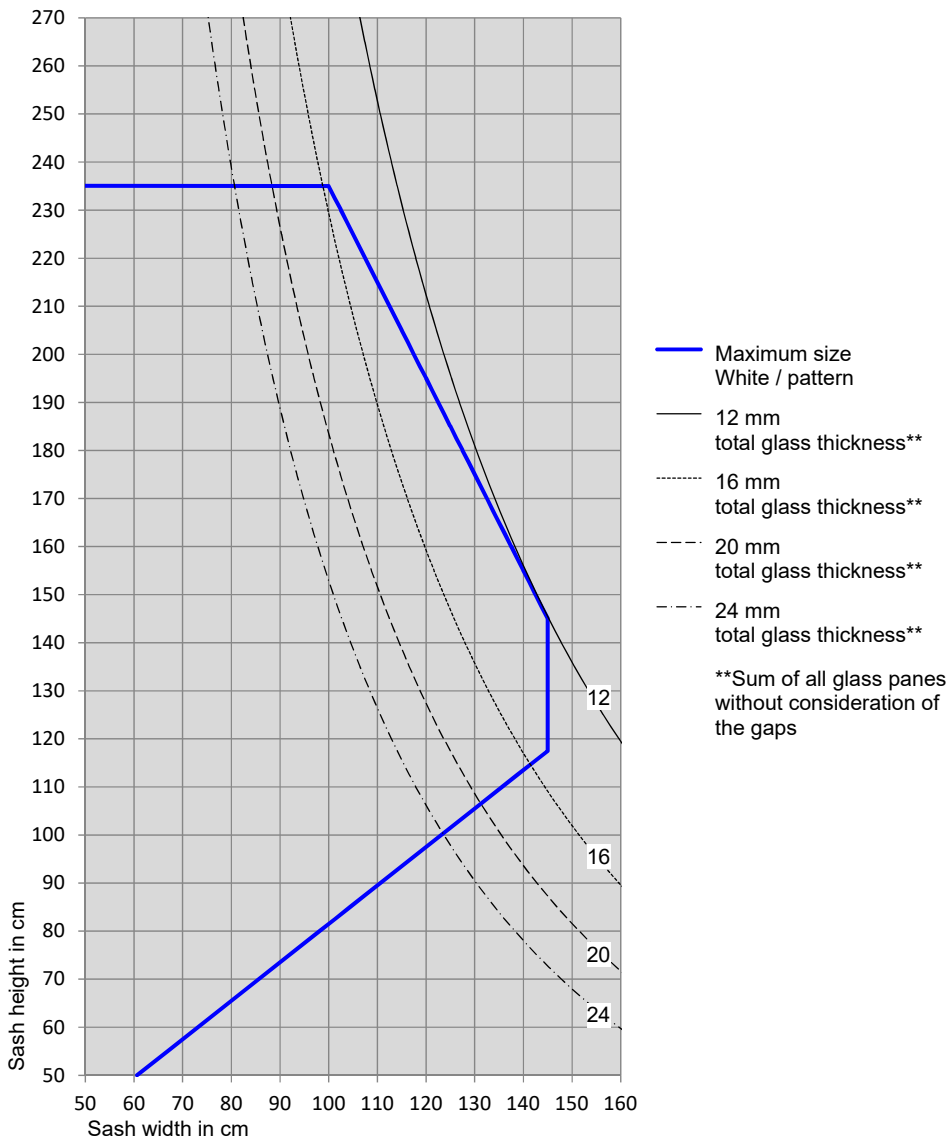
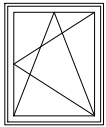
465006-74

Size diagram for reinforcement 465006, 2.0 mm - single sash



465006-74
thickness
2.0 mm
 $I_x = 1.64 \text{ cm}^4$
 $I_y = 4.49 \text{ cm}^4$

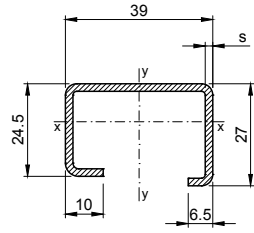
Window type 1.1 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-74

Size diagram for reinforcement 465006, 2.0 mm - French window sash with broad faceplate



465006-74
thickness
2.0 mm
 $I_x = 1.64 \text{ cm}^4$
 $I_y = 4.49 \text{ cm}^4$

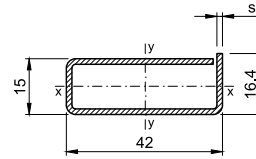
Use for sashes



721001



721005



465013-73
thickness
1.5 mm
 $I_x = 0.61 \text{ cm}^4$
 $I_y = 3.22 \text{ cm}^4$

Use with faceplate

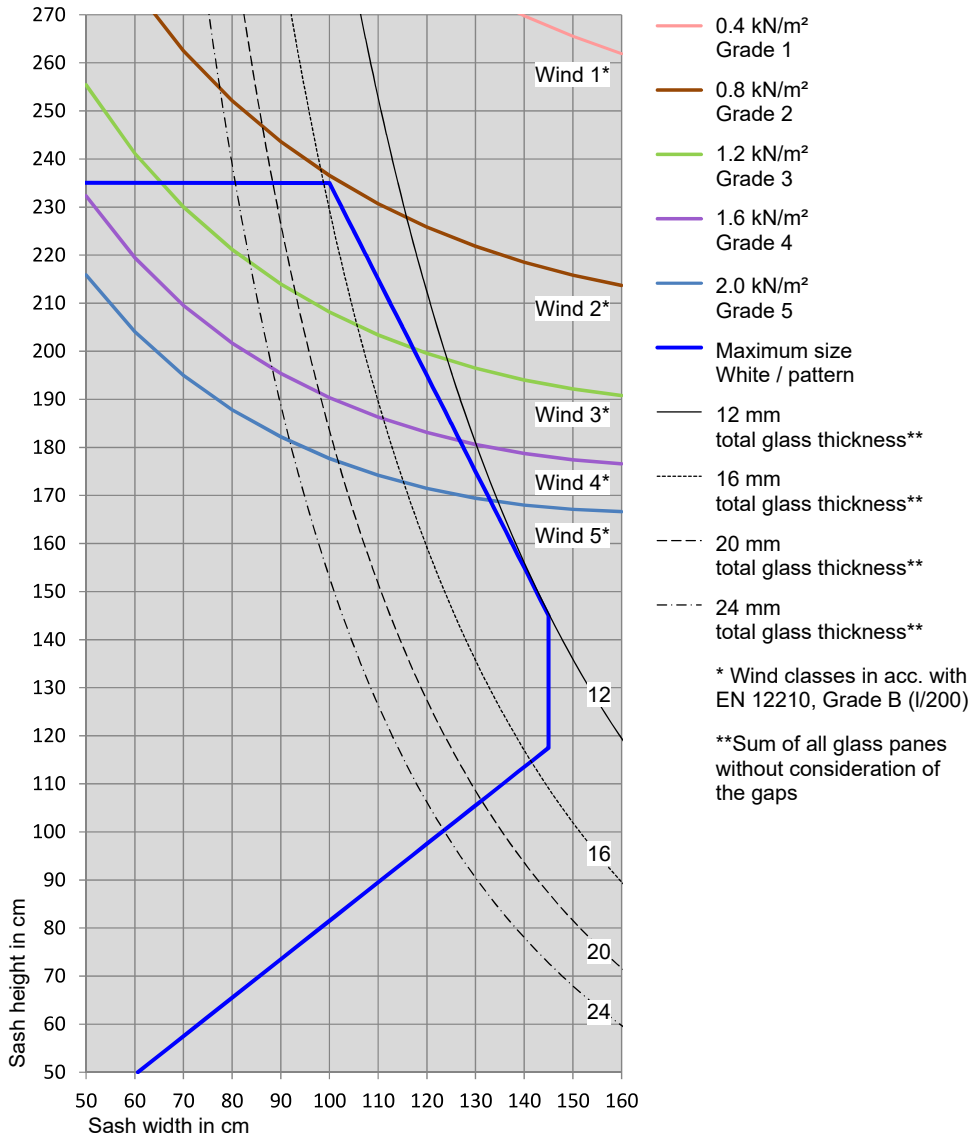
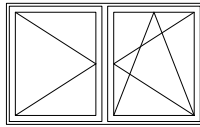


726003



726004

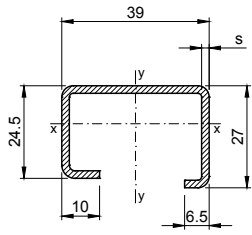
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-74

Size diagram for reinforcement 465006, 2.0 mm - French window sash with broad faceplate



465006-74
thickness
2.0 mm
 $I_x = 1.64 \text{ cm}^4$
 $I_y = 4.49 \text{ cm}^4$

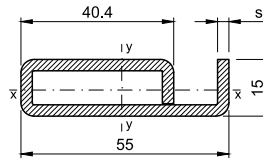
Use for sashes



721001



721005



415136-76
thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

Use with faceplate

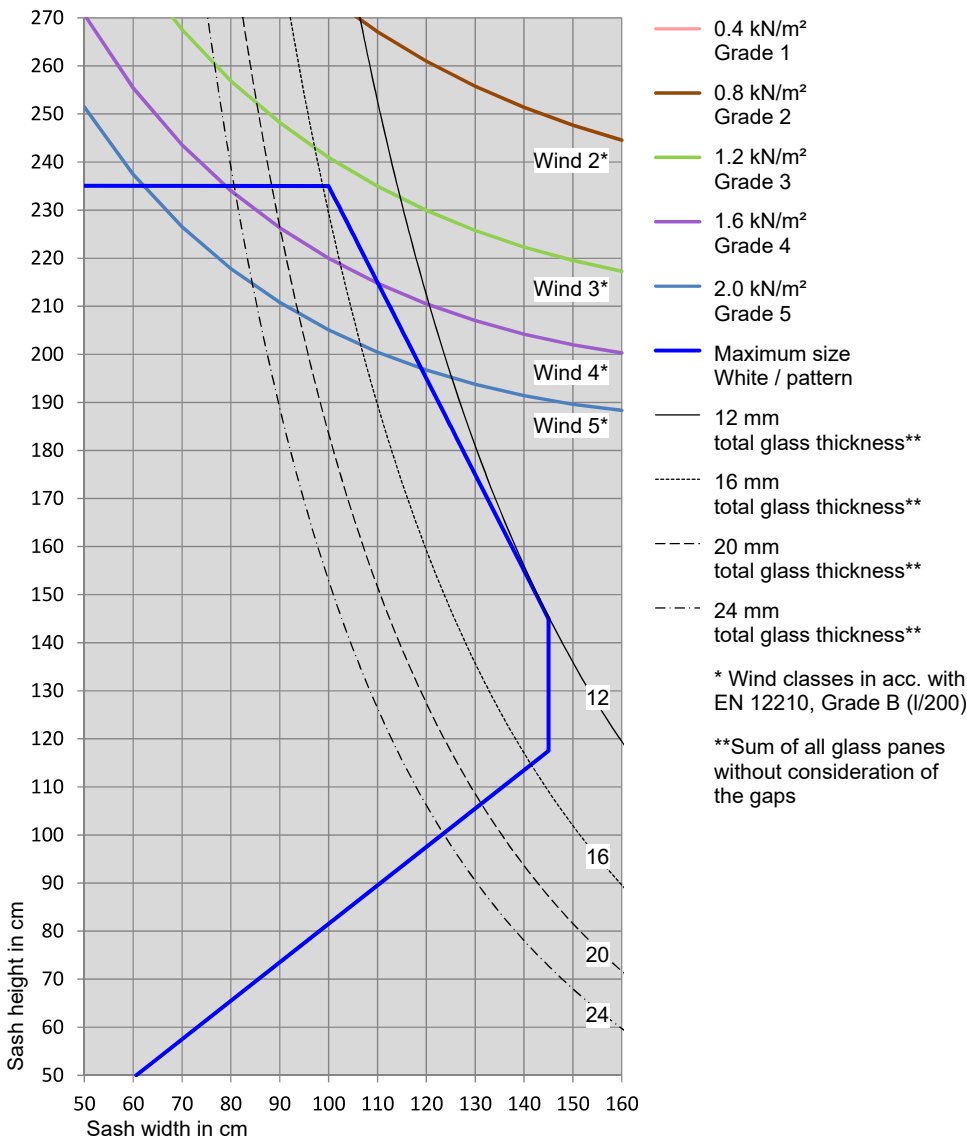
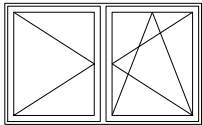


726003



726004

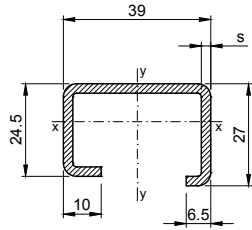
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-75

Size diagram for reinforcement 465006, 2.5 mm - single sash



Use for sashes



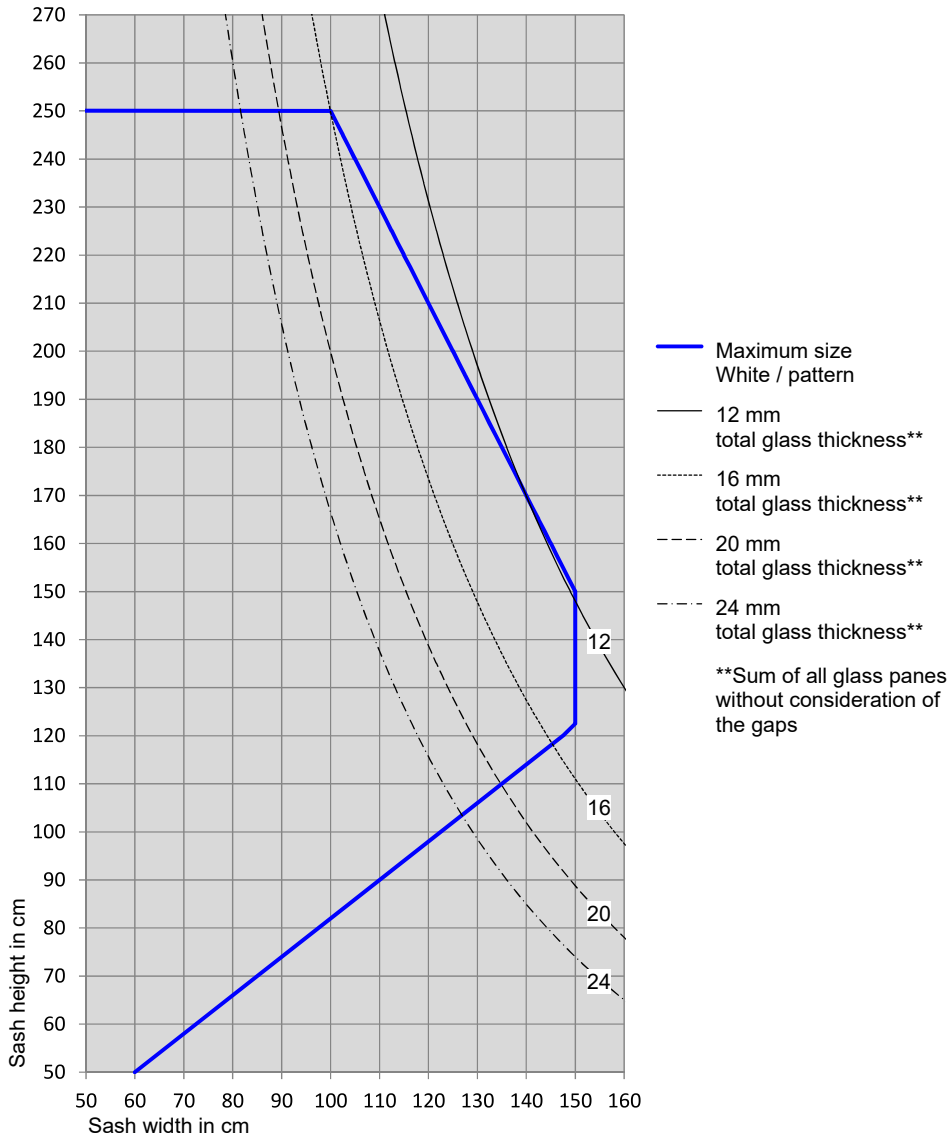
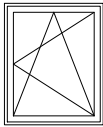
721001



721005

465006-75
thickness
2.5 mm
 $I_x = 1.91 \text{ cm}^4$
 $I_y = 5.33 \text{ cm}^4$

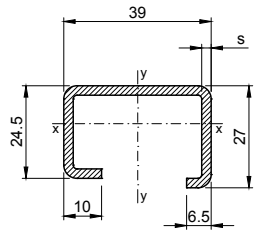
Window type 1.1 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-75

Size diagram for reinforcement 465006, 2.5 mm - French window sash with broad faceplate



465006-75
Thickness
2.5 mm
 $I_x = 1.91 \text{ cm}^4$
 $I_y = 5.33 \text{ cm}^4$

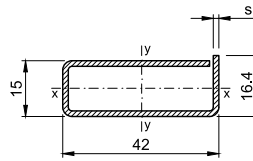
Use for sashes



721001



721005



465013-73
Thickness
1.5 mm
 $I_x = 0.61 \text{ cm}^4$
 $I_y = 3.22 \text{ cm}^4$

Use with faceplate

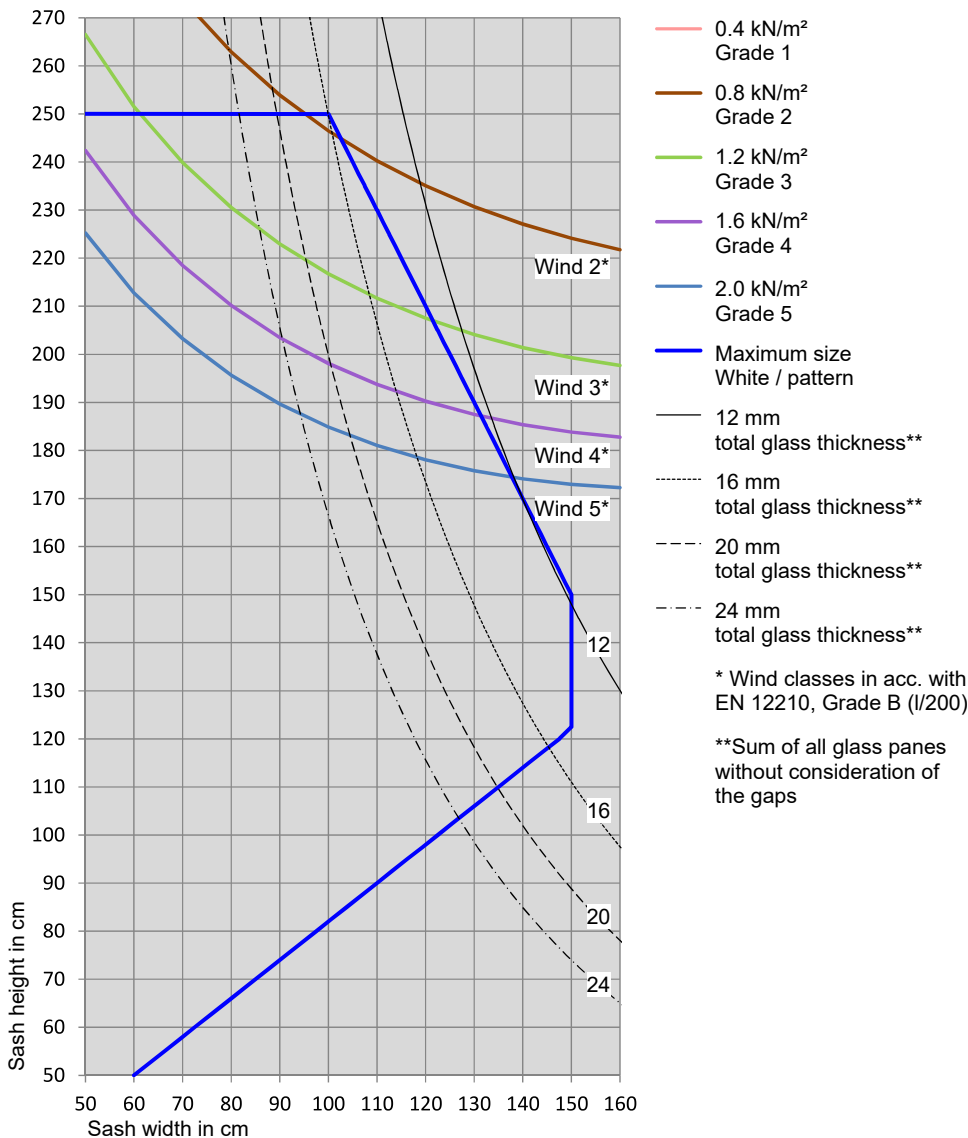
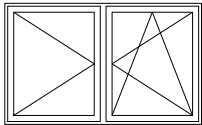


726003



726004

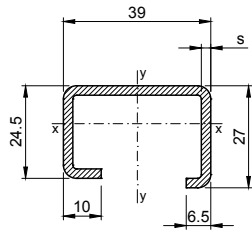
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465006-75

Size diagram for reinforcement 465006, 2.5 mm - French window sash with broad faceplate



465006-75
thickness
2.5 mm
 $I_x = 1.91 \text{ cm}^4$
 $I_y = 5.33 \text{ cm}^4$

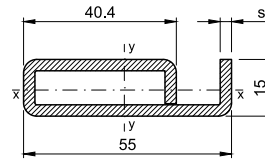
Use for sashes



721001



721005



415136-76
thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

Use with faceplate

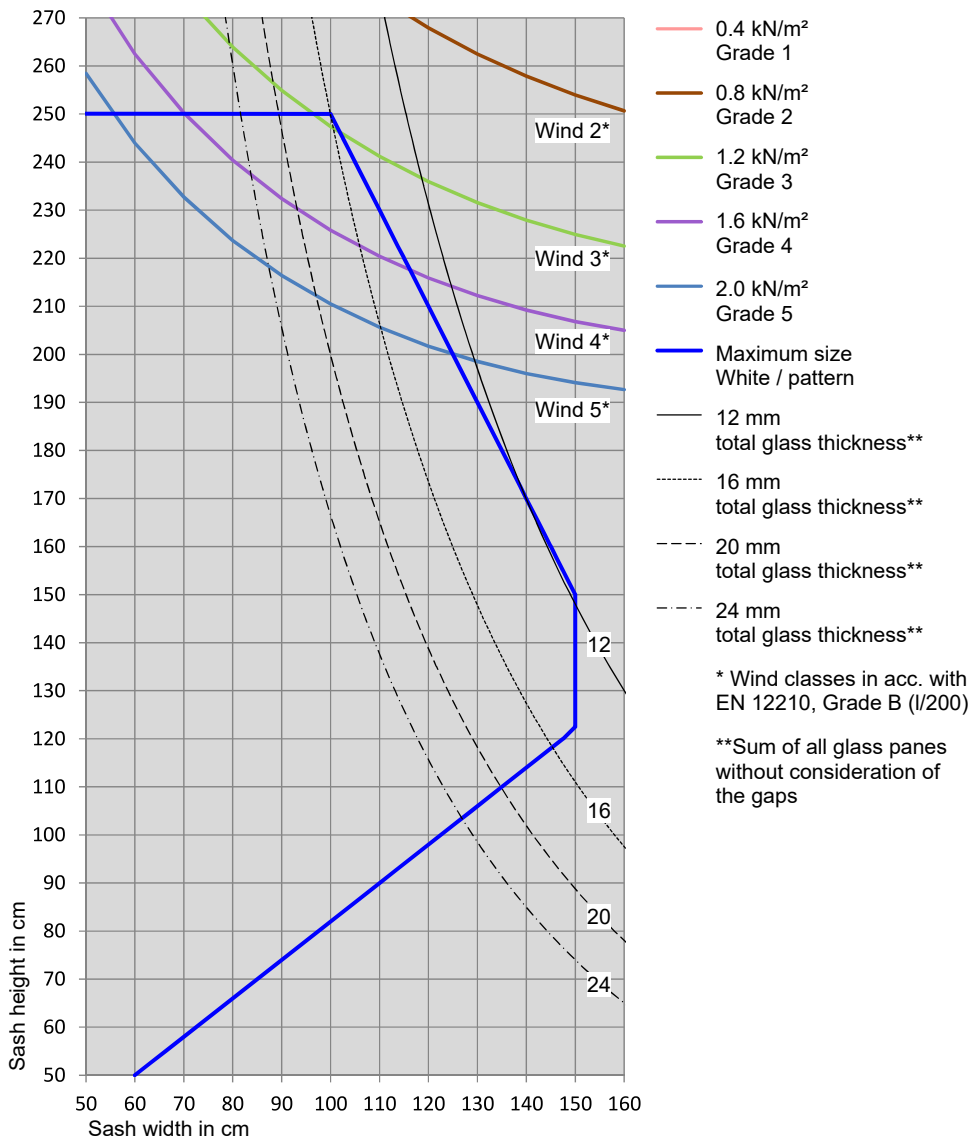
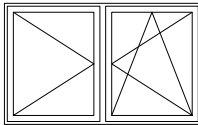


726003



726004

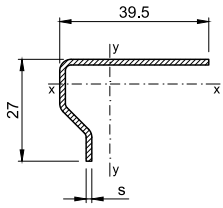
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465026-73

Size diagram for reinforcement 465006, 1.5 mm - single sash



Use for sashes



721001



721005

465026-73

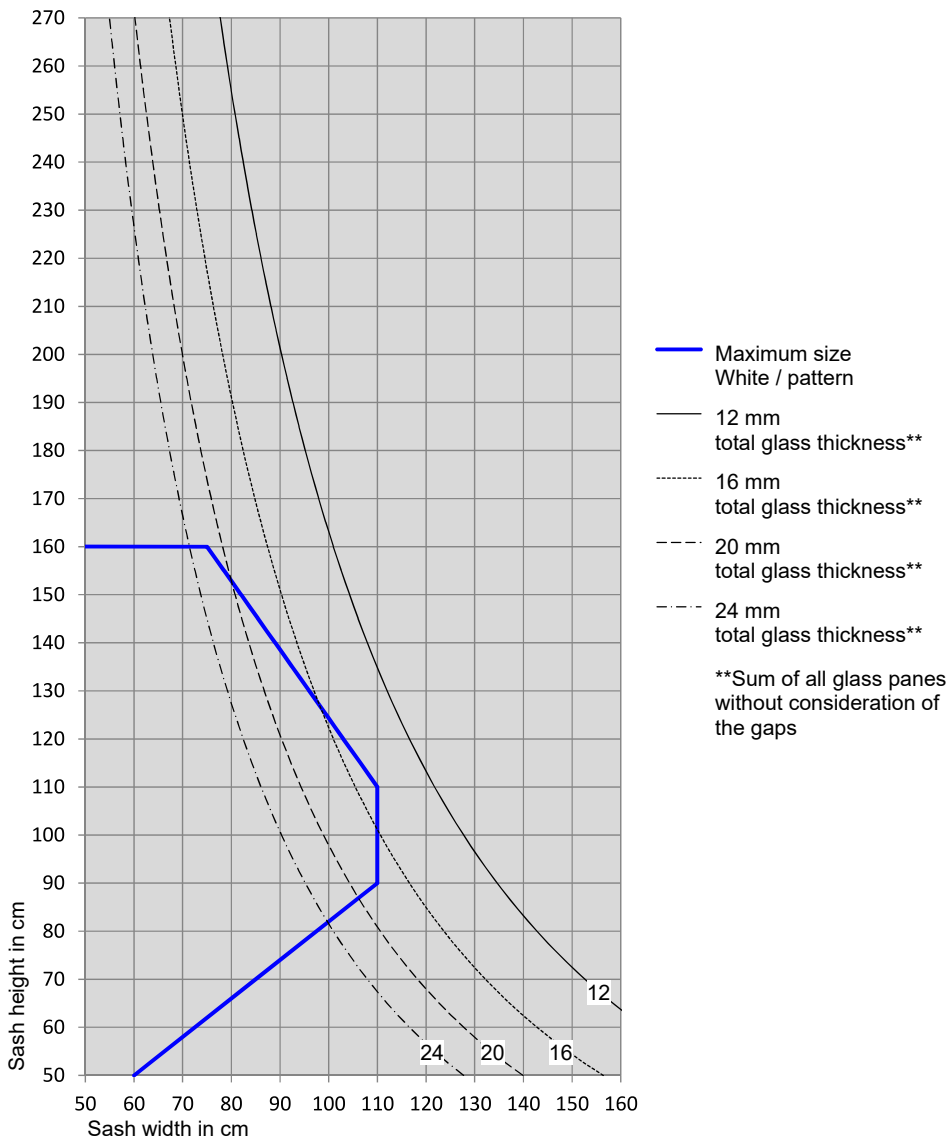
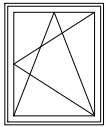
thickness

1.5 mm

$I_x = 0.67 \text{ cm}^4$

$I_y = 1.42 \text{ cm}^4$

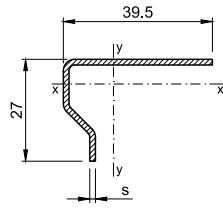
Window type 1.1 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465026-73

Size diagram for reinforcement 465006, 1.5 mm - French window sash with broad faceplate



465026-73
thickness
1.5 mm
 $I_x = 0.67 \text{ cm}^4$
 $I_y = 1.42 \text{ cm}^4$

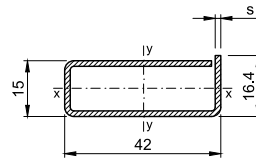
Use for sashes



721001



721005



465013-73
thickness
1.5 mm
 $I_x = 0.61 \text{ cm}^4$
 $I_y = 3.22 \text{ cm}^4$

Use with faceplate

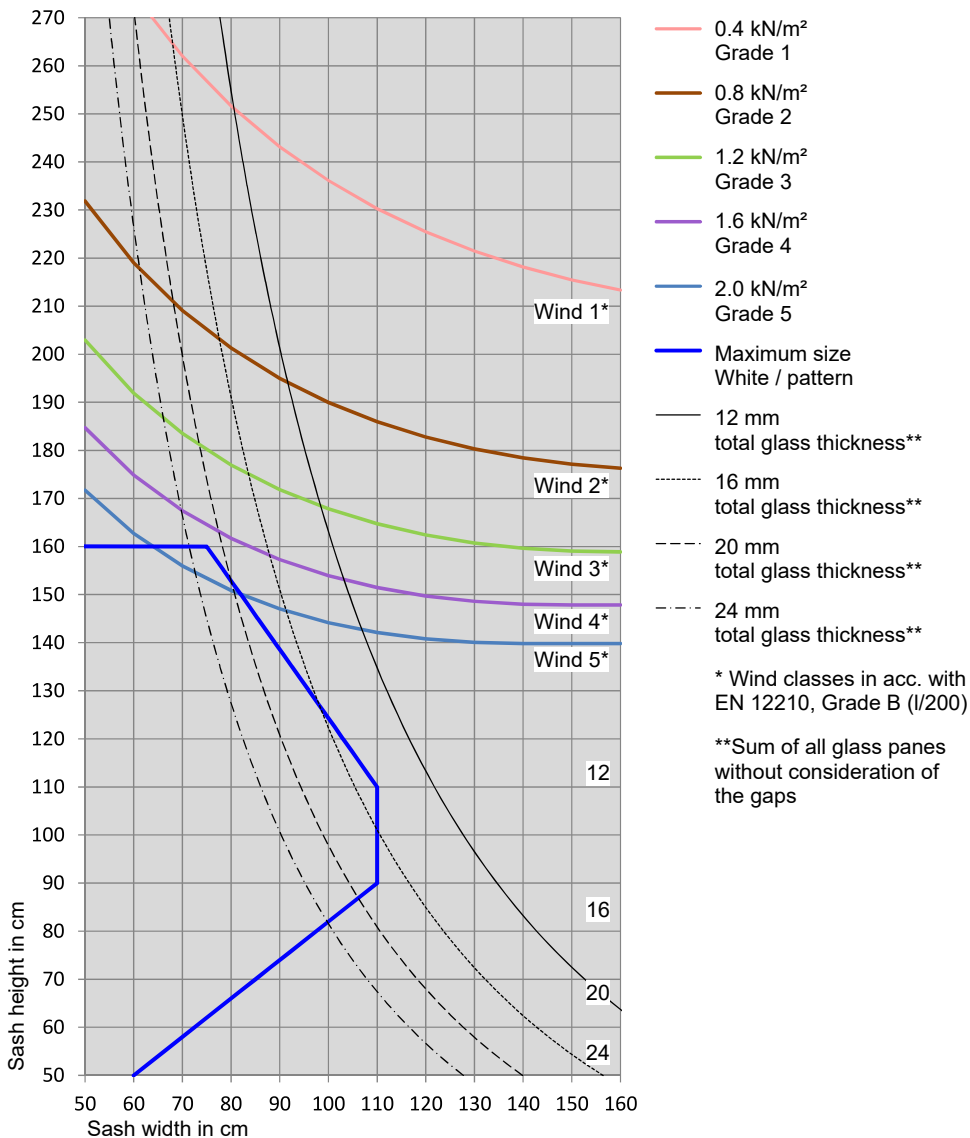
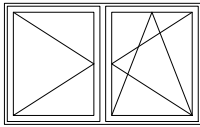


726003



726004

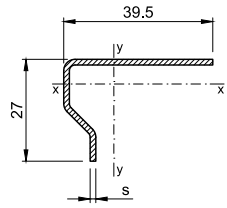
Window type 1.2 Turn-only / tilt & turn window/door



Turn-only / Tilt&turn sash

465026-73

Size diagram for reinforcement 465006, 1.5 mm - French window sash with broad faceplate



465026-73
thickness 1.5 mm
 $l_x = 0.67 \text{ cm}^4$
 $l_y = 1.42 \text{ cm}^4$

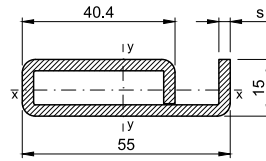
Use for sashes



721001



721005



415136-76
thickness 3.0 mm
 $l_x = 1.08 \text{ cm}^4$
 $l_y = 10.44 \text{ cm}^4$

Use with faceplate

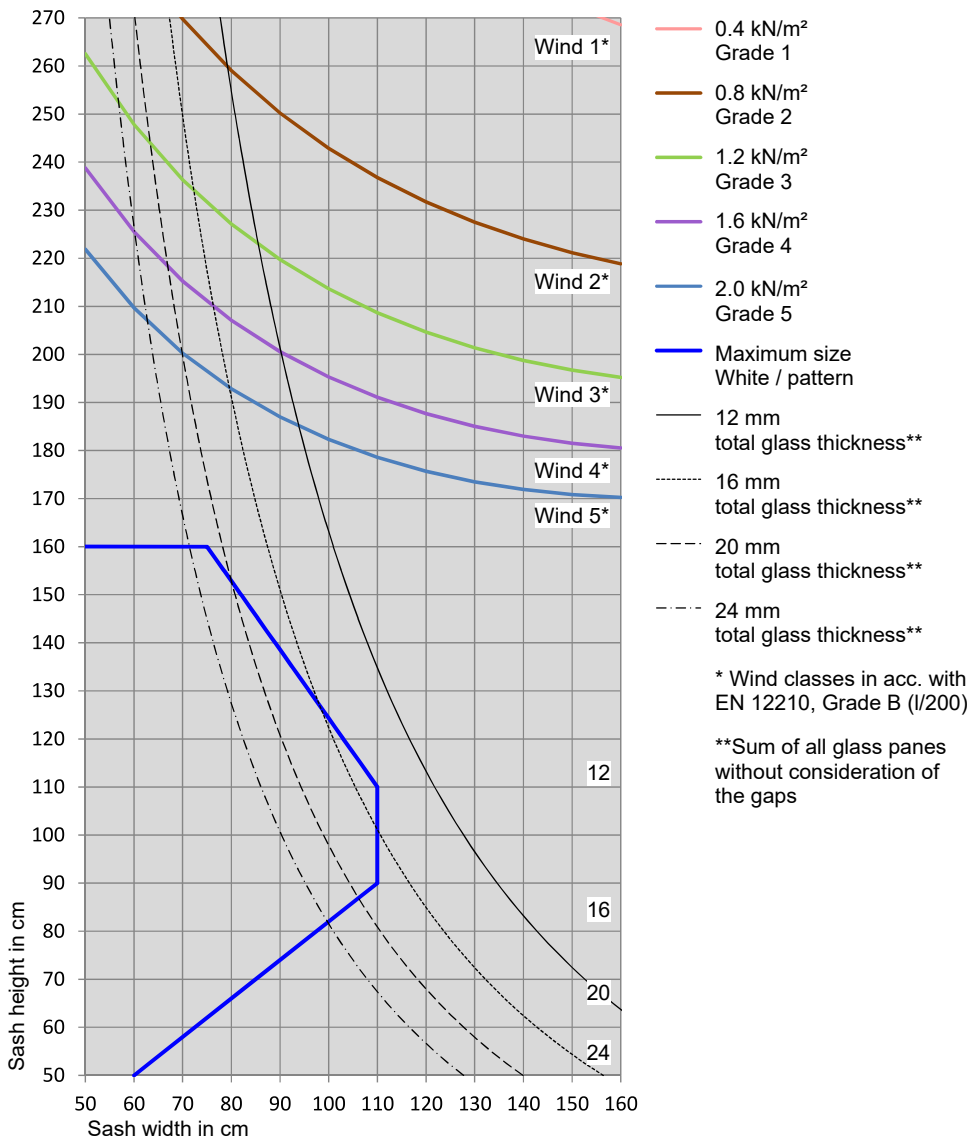
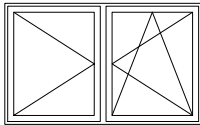


726003



726004

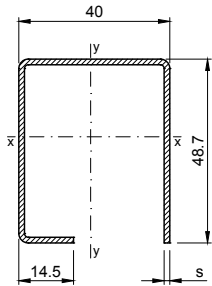
Window type 1.2 Turn-only / tilt & turn window/door



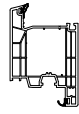
Turn-only / Tilt&turn sash

465017-73

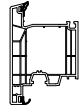
Size diagram for strengthening 465017, 1.5 mm - individual sash



Use for sashes



721008



721009

465017-73

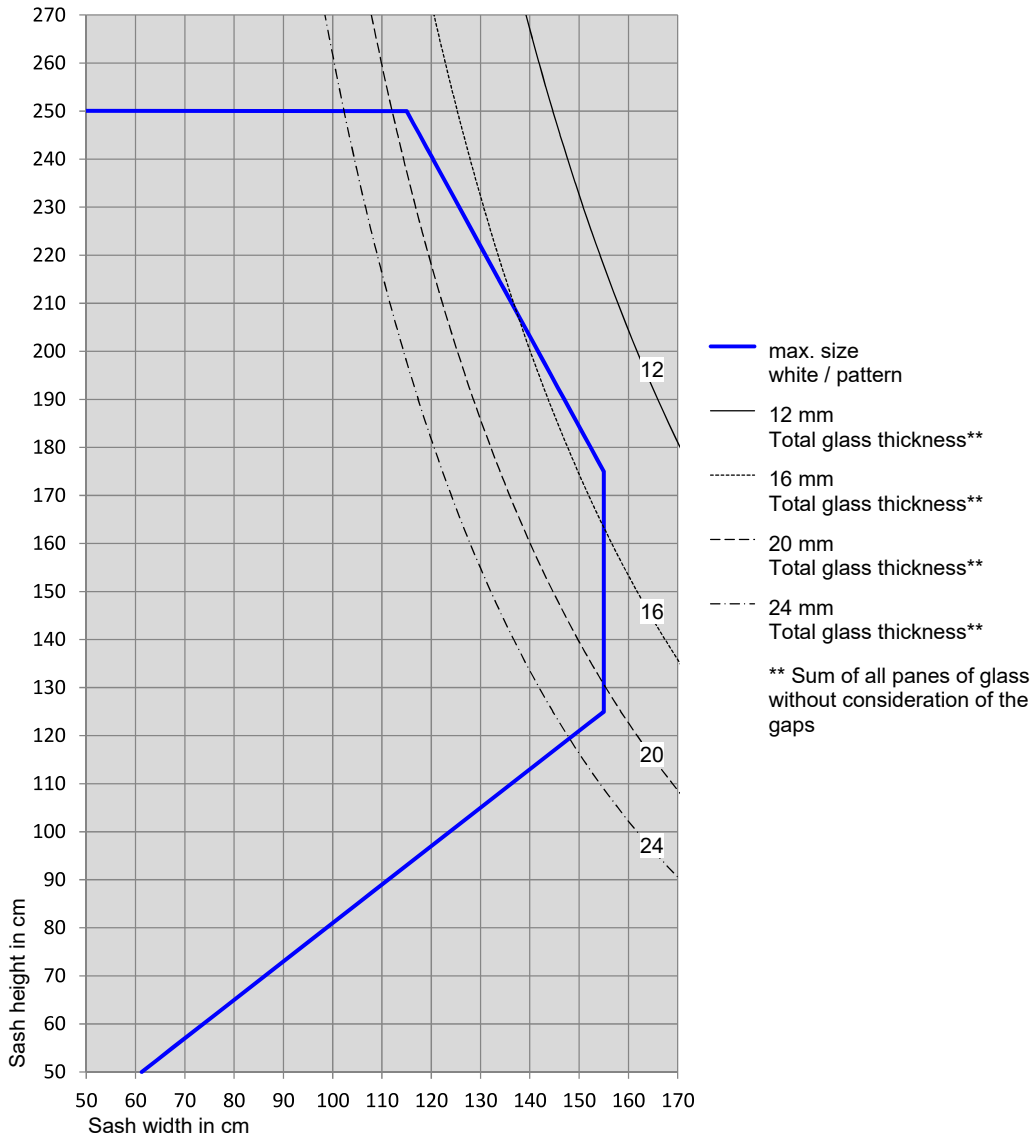
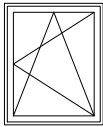
Thickness

1.5 mm

$l_x = 6.56 \text{ cm}^4$

$l_y = 6.21 \text{ cm}^4$

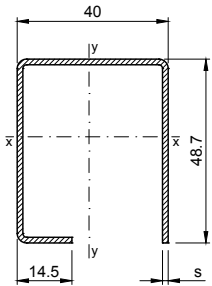
Window type 1.1 Turn-only / Tilt&turn window/door



Turn-only / Tilt&turn sash

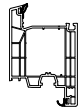
465017-73

Size diagram for strengthening 465017, 1.5 mm - French window sash with wide floating mullion / faceplate

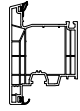


465017-73
Thickness
1.5 mm
 $I_x = 6.56 \text{ cm}^4$
 $I_y = 6.21 \text{ cm}^4$

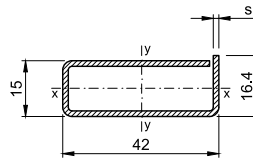
Use for sashes



721008



721009



465013-73
thickness 1.5 mm
 $I_x = 0.61 \text{ cm}^4$
 $I_y = 3.22 \text{ cm}^4$

Application with floating mullion / faceplate

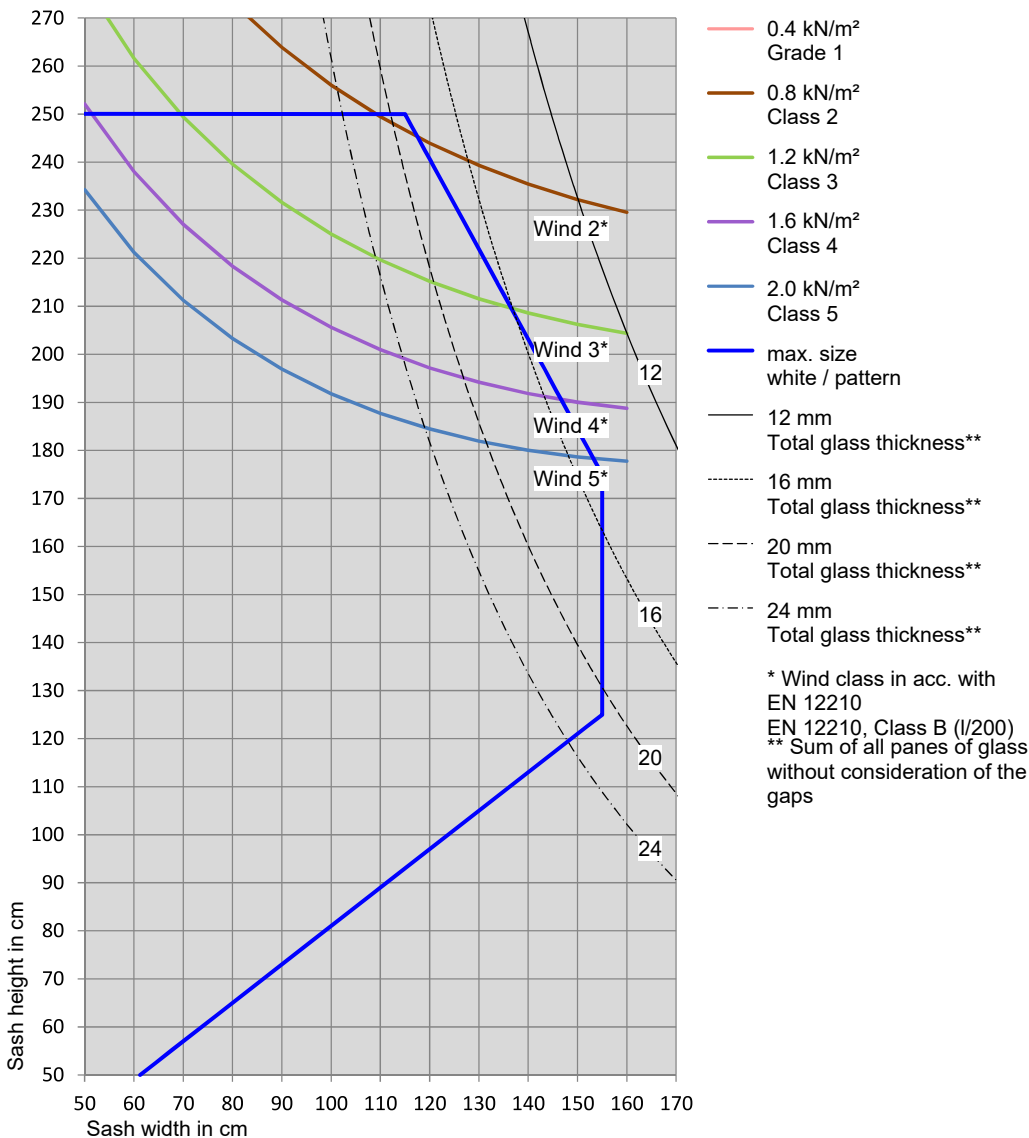
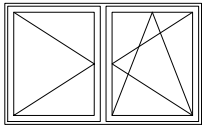


726003



726004

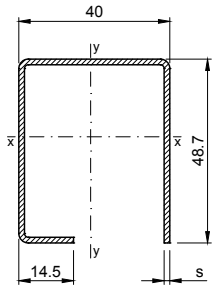
Window type 1.2 Turn-only / Tilt&turn window/door



Turn-only / Tilt&turn sash

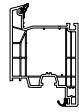
465017-73

Size diagram for strengthening 465017, 1.5 mm - French window sash with wide floating mullion / faceplate

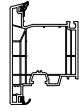


465017-73
 Thickness
 1.5 mm
 $l_x = 6.56 \text{ cm}^4$
 $l_y = 6.21 \text{ cm}^4$

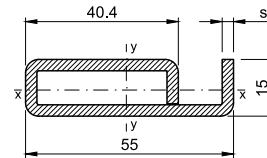
Use for sashes



721008



721009



415136-76
 Thickness
 3.0 mm
 $l_x = 1.08 \text{ cm}^4$
 $l_y = 10.44 \text{ cm}^4$

Application with floating mullion / faceplate

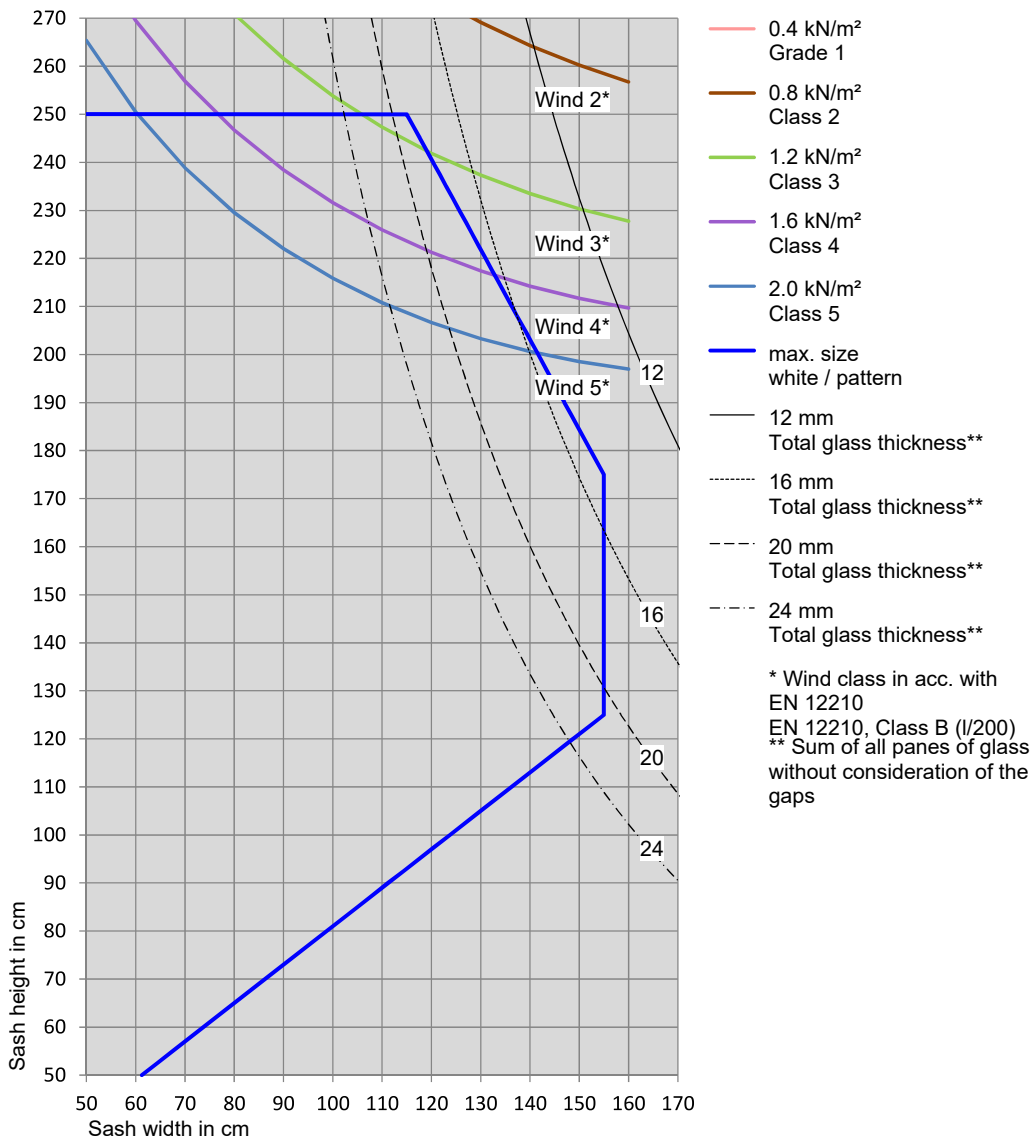
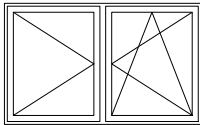


726003



726004

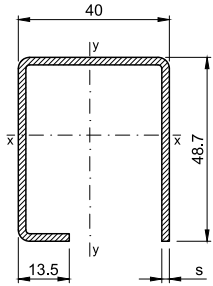
Window type 1.2 Turn-only / Tilt&turn window/door



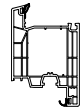
Turn-only / Tilt&turn sash

465017-74

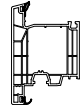
Size diagram for reinforcement 465017, 2.0 mm - individual sash



Use for sashes



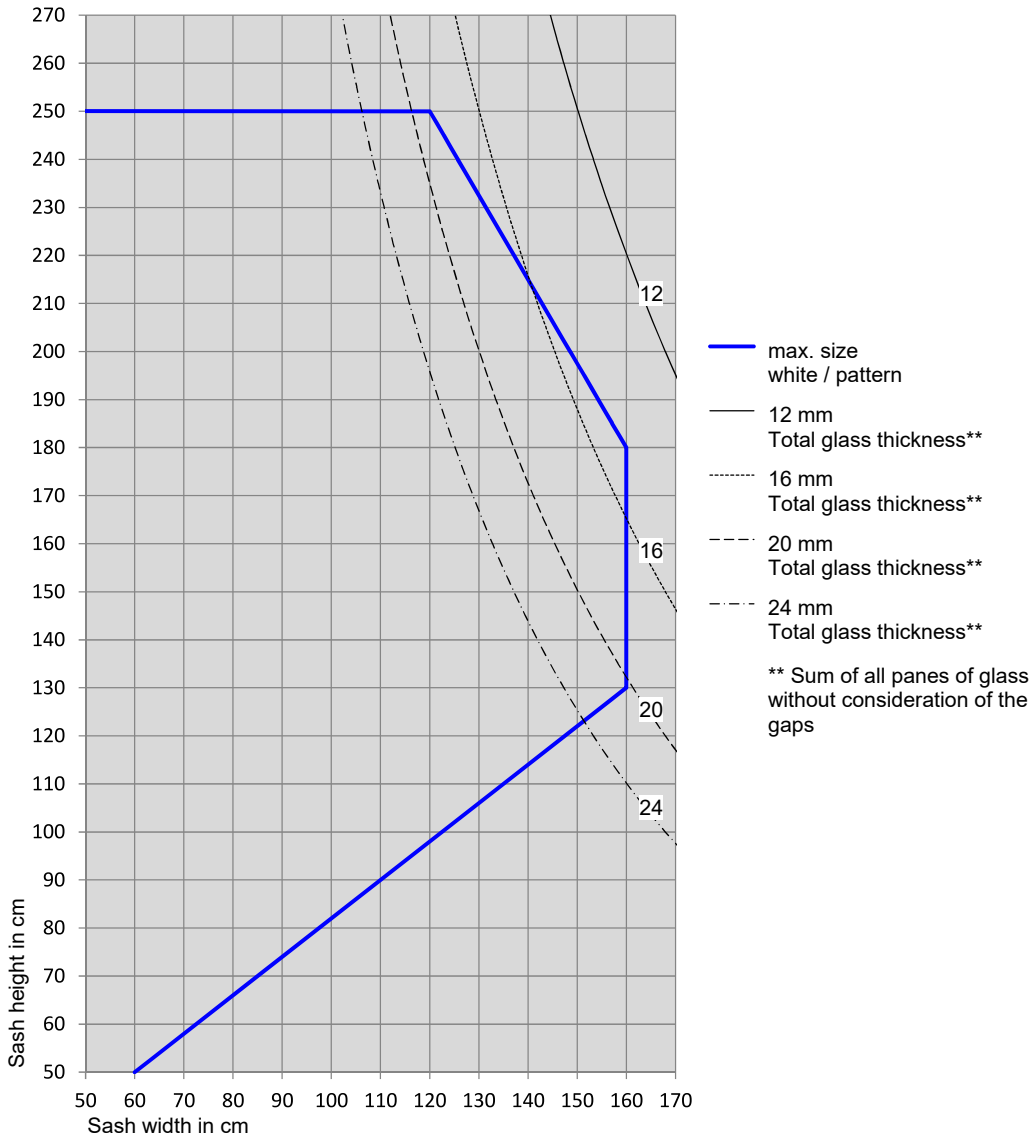
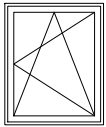
721008



721009

465017-74
Thickness 2.0 mm
 $I_x = 8.46 \text{ cm}^4$
 $I_y = 7.97 \text{ cm}^4$

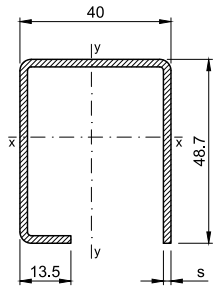
Window type 1.1 Turn-only / Tilt&turn window/door



Turn-only / Tilt&turn sash

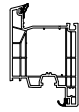
465017-74

Size diagram for reinforcement 465017, 2.0 mm - French window sash with narrow floating mullion / faceplate

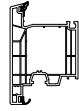


465017-74
Thickness 2.0 mm
 $I_x = 8.46 \text{ cm}^4$
 $I_y = 7.97 \text{ cm}^4$

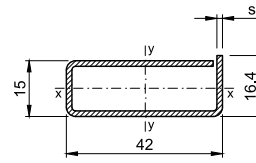
Use for sashes



721008



721009



465013-73
thickness 1.5 mm
 $I_x = 0.61 \text{ cm}^4$
 $I_y = 3.22 \text{ cm}^4$

Application with floating mullion / faceplate

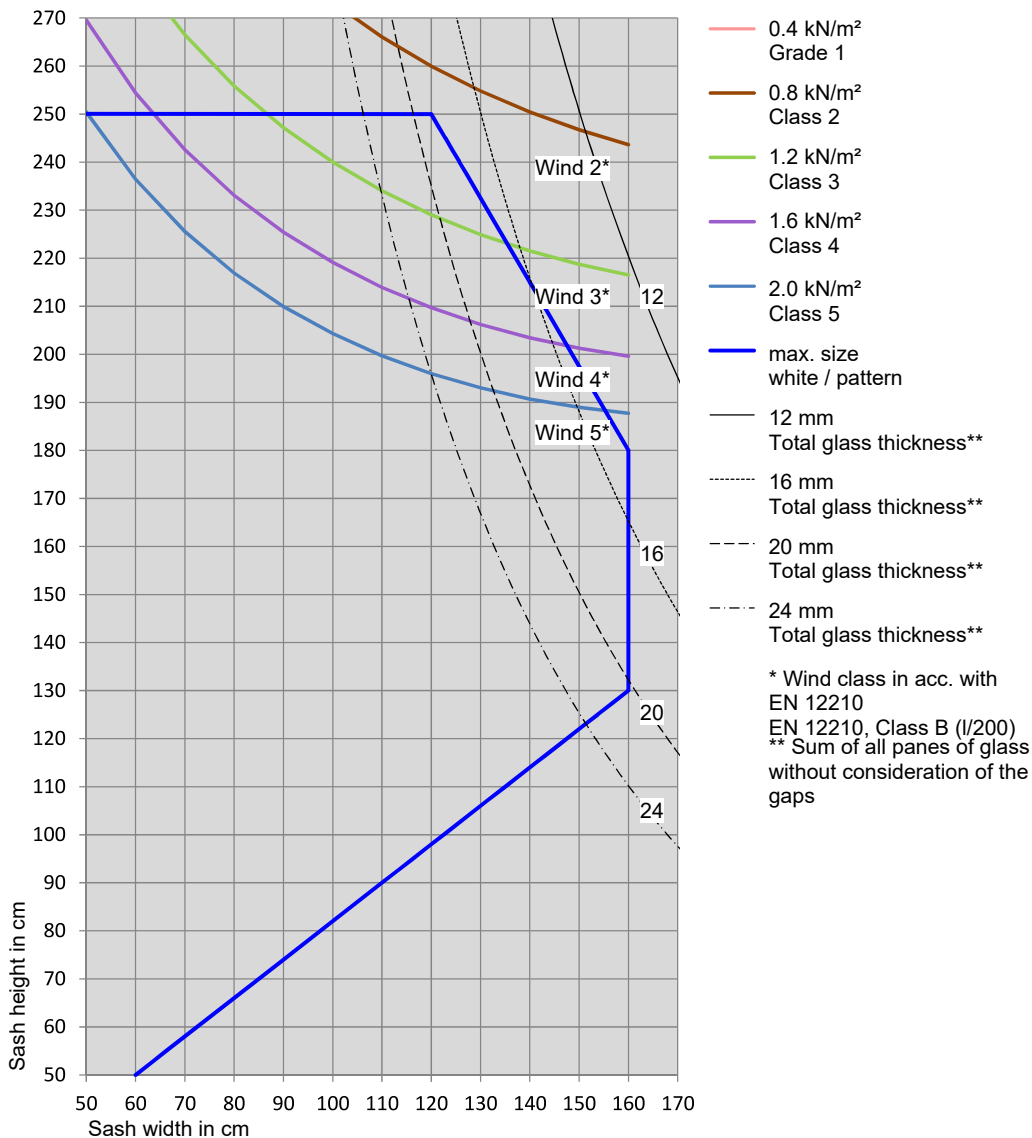
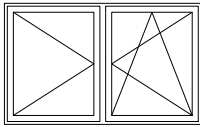


726003



726004

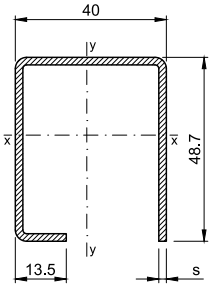
Window type 1.2 Turn-only / Tilt&turn window/door



Turn-only / Tilt&turn sash

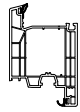
465017-74

Size diagram for reinforcement 465017, 2.0 mm - French window sash with wide floating mullion / faceplate

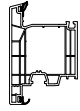


465017-74
Thickness
2.0 mm
 $I_x = 8.46 \text{ cm}^4$
 $I_y = 7.97 \text{ cm}^4$

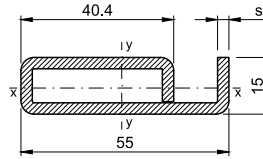
Use for sashes



721008



721009



415136-76
Thickness
3.0 mm
 $I_x = 1.08 \text{ cm}^4$
 $I_y = 10.44 \text{ cm}^4$

Application with floating mullion / faceplate

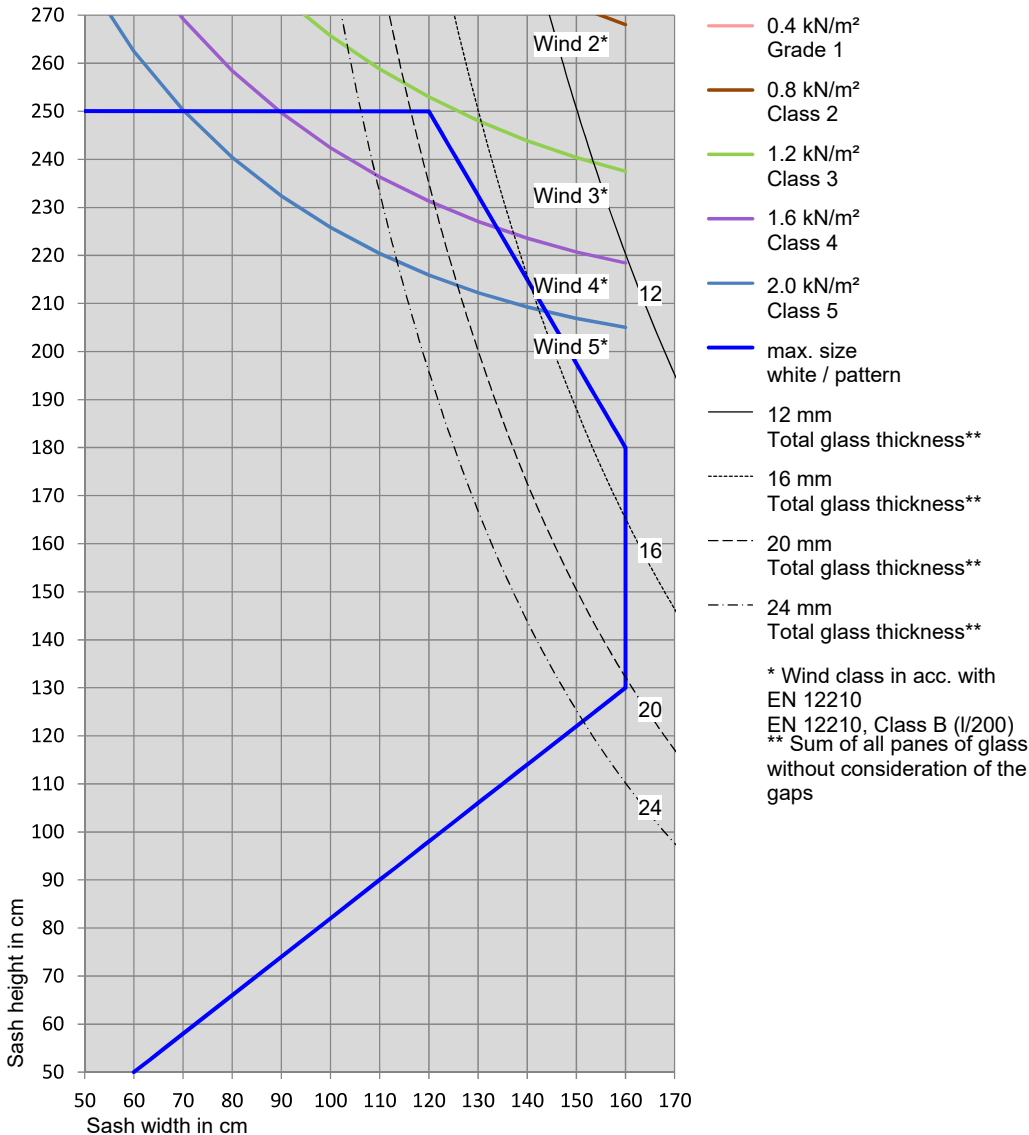
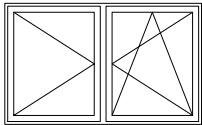


726003



726004

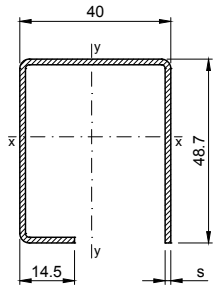
Window type 1.2 Turn-only / Tilt&turn window/door



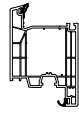
Back door

465017-73

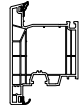
Size diagram for reinforcement 465017, 1.5 mm - back door



Use for sashes



721008



721009

465017-73

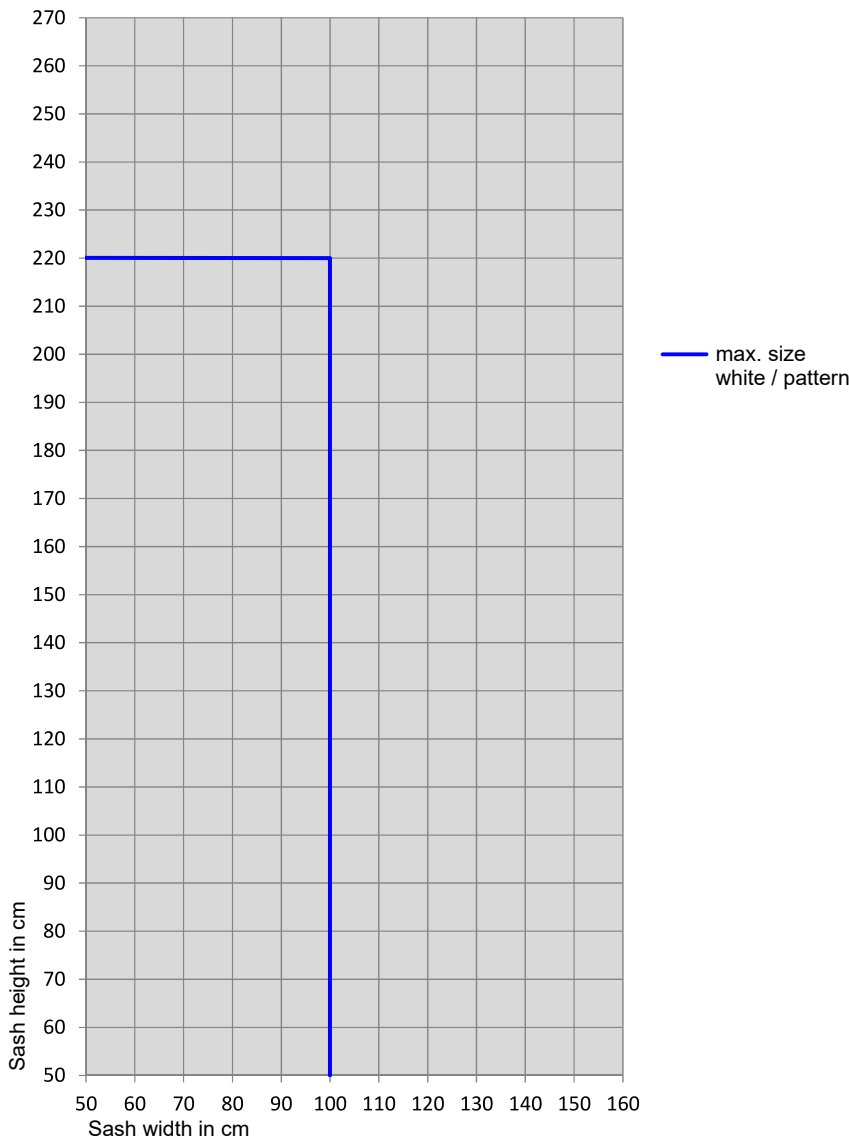
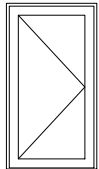
Thickness

1.5 mm

$l_x = 6.56 \text{ cm}^4$

$l_y = 6.21 \text{ cm}^4$

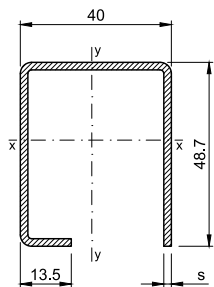
Window type 3.1 Back door



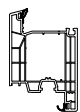
Porta de entrada secundária

465017-74

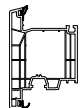
Size diagram for reinforcement 465017, 2.0 mm - back door



Use for sashes



721008



721009

465017-74

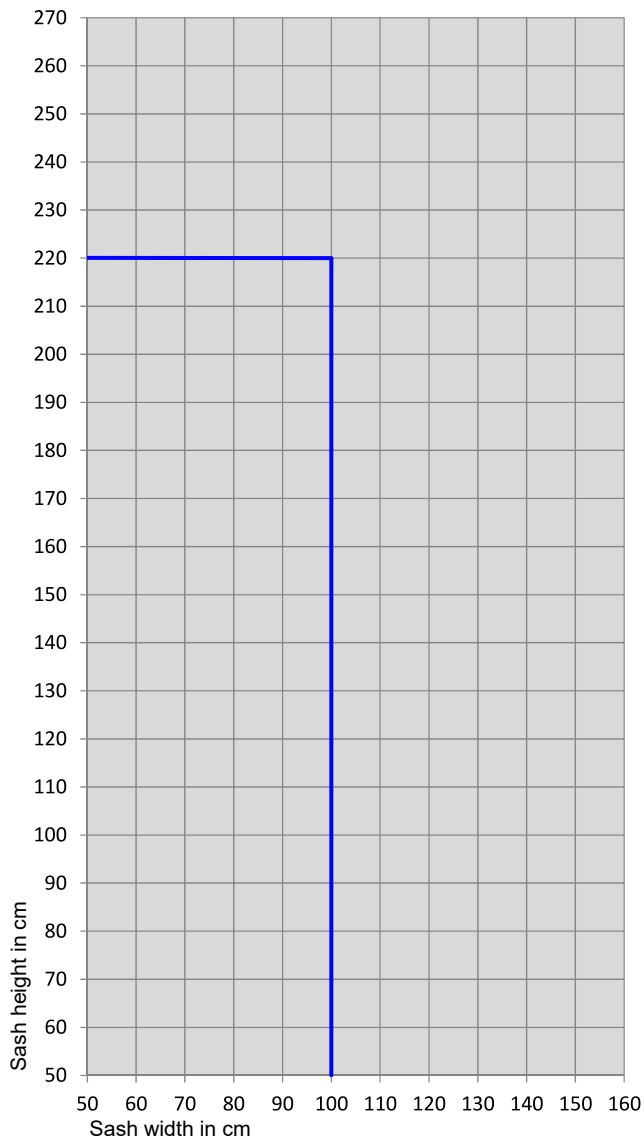
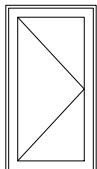
Thickness

2.0 mm

$I_x = 8.46 \text{ cm}^4$

$I_y = 7.97 \text{ cm}^4$

Window type 3.1 Back door

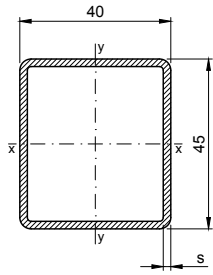


— max. size
white / pattern

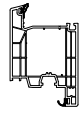
Porta de entrada secundária

VS8450-74

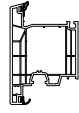
Size diagram for reinforcement VS8450, 2.0 mm - back door



Use for sashes



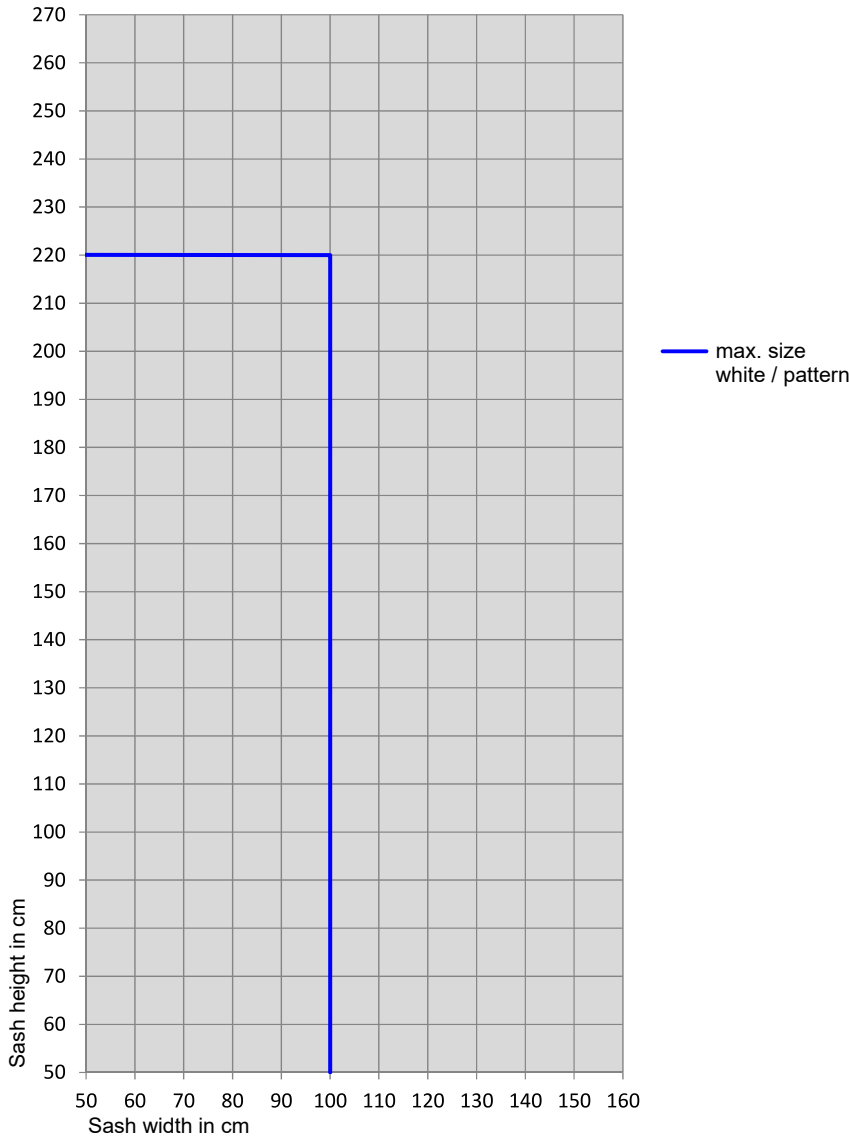
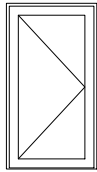
721008



721009

VS8450-74
Thickness
2.0 mm
 $I_x = 9.36 \text{ cm}^4$
 $I_y = 7.80 \text{ cm}^4$

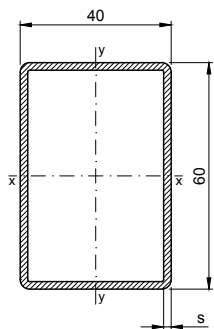
Window type 3.1 Back door



Main door

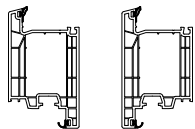
AR4630-74

Size diagram for reinforcement AR4630, 2.0 mm - main door



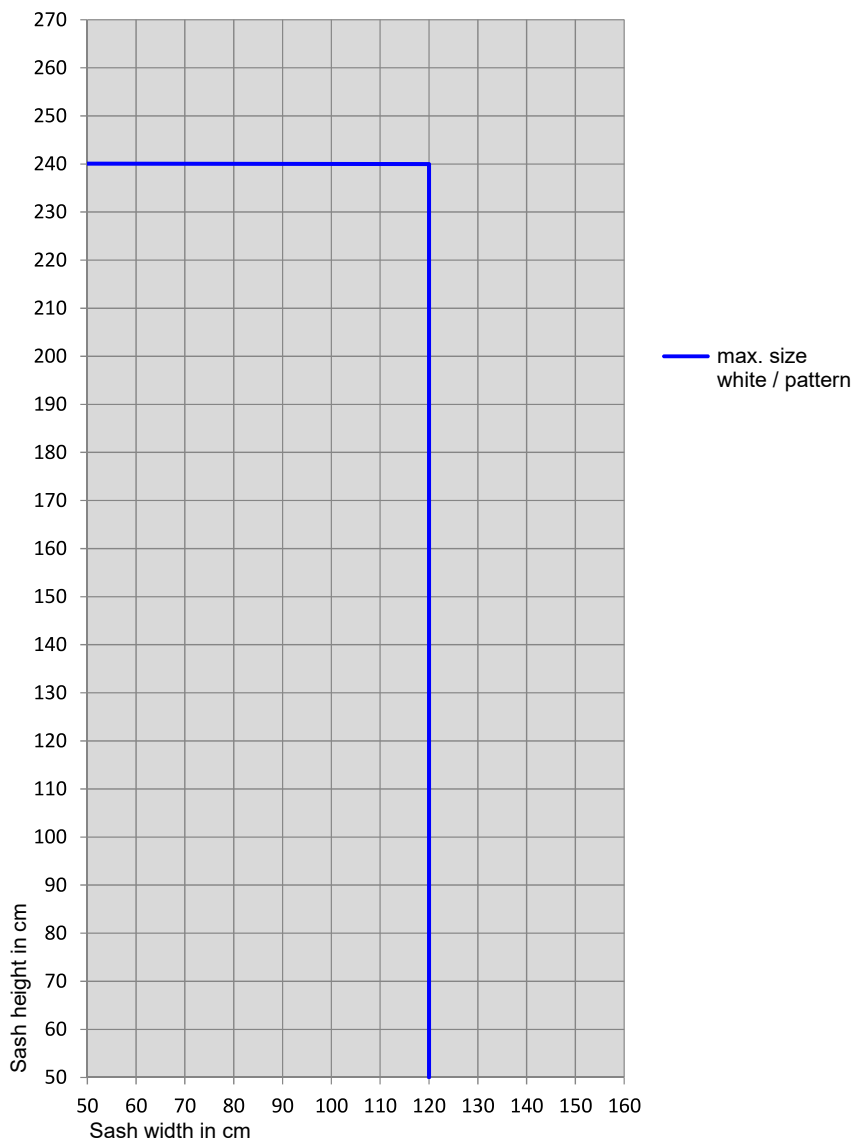
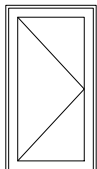
AR4630-74
 thickness 2.0 mm
 $I_x = 18.87 \text{ cm}^4$
 $I_y = 10.03 \text{ cm}^4$

Application with sashes



721014 721015

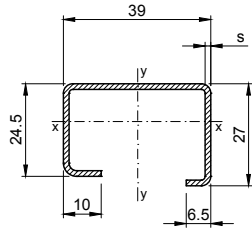
Window type 3.1 Main door



Parallel tilt and slide door/window

465006-73

Size diagram for reinforcement 465006, 1.5 mm - PSK door/window



Use for sashes



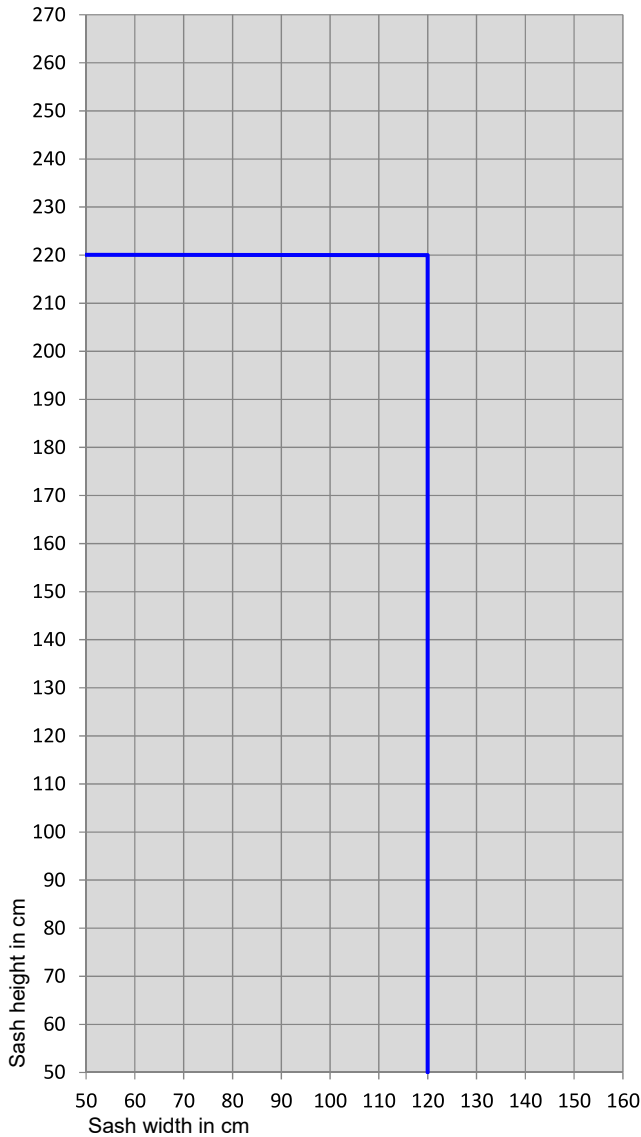
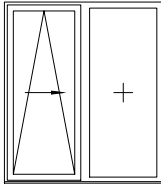
721001



721005

465006-73
thickness
1.5 mm
 $I_x = 1.31 \text{ cm}^4$
 $I_y = 3.54 \text{ cm}^4$

Window type 2.1 PSK doors/windows

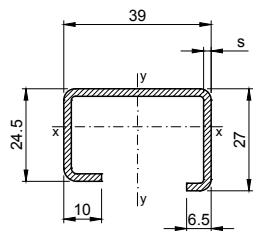


— Maximum size
White / pattern

Parallel tilt and slide door/window

465006-74

Size diagram for reinforcement 465006, 2.0 mm - PSK door/window



Use for sashes



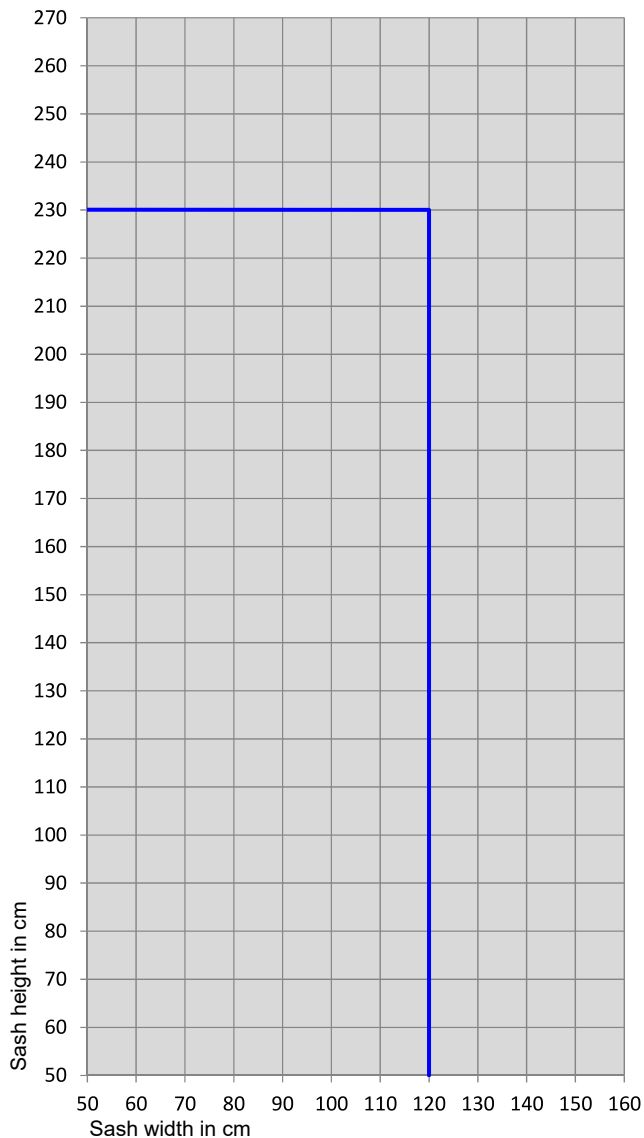
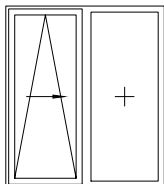
721001



721005

465006-74
thickness
2.0 mm
 $I_x = 1.64 \text{ cm}^4$
 $I_y = 4.49 \text{ cm}^4$

Window type 2.1 PSK doors/windows

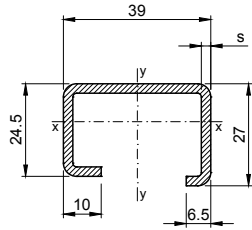


— Maximum size
White / pattern

Parallel tilt and slide door/window

465006-75

Size diagram for reinforcement 465006, 2.5 mm - PSK door/window



Use for sashes



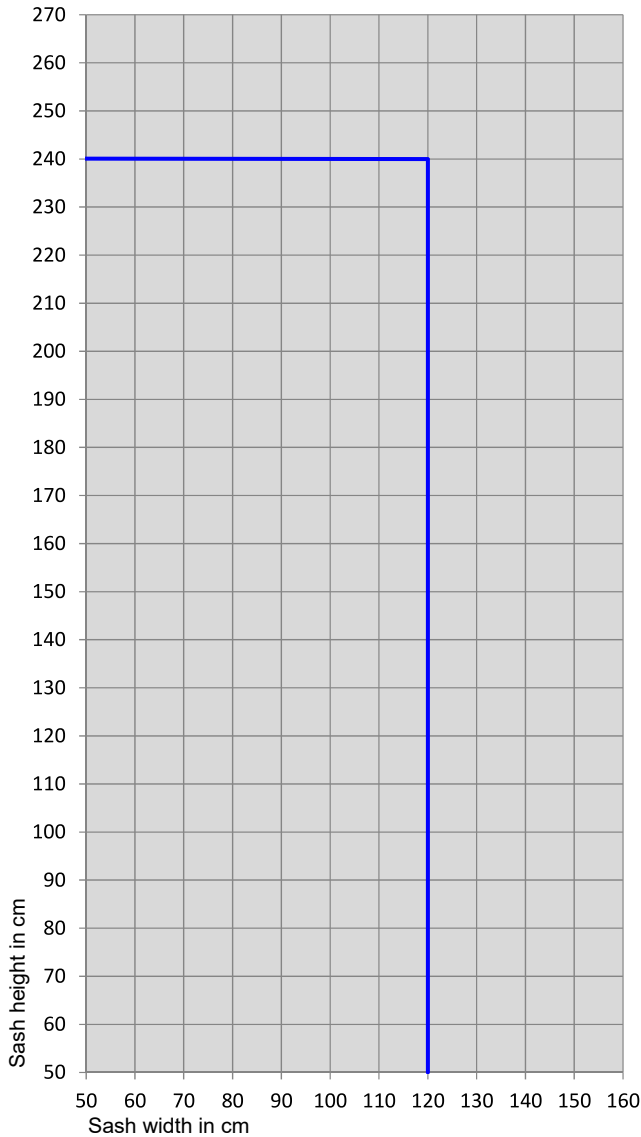
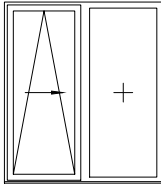
721001



721005

465006-75
thickness
2.5 mm
 $I_x = 1.91 \text{ cm}^4$
 $I_y = 5.33 \text{ cm}^4$

Window type 2.1 PSK doors/windows

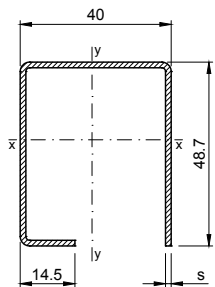


— Maximum size
White / pattern

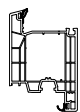
Parallel tilt and slide door/window

465017-73

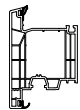
Size diagram for reinforcement 465017, 1.5 mm - Parallel tilt and slide door/window



Use for sashes



721008



721009

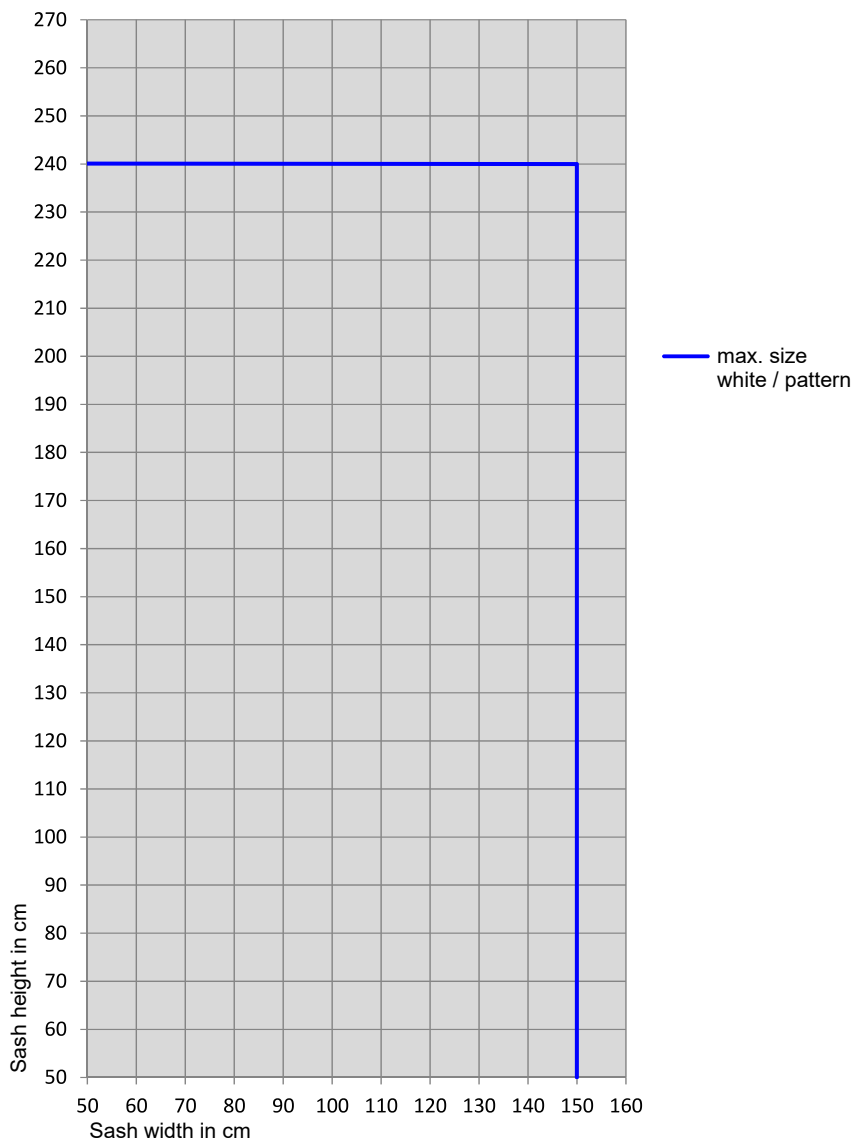
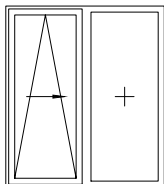
465017-73

Thickness 1.5 mm

$I_x = 6.56 \text{ cm}^4$

$I_y = 6.21 \text{ cm}^4$

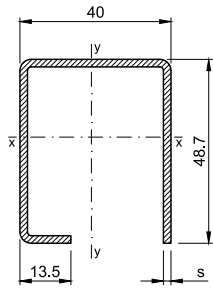
Window type 2.1 Parallel tilt and slide doors/windows



Parallel tilt and slide door/window

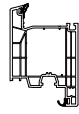
465017-74

Size diagram for reinforcement 465017, 2.0 mm - Parallel tilt and slide door/window

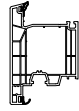


465017-74
 Thickness 2.0 mm
 $l_x = 8.46 \text{ cm}^4$
 $l_y = 7.97 \text{ cm}^4$

Use for sashes

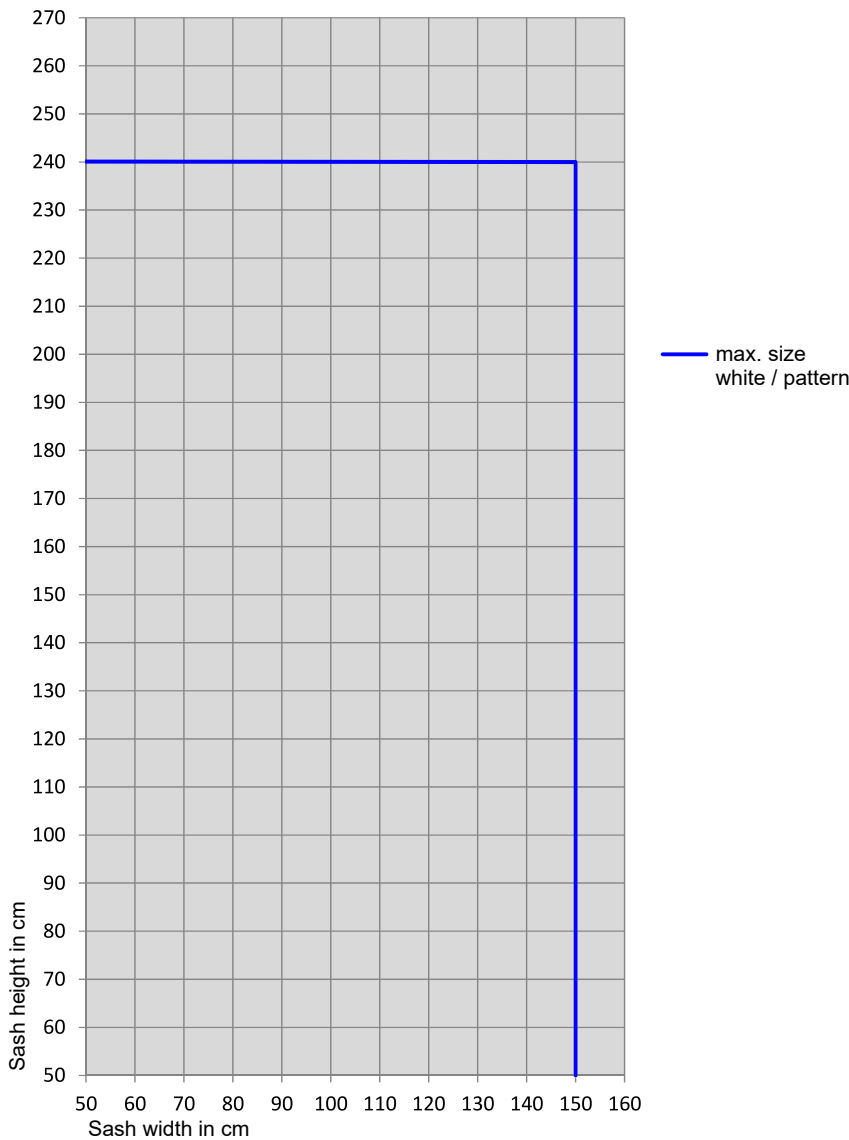
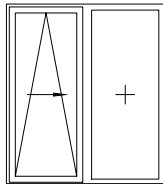


721008



721009

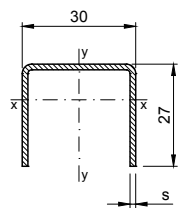
Window type 2.1 Parallel tilt and slide doors/windows



Tilt-only casement

465001-73

Size diagram for reinforcement 465001, 1.5 mm - tilt-only sash



Use for sashes



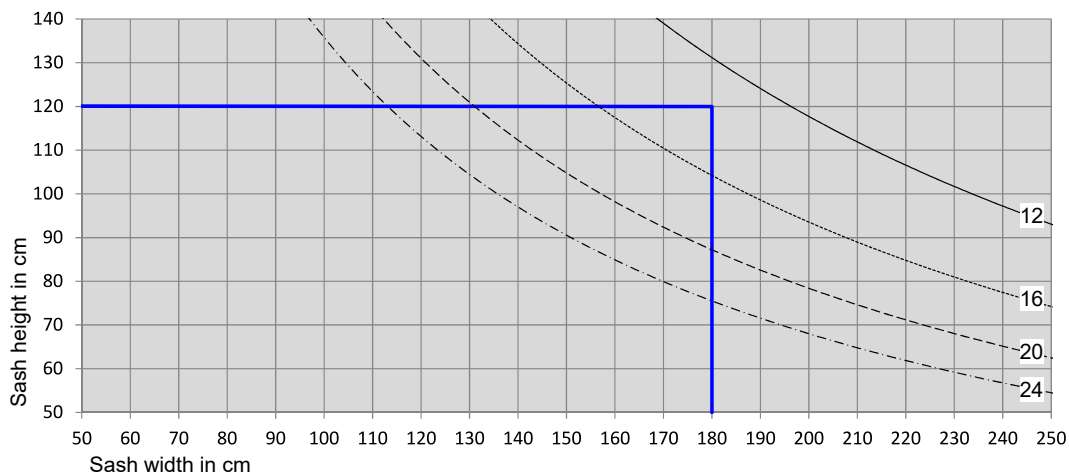
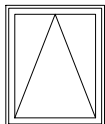
721001



721005

465001-73
thickness
1.5 mm
 $I_x = 0.91 \text{ cm}^4$
 $I_y = 1.84 \text{ cm}^4$

Window type 1.1 Bottom-hung window



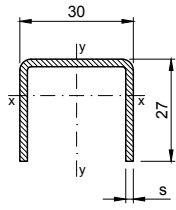
- Maximum size
White / pattern
- 12 mm
total glass thickness**
- 16 mm
total glass thickness**
- - - 20 mm
total glass thickness**
- · - · 24 mm
total glass thickness**

**Sum of all glass panes
without consideration of
the gaps

Tilt-only casement

465001-74

Size diagram for reinforcement 465001, 2.0 mm - tilt-only sash



Use for sashes



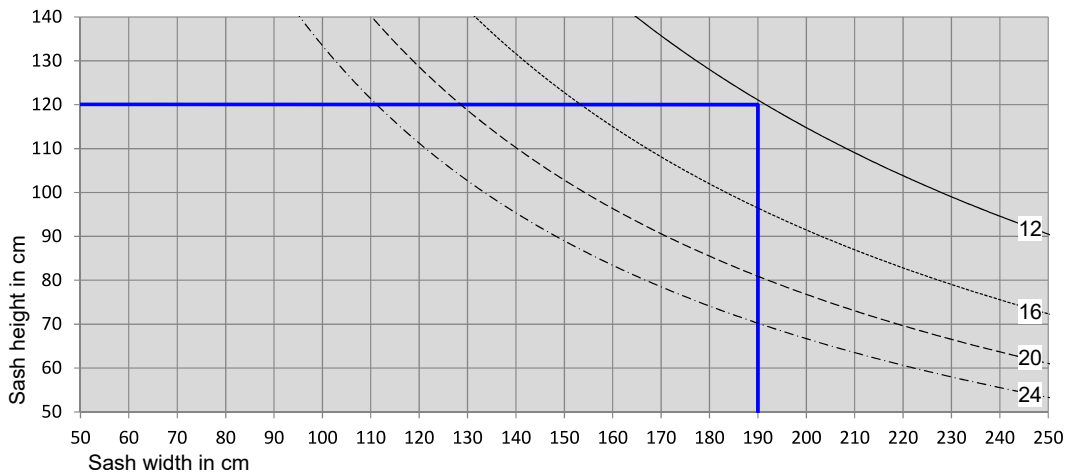
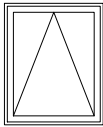
721001



721005

465001-74
thickness
2.0 mm
 $I_x = 1.18 \text{ cm}^4$
 $I_y = 2.34 \text{ cm}^4$

Window type 1.1 Bottom-hung window

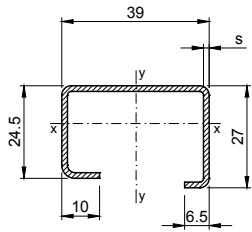


- Maximum size
White / pattern
 - 12 mm
total glass thickness**
 - 16 mm
total glass thickness**
 - - - 20 mm
total glass thickness**
 - · - · 24 mm
total glass thickness**
- **Sum of all glass panes
without consideration of
the gaps

Tilt-only casement

465006-73

Size diagram for reinforcement 465006, 1.5 mm - tilt-only sash



Use for sashes



721001



721005

465006-73

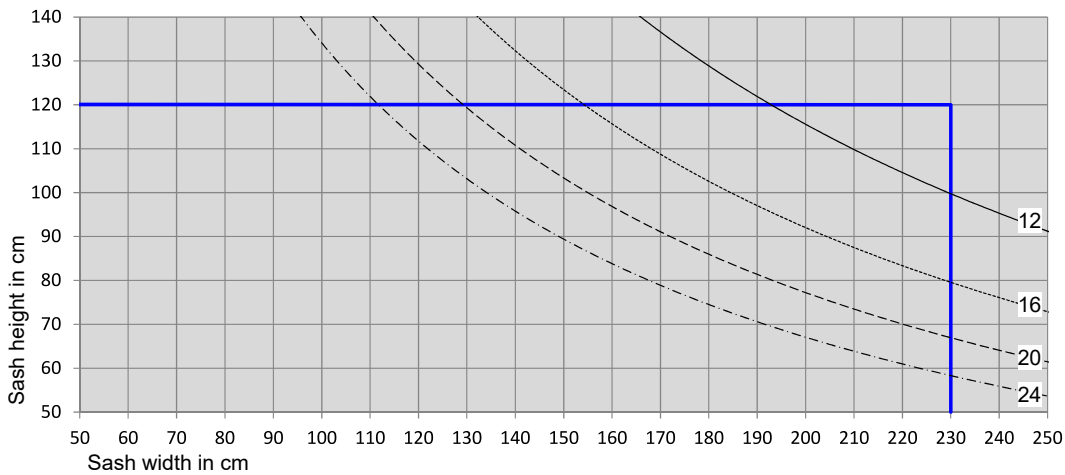
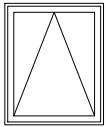
thickness

1.5 mm

$I_x = 1.31 \text{ cm}^4$

$I_y = 3.54 \text{ cm}^4$

Window type 1.1 Bottom-hung window



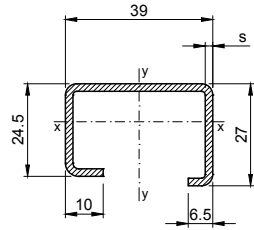
- Maximum size
White / pattern
- 12 mm
total glass thickness**
- 16 mm
total glass thickness**
- - - 20 mm
total glass thickness**
- · - · 24 mm
total glass thickness**

**Sum of all glass panes
without consideration of
the gaps

Tilt-only casement

465006-74

Size diagram for reinforcement 465006, 2.0 mm - tilt-only sash



465006-74
thickness
2.0 mm
 $I_x = 1.64 \text{ cm}^4$
 $I_y = 4.49 \text{ cm}^4$

Use for sashes

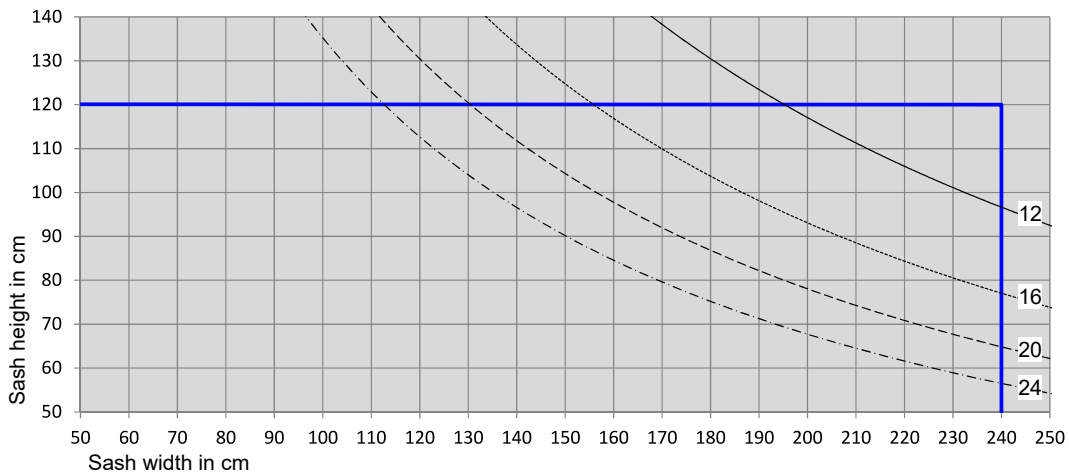
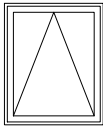


721001



721005

Window type 1.1 Bottom-hung window

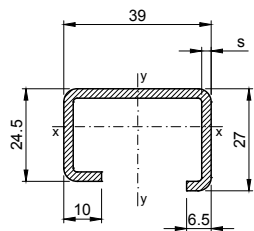


- Maximum size
White / pattern
 - 12 mm
total glass thickness**
 - 16 mm
total glass thickness**
 - - - - 20 mm
total glass thickness**
 - . - . 24 mm
total glass thickness**
- **Sum of all glass panes
without consideration of
the gaps

Tilt-only casement

465006-75

Size diagram for reinforcement 465006, 2.5 mm - tilt-only sash



Use for sashes



721001



721005

465006-75

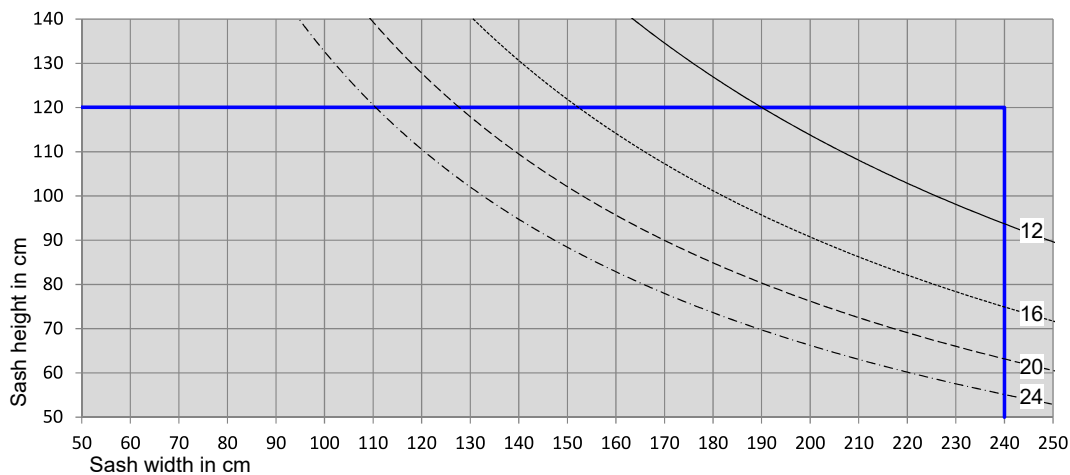
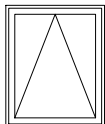
thickness

2.5 mm

$I_x = 1.91 \text{ cm}^4$

$I_y = 5.33 \text{ cm}^4$

Window type 1.1 Bottom-hung window



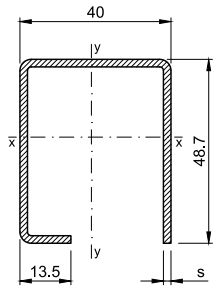
- Maximum size
White / pattern
- 12 mm
total glass thickness**
- 16 mm
total glass thickness**
- - - 20 mm
total glass thickness**
- · - · 24 mm
total glass thickness**

**Sum of all glass panes
without consideration of
the gaps

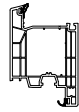
Tilt-only casement

465017-74

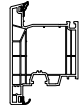
Size diagram for reinforcement 465017, 2.0 mm - tilt-only casement



Use for sashes



721008



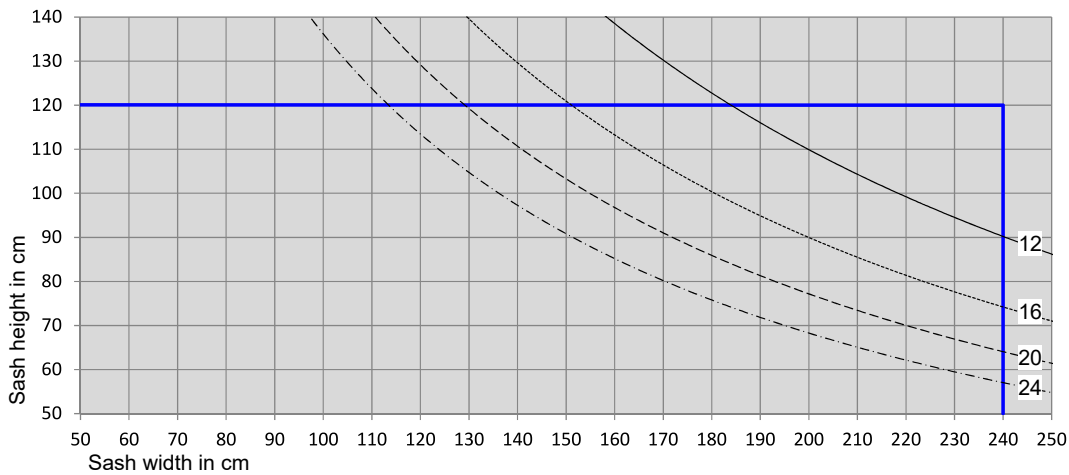
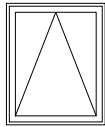
721009

465017-74
thickness 2.0
mm

$I_x = 8.46 \text{ cm}^4$

$I_y = 7.97 \text{ cm}^4$

Window type 1.1, bottom-hung window



- Maximum size
White / pattern
- 12 mm
total glass thickness**
- 16 mm
total glass thickness**
- - - 20 mm
total glass thickness**
- · - · 24 mm
total glass thickness**

**Sum of all glass panes
without consideration of
the gaps

Wind load

Explanation wind load

Wind acts on the structure through wind pressure. It is measured as wind loads. These wind loads are made up of wind pressure or wind suction and the corresponding surcharge values. The wind loads depend, among other things, on the height of the building, the position of the building and the shape of the building.

Wind loads can be applied according to the simplified procedure for wind loads in accordance with DIN EN 1991-1. They apply to installation heights of up to 25 m.

Classification

The classification of resistance to wind is carried out according to DIN EN 12210.

The aim is to guarantee:

- permanently tight glass edge seal of multi-pane insulating glazings
- sufficient tightness of window elements
- functional efficiency of window elements.

This is achieved by limiting the deformation of insulating glass panes (L/200, maximum 15 mm).

Class	P1 (in Pa)	P2 * (in Pa)	P3 (in Pa)
0	Not tested		
1	400	200	600
2	800	400	1200
3	1200	600	1800
4	1600	800	2400
5	2000	1000	3000
E xxxx **	xxxx		

* This pressure must be repeated 50 times.

** Test specimens with stress due to wind tested above class 5, are classified as E xxxx, if xxxx is the actual test pressure P1 (e.g. 2350, etc.).

Wind speed

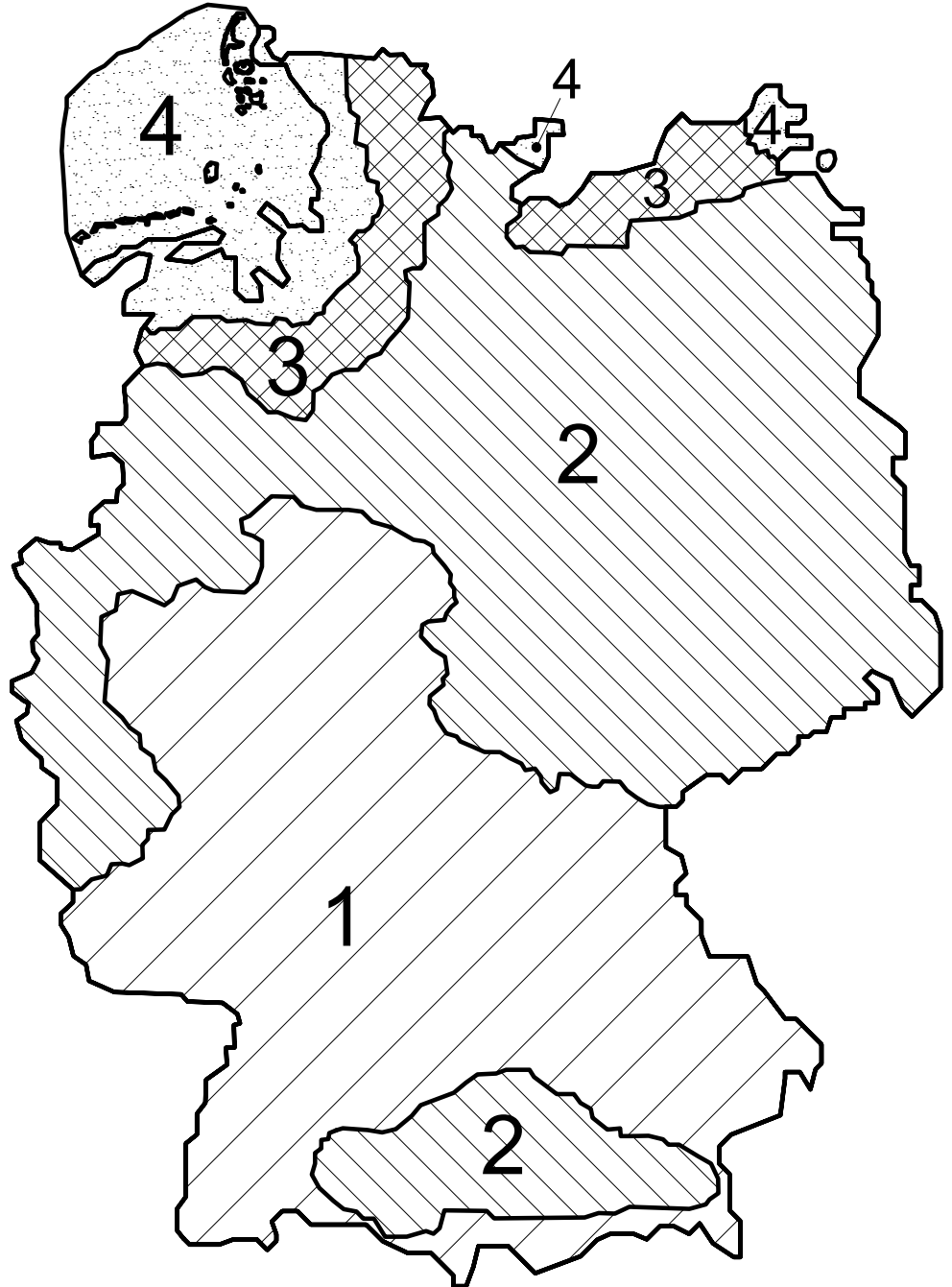
Class	Pa	km/h	Wind strength	Designation
2A	50	33	5	Fresh breeze
3A	100	46	6	Strong wind
4A	150	56.5	7	Stiff wind
5A	200	65	8	Stormy wind
6A	250	72	8	Stormy wind
7A	300	79	9	Storm
8A	450	98	10	Severe storm
9A	600	113	11	Hurricane-like storm
E750	750	127	12	Hurricane

Wind zones

Wind zones

Germany is divided into 4 wind zones. Depending on the location, different wind loads result. The wind load is indicated with the value for V/REF. V/REF indicates the time-averaged wind speed in m/s with the corresponding speed pressure q/REF in kN/m².

Wind zone map Germany



Wind zone	1	2	3	4
V/REF in m / s	22.5	25.0	27.5	30.0
q/REF in kN / m ²	0.32	0.39	0.47	0.56
Marking				

Stress classes for windows

In accordance with DIN 18055.

Inland	Wind zone 1						Wind zone 2						Wind zone 3						Wind zone 4					
	0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m	
	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge
Velocity pressure in kN/m ² according to DIN EN 1991-1	0.50	0.50	0.65	0.65	0.75	0.75	0.65	0.65	0.80	0.80	0.90	0.90	0.80	0.80	0.95	0.95	1.10	1.10	0.95	0.95	1.15	1.15	1.30	1.30
Wind load - wind pressure in kN/m ² cpe,1 = 1.0/1.0	0.50	0.50	0.65	0.65	0.75	0.75	0.65	0.65	0.80	0.80	0.90	0.90	0.80	0.80	0.95	0.95	1.10	1.10	0.95	0.95	1.15	1.15	1.30	1.30
Wind load - wind suction in kN/m ² cpe,1 = 1.1/-1.7	0.55	0.85	0.72	1.11	0.83	1.28	0.72	1.11	0.88	1.36	0.99	1.53	0.88	1.36	1.05	1.62	1.21	1.87	1.05	1.62	1.27	1.96	1.43	2.21
Resistance to wind load according to DIN EN 14351-1	B2	B3	B2	B3	B3	B4	B2	B3	B3	B4	B3	B4	B3	B4	B3	B5	B4	B5	B3	B5	B4	B5	B4	E22 10
Water tightness according to DIN EN 14351-1	4A	4A	5A	5A	5A	5A	5A	5A	5A	5A	6A	6A	5A	5A	6A	6A	7A	7A	6A	6A	7A	7A	8A	8A
Air permeability according to DIN EN 14351-1	2	2	2 (3)	2 (3)	2 (3)	3	2	2	2 (3)	3	2 (3)	3	2	2	3	2	3	3	2	2	3	3	3	4
Coast and islands of the Baltic Sea	Wind zone 2						Wind zone 3						Wind zone 4											
Velocity pressure in kN/m ² according to DIN EN 1991-1	0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m	
	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge
Wind load - wind pressure in kN/m ² cpe,1 = 1.0/1.0	0.85	0.85	1.00	1.00	1.10	1.10	1.05	1.05	1.20	1.20	1.30	1.30	1.05	1.05	1.20	1.20	1.30	1.30	1.25	1.25	1.40	1.40	1.55	1.55
Wind load - wind suction in kN/m ² cpe,1 = 1.1/-1.7	0.94	1.45	1.10	1.70	1.21	1.87	1.16	1.79	1.32	2.04	1.43	2.21	1.38	2.12	1.54	2.38	1.71	2.63	1.38	2.12	1.54	2.38	1.71	2.63

Stress classes for windows

Inland	Wind zone 1						Wind zone 2						Wind zone 3						Wind zone 4							
	0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m		0 – 10 m		>10 – 18 m		> 18 – 25 m			
	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge	Centre	Edge		
Resistance to wind load according to DIN EN 14351-1	B3	B4	B3	B5	B4	B5	B3	B5	B4	B5	B4	B5	B3	B5	B4	B5	B4	E20 40	E22 10	E21 25	B4	E23 80	B5	E26 35		
Water tightness according to DIN EN 14351-1	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	7A	7A	7A	8A	8A	8A	8A	8A		
Air permeability according to DIN EN 14351-1	2	3	2 (3)	3	3	3	2	3	3	3	3	3	2	3	3	3	4	4	4	3	4	3	3	4		
Coast of the North Sea	Wind zone 4																									
Velocity pressure in kN/m ² according to DIN EN 1991-1	1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25	
Wind load - wind pressure in kN/m ² cpe,1 = 1.0/1.0	1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25		1.25	
Wind load - wind suction in kN/m ² cpe,1 = 1.1/-1.7	1.38		2.12 5		1.54		2.38		1.71		2.63 5		1.40		1.55		2.38		1.71		2.63 5		1.40		1.55	
Resistance to wind load according to DIN EN 14351-1	B4	E21 25	B4	E23 80	B4	E23 80	B4	E21 25	B4	E23 80	B4	E21 25	B4	E23 80	B4	E21 25	B4	E23 80	B4	E21 25	B4	E23 80	B4	E21 25		
Water tightness according to DIN EN 14351-1	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A	8A		
Air permeability according to DIN EN 14351-1	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4		

Stress classes for windows

Inland	Wind zone 1			Wind zone 2			Wind zone 3			Wind zone 4		
	0 – 10 m	> 10 – 18 m	> 18 – 25 m	0 – 10 m	> 10 – 18 m	> 18 – 25 m	0 – 10 m	> 10 – 18 m	> 18 – 25 m	0 – 10 m	> 10 – 18 m	> 18 – 25 m
	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge	Centre Edge
Islands of the North Sea	Wind zone 4											
Velocity pressure in kN/m ² according to DIN EN 1991-1	Special calculation required											
Wind load - wind pressure in kN/m ² cpe,1 = 1.0/1.0	1.40 1.40											
Wind load - wind suction in kN/m ² cpe,1 = 1.1/-1.7	1.54 2.38											
Resistance to wind load according to DIN EN 14351-1	B4 E23 80											
Water tightness according to DIN EN 14351-1	8A 8A											
Air permeability according to DIN EN 14351-1	3 4											
NOTE 1 For air permeability, a class is given in brackets if the requirement according to DIN 4108-2 results in a higher class than the calculation (see 4.12).												
NOTE 2 The pair of values given for cpe,1 refers in each case to the centre of the building or the edge of the building.												

Stress classes for exterior doors with thermal insulation requirements

In accordance with DIN 18055.

Building height (m)	Location	Wind load	Driving rain tightness*	Air permeability
0 to 8	Protected installation	B 2	NPD to 4 B	2
	Non-protected installation	B 2	4 A	2

* In certain structural situations, air permeability class 3 may also be necessary for exterior doors.

Explanation of driving rain tightness

Driving rain tightness is the resistance of a window to water penetration into the interior of the building or into areas that cannot be drained to the outside in a controlled manner. The window is closed and locked at a defined wind force, amount of rain and duration of exposure.

The building location, the installation height and the installation situation of the window element are decisive for the classification according to the product standard for windows and doors (DIN EN 14351-1).

Classification

Classification DIN EN 12208		Test method DIN EN 1027 (Δp in Pa)
1 A	1 B	0
2 A	2 B	50
3 A	3 B	100
4 A	4 B	150
5 A	5 B	200
6 A	6 B	250
7 A	7 B	300
8 A	-	450
9 A	-	600
E xxx	-	> 600

1 A to 9 A = Suitability for unprotected installation position of windows
 1 B to 7 B = Suitability for protected installation position of windows
 0 Pa 15 min.
 Pressurisation in steps of 5 min. each

Imprint

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