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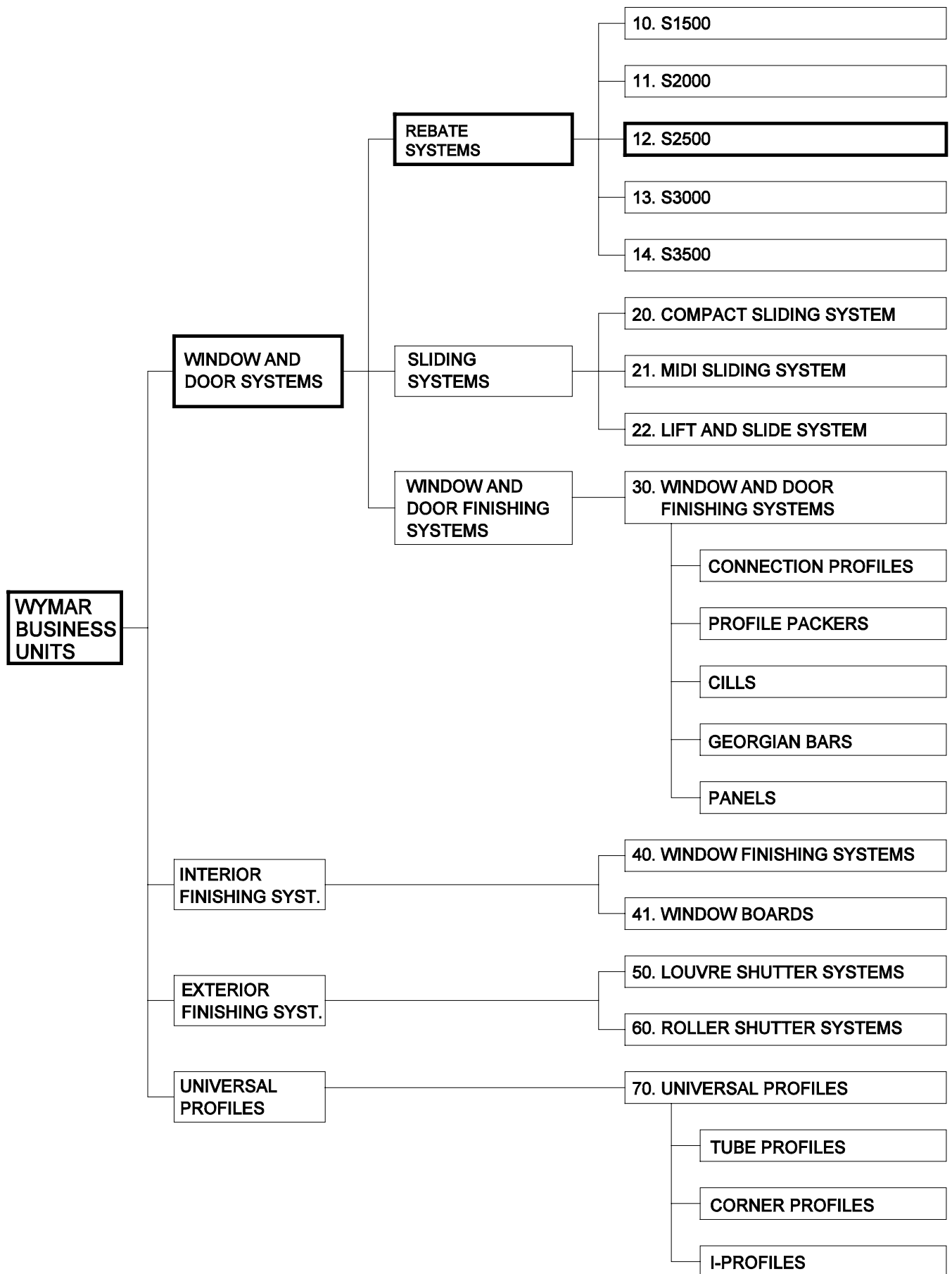
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










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1. GENERAL INFORMATION

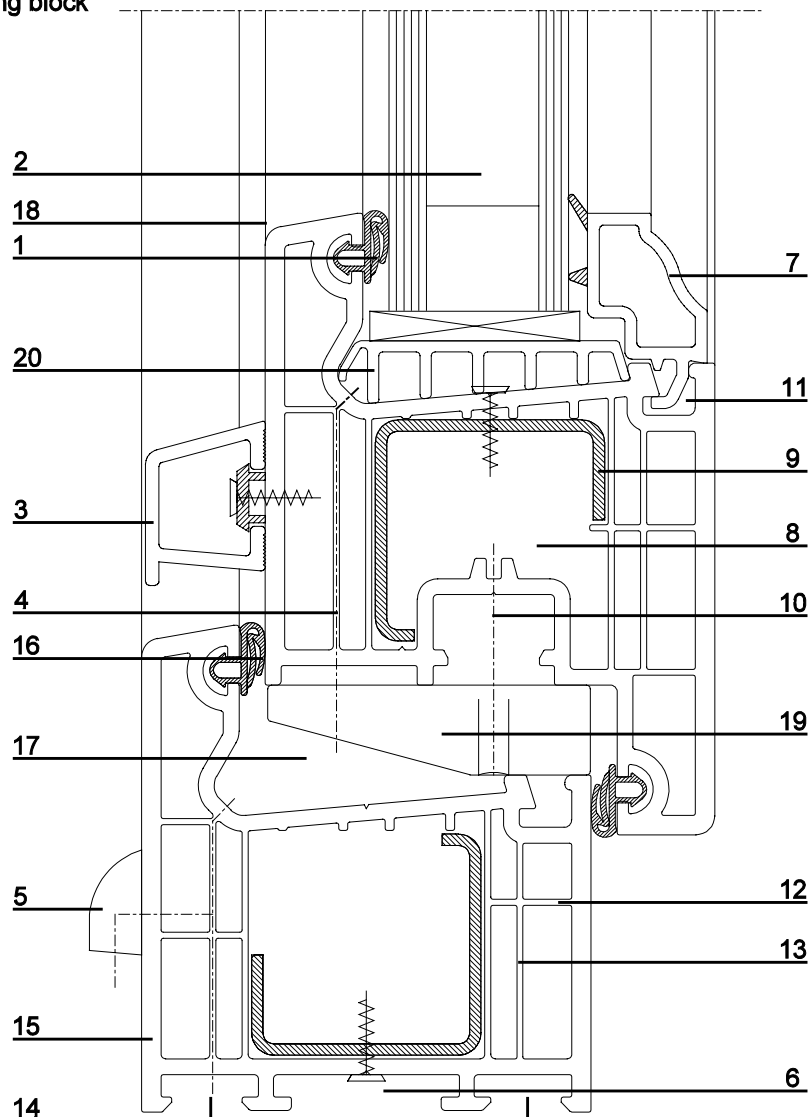
1. GENERAL INFORMATION

1.1. SYMBOLS

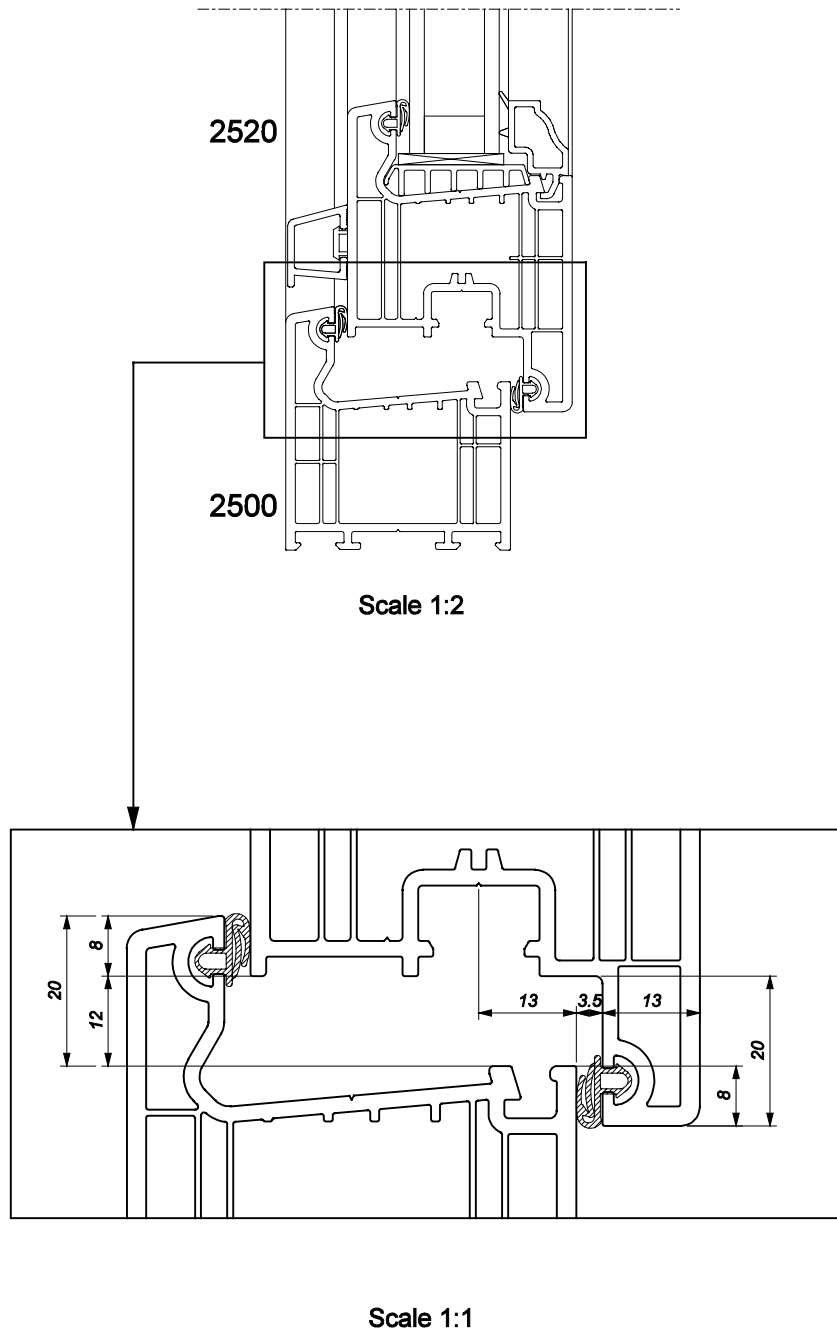
	Profile number
	Profile description
	Moment of inertia in direction of the X-axis in cm ⁴
	Moment of inertia in direction of the Y-axis in cm ⁴
	Correspondent reinforcement
	Correspondent profile
	Complementary endcap
	Mechanical connector
	Weldable insert
	Length of the profile in meter or the quantity
	Packaging: not foiled
	Packaging: foiled
	Packaging: container
	Foiled

1.2. DESCRIPTION OF THE SYSTEM

1. Weldable on line inserted TPE-gasket with double function
2. Glazing from 6 to 35 mm
3. Drip rail
4. Draining openings
5. Drainage hole covering
6. Groove for fixing lugs
7. Glazingbeads with coextruded gasket
8. Chambers for reinforcements and clearance for hardware system
9. Galvanised steel reinforcement
10. Eurogroove at 13mm
11. Groove for installation of glazingbeads and hardware locking points
12. Innerwall for reinforcement of the fixing of the hardware locking points
13. 5-chamber windowsystem for improved thermal and acoustic insulation
14. Groove for the connection of different profiles
15. Optimized wall thicknesses
16. Profile covering of 8mm
17. Inclined rebate for improved drainage
18. Rounded corners
19. Supportpiece for sash
20. Glass supporting block



1.3. DIMENSIONS OF HARDWARE CLEARANCE



1.4. TECHNICAL SPECIFICATIONS

1.4.1. MATERIAL

The frames are fabricated from profiles extruded in rigid PVC, classified under category B. The PVC compound has a technical agreement with certification given by the BUtgb. The compounding happens under the certification ISO 9001. The profiles are coloured white throughout their mass.

The materials posses the following properties;

Main Properties

- Mass Volume	ISO 1183	1440 kg/m ³	+/- 20 kg/m ³
- Vicat softening point	ISO 306	80 °C	+/- 2°C
- Ash content @ 850°C	ISO 1270	5,5 %	+/- 7%
- Induction time of DHC	ISO 182/B	84 min.	+/- 12 min.
- Surface strenght		80 shore D	

Mechanical properties

- Resilience in traction @ 23 °C (+/- 2°C) & 50 % relative humidity	ISO 8256 (type 5)	> 600 kJ/m ²
- Modulus of elasticity @ 23 °C & 2.0 mm/min. deformation	ISO 178	> 2200 N/mm ² of MPa
- Resistance to shock Charpy @ 23°C (+/- 2 °C)	ISO 179 (1eA)	> 10 kJ/m ²
- Resistance to shock when cold 1 kg. from 1,5m height @ -10 °C	Eutgb-directive	<= 1 rupture by 10 samples

Thermomechanical properties

- Co-efficient of thermal conductivity	ASTM C 177	0.17 W/mK
- co-efficient of lineair expansion - 40 °C tot + 10°C + 10 °C tot + 40 °C	ASTM D 696	6.0 x 10 ⁻⁵ C ⁻¹ 7.7 x 10 ⁻⁵ C ⁻¹
- Uf-value	ISO EN 10077	1,3 - 1,5

Measurements of stability

- Shrinkage after 1hr @ 100 °C	Eutgb-directive	<=2 %
- Thermal behaviour after 30 mins.	Eutgb-directive	no bubbles, tears or flakes

Durability

- Artificial ageing @ 8000 mJ/m ² exposure to sun	ISO 105/A02	>=3/4 of the grey-scalereferences
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1.4.2. PROFILES

1.4.2.1 Composition

The main profiles have an external wallthickness of 2.6mm with a minimum of 2.5mm. They have five chambers thus affording the optimum degree of insulation. These chambers also permit the evacuation of water / condensation, the decompression / ventilation of the profile and the introduction of reinforcement. The other chambers are insulation chambers and function also as an extra wall for the fixation of hinges. The main profiles are coloured white, +/- RAL9016, throughout their mass, but can also be coloured. This happens by glueing a coloured foil on the external side(s) of the profile. The profiles can also be coloured brown throughout their mass on which a coloured foil in woodimitation is glued on both external sides of the profile. The glazing beads clip into the main profiles and are co-extruded with a white seal (except where the profiles are woodgrained, in which case they are co-extruded with a black seal.). Sills and auxiliary profiles may be screwed, clipped or glued to the main profiles.

1.4.2.2 Dimension

The design of the profiles retains the concept of maximum light transmission without compromising the mechanical strength. The main profiles must have a minimum width of 60 mm (measured perpendicular on the glazing). The glazing rebate of the main profiles has a minimum height of 20 mm to ensure good glass coverage and is an integral part of the profile. To achieve an elegant and aesthetically pleasing form, the upstand of the main profiles have a 10° slope where they abut the glass, which makes the profiles looks slimmer and nicer.

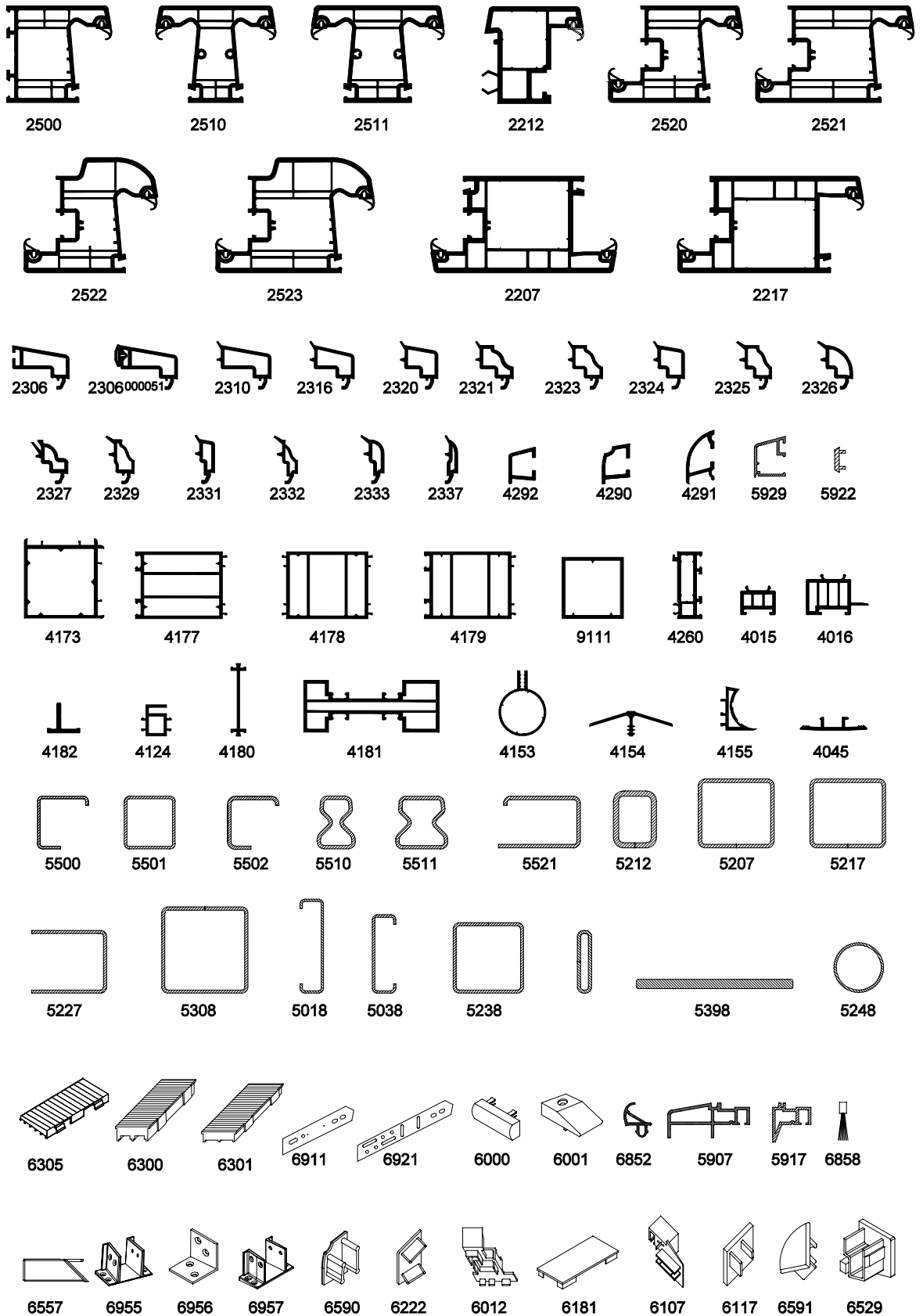
1.4.2.3 Gaskets

In the S2500 the glazing- and weather-tightness are achieved using a TPE-gasket, which is on-line inserted into the gasket groove during the extrusion process of the main profiles. This gasket can be welded at the same temperature as the profile and is dual purpose, functioning as a weather seal, and as a glazing gasket. This PCE gasket can be manually reinstalled. Only original gaskets prescribed by the system supplier can be used and resists against atmospheric influences and symptoms of aging. On white profiles the gasket is grey in colour but black when used on woodgrain or brown profiles.

2. PROFILES AND ACCESSORIES

2. PROFILES AND ACCESSORIES

2.1. PROFILE OVERVIEW



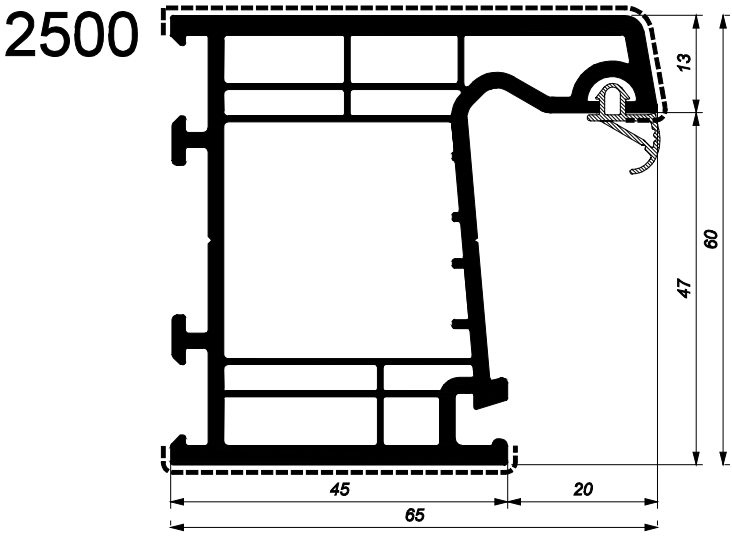
2.2. PROFILE LIST







2207.....	p. 12.2.7.	5018.....	p. 12.2.17
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2217.....	p. 13.2.7.	5100.....	p. 12.2.18.
2306.....	p. 12.2.9.	5207.....	p. 12.2.17.
2306000051.....	p. 12.2.9.	5212.....	p. 12.2.16.
2310.....	p. 12.2.9.	5217.....	p. 12.2.17.
2316.....	p. 12.2.9.	5227.....	p. 12.2.17.
2320.....	p. 12.2.10.	5238.....	p. 12.2.18.
2321.....	p. 12.2.10.	5248.....	p. 12.2.18.
2323.....	p. 12.2.10.	5308.....	p. 12.2.18.
2324.....	p. 12.2.10.	5398.....	p. 12.2.18.
2325.....	p. 12.2.10.	5500.....	p. 12.2.16.
2326.....	p. 12.2.10.	5501.....	p. 12.2.16.
2327.....	p. 12.2.10.	5502.....	p. 12.2.16.
2329.....	p. 12.2.11.	5510.....	p. 12.2.16.
2331.....	p. 12.2.11.	5511.....	p. 12.2.16.
2332.....	p. 12.2.11.	5521.....	p. 12.2.16.
2333.....	p. 12.2.11.	5907.....	p. 12.2.12.
2337.....	p. 12.2.11.	5917.....	p. 12.2.12.
2500.....	p. 12.2.3.	5922.....	p. 12.2.12.
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2521.....	p. 12.2.5.	6012.....	p. 12.2.20.
2522.....	p. 12.2.6.	6107.....	p. 12.2.20.
2523.....	p. 12.2.6.	6117.....	p. 12.2.20.
4015.....	p. 12.2.14.	6181.....	p. 12.2.20.
4016.....	p. 12.2.14.	6222.....	p. 12.2.20.
4045.....	p. 12.2.15.	6300.....	p. 12.2.19.
4124.....	p. 12.2.14.	6301.....	p. 12.2.19.
4153.....	p. 12.2.15.	6305.....	p. 12.2.19.
4154.....	p. 12.2.15.	6529.....	p. 12.2.20.
4155.....	p. 12.2.15.	6557.....	p. 12.2.19.
4173.....	p. 12.2.13.	6590.....	p. 12.2.20.
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4180.....	p. 12.2.14.	6911.....	p. 12.2.19.
4181.....	p. 12.2.15.	6921.....	p. 12.2.19.
4182.....	p. 12.2.14.	6955.....	p. 12.2.19.
4260.....	p. 12.2.14.	6956.....	p. 12.2.19.
4290.....	p. 12.2.12.	6957.....	p. 12.2.19.
4291.....	p. 12.2.12.	9111.....	p. 12.2.14.
4292.....	p. 12.2.12.		

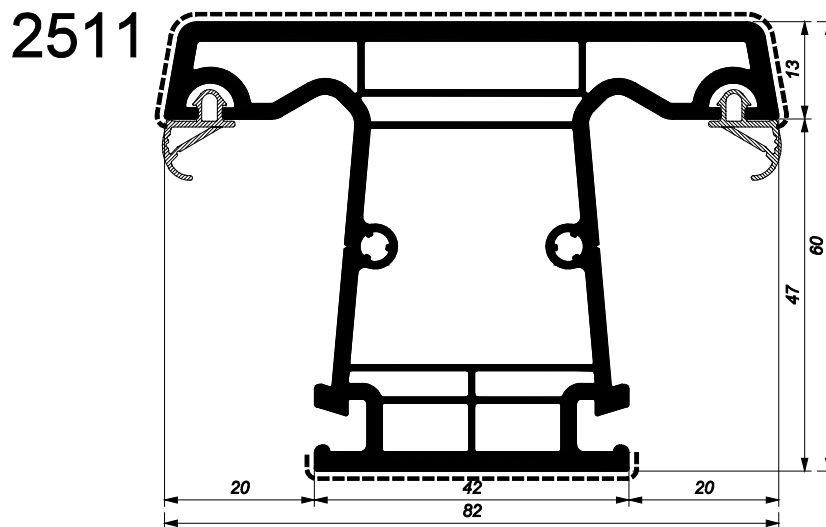
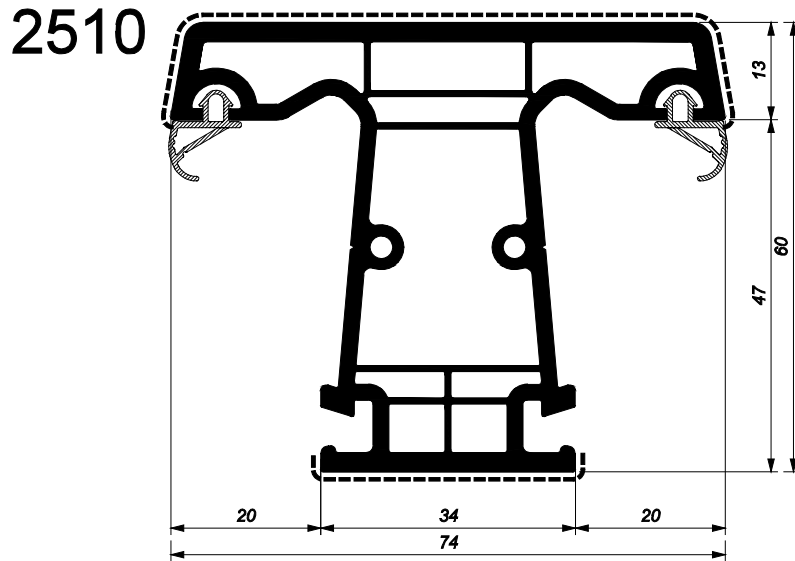
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



SCALE 1/1

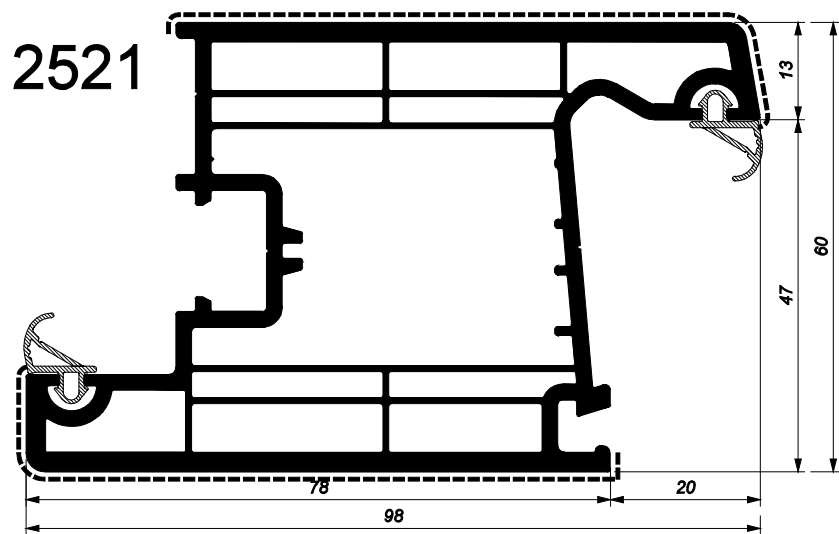
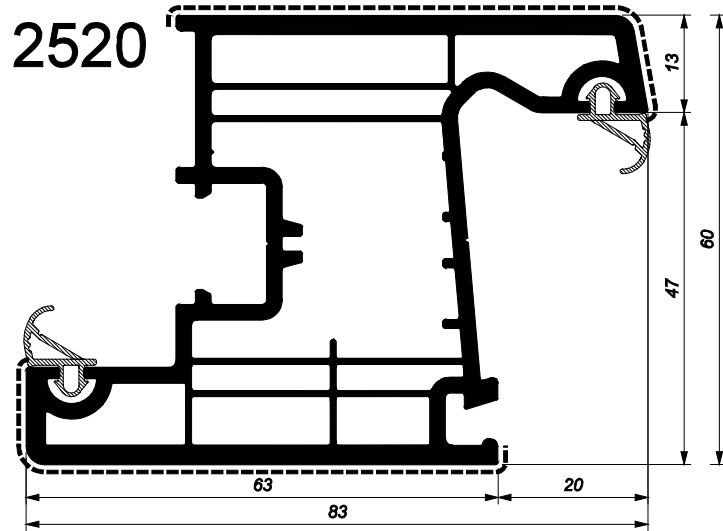
123	<i>abc</i>	lx	ly					
2500	Outer frame 65 mm	37.5 cm ⁴	26,1 cm ⁴	5500-5501-5502	6 m	24 m	—	792 m








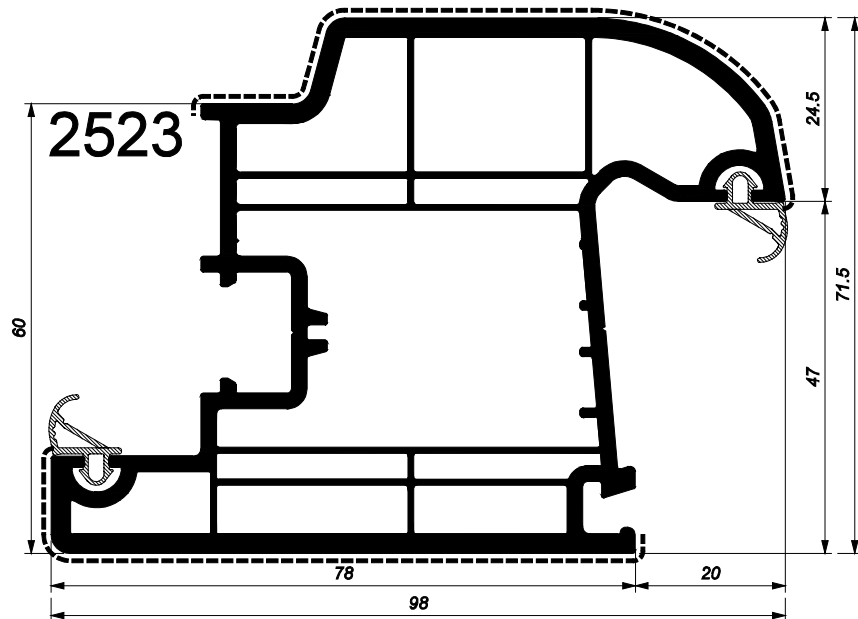
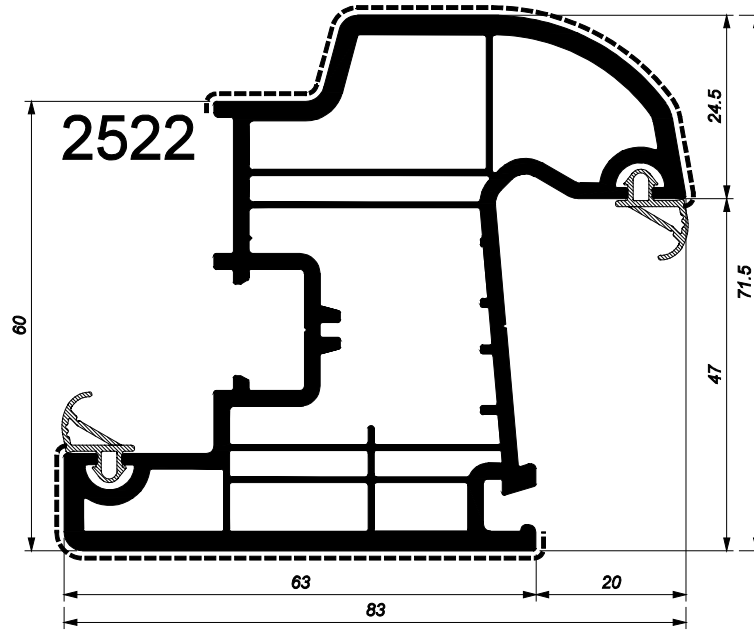
123	abc	I_x	I_y						
2510	T-profile 74 mm	36.2 cm ⁴	26.3 cm ⁴	5510	6955-6956	6 m	24 m	—	792 m
2511	T-profile 82 mm	40.7 cm ⁴	37.4 cm ⁴	5511	6956-6957	6 m	24 m	—	—








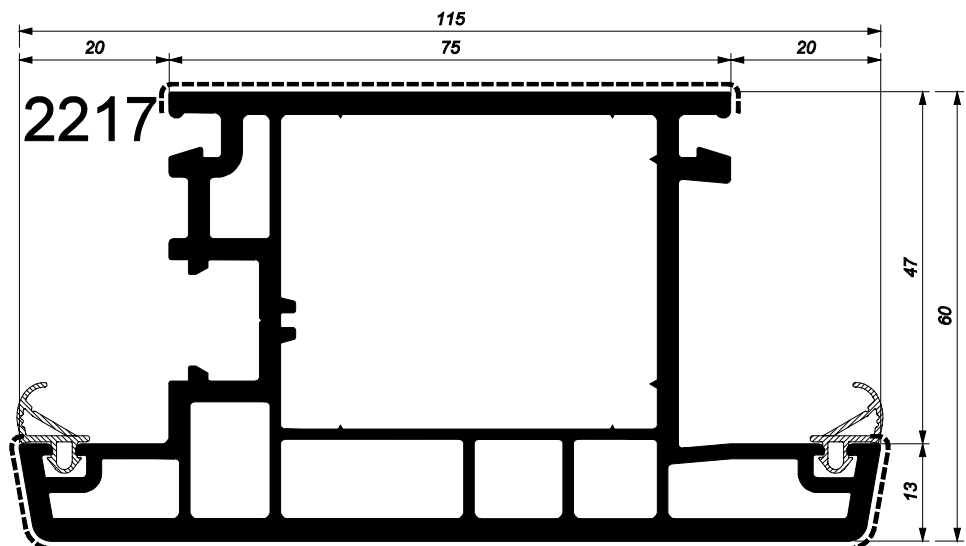
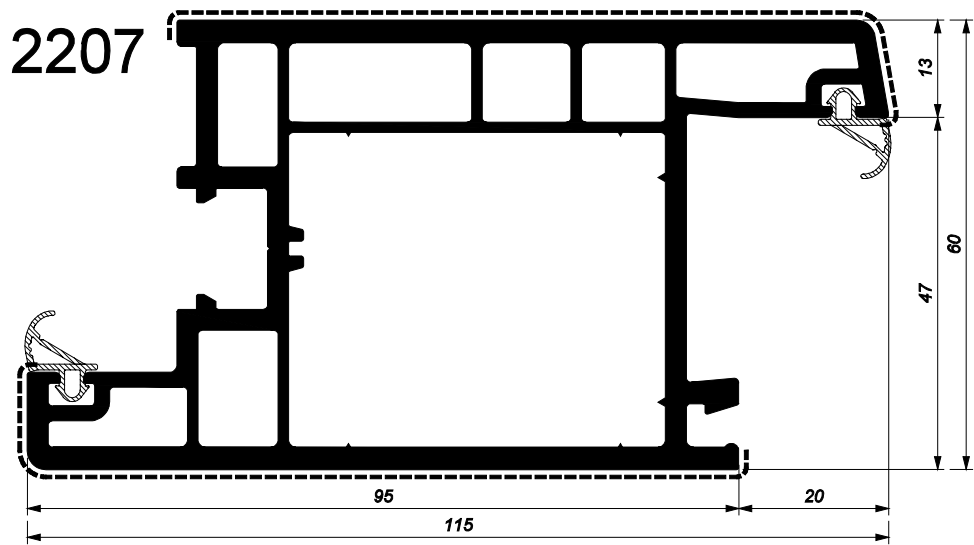
123	abc	lx	ly					
2520	Sash profile 83 mm	43.5 cm ⁴	40.1 cm ⁴	5500-5502	6 m	24 m	—	660 m
2521	Sash profile 98 mm	51.9 cm ⁴	69.8 cm ⁴	5521	6 m	24 m	—	660 m









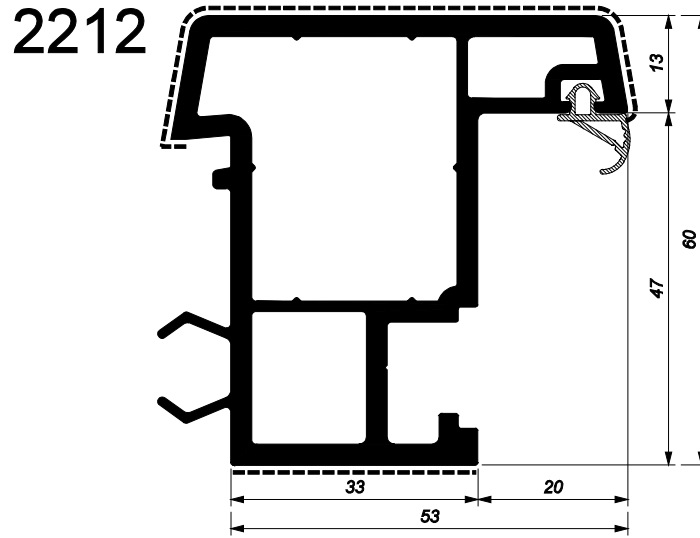
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2522	Sash profile 83 mm	55.1 cm ⁴	41.6 cm ⁴	5500-5502	6 m	—	—	—
2523	Sash profile 98 mm	67.3 cm ⁴	72.3 cm ⁴	5521	6 m	—	—	—



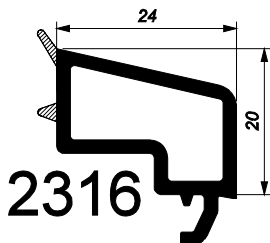
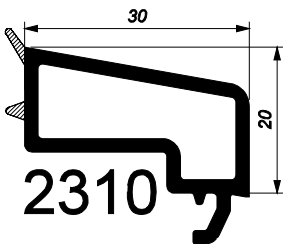
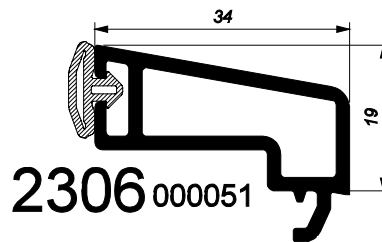
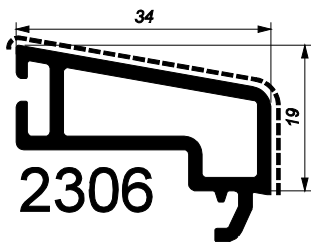
123	abc	lx	ly					
2207	Door sash profile (int.)	65.6 cm ⁴	125.9 cm ⁴	5207-5217-5227	6.4 m	24 m	—	660 m
2217	Door sash profile (ext.)	62.4 cm ⁴	125.0 cm ⁴	5207-5217-5227	6.4 m	24 m	—	660 m








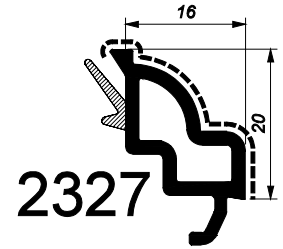
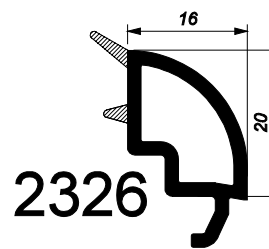
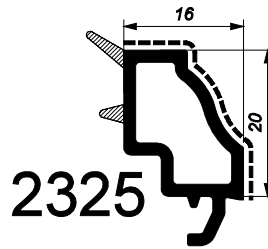
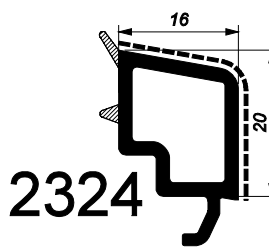
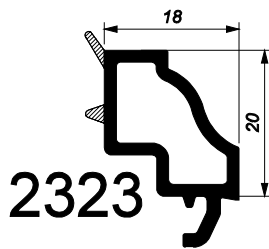
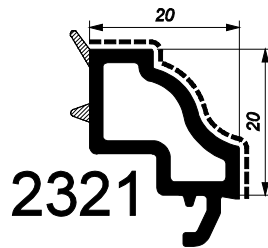
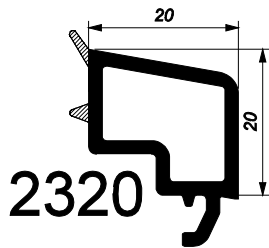
123	<i>abc</i>	lx	ly						
2212	False mullion 61 mm	32.8 cm ⁴	21.1 cm ⁴	5212	6012	6 m	24 m	12 m	858 m








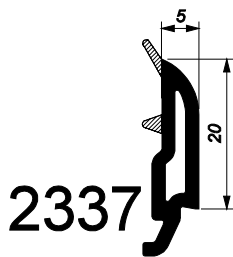
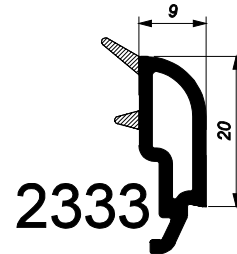
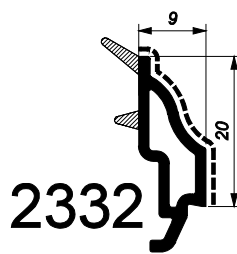
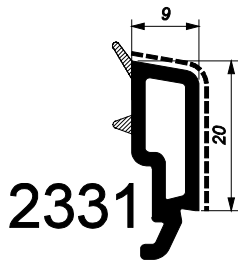
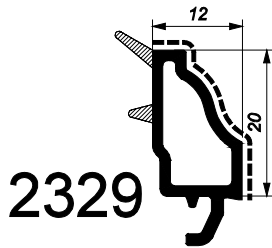
123	abc	lx	ly				
2306	Glazing bead 6mm European style	—	—	—	6 m	60 m	4320 m
2306 ⁰⁰⁰⁰⁵¹	Glazing bead 6mm European style	—	—	—	6 m	60 m	4320 m
2310	Glazing bead 10mm European style	—	—	—	6 m	120 m	4320 m
2316	Glazing bead 16mm European style	—	—	—	6 m	120 m	4080 m



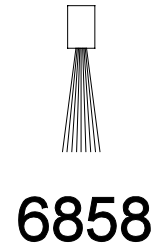
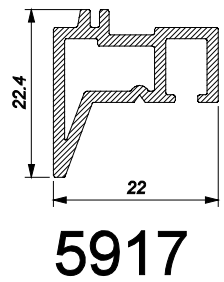
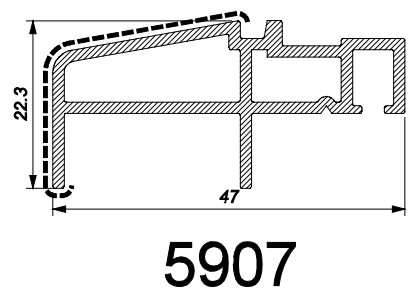
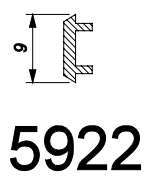
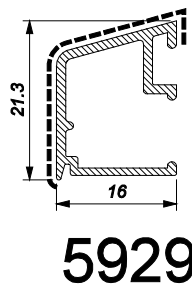
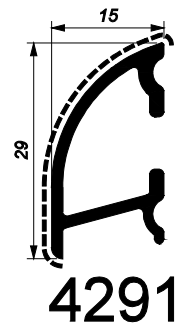
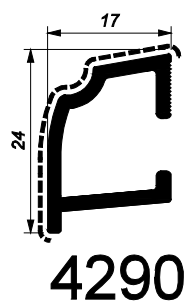
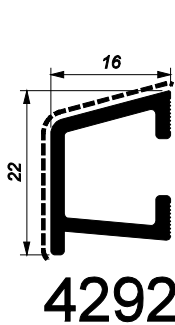
123	abc	lx	ly					
2320	Glazing bead 20mm European style	—	—	—	6 m	120 m	—	5400 m
2321	Glazing bead 20mm Renaissance style	—	—	—	6 m	120 m	120 m	5760 m
2323	Glazing bead 22mm Renaissance style	—	—	—	6 m	120 m	—	6000 m
2324	Glazing bead 24mm European style	—	—	—	6 m	120 m	120 m	6000 m
2325	Glazing bead 24mm Renaissance style	—	—	—	6 m	120 m	120 m	6000 m
2326	Glazing bead 24mm Softline style	—	—	—	6 m	120 m	—	6624 m
2327	Glazing bead 24mm Renaissance style	—	—	—	6 m	120 m	—	6000 m



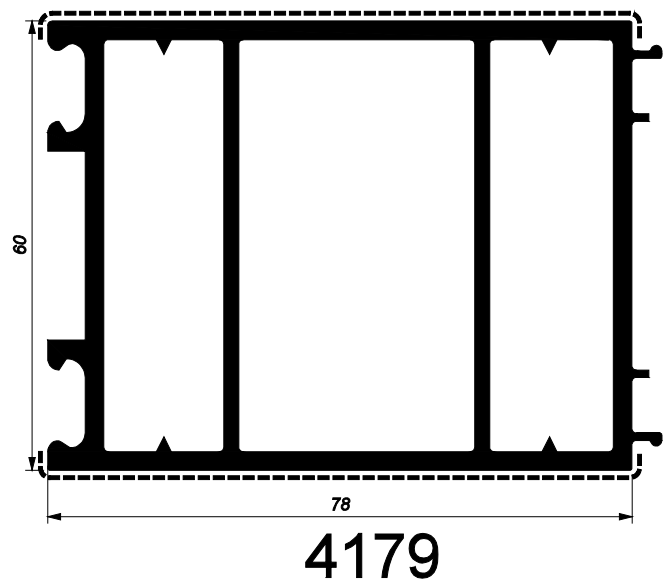
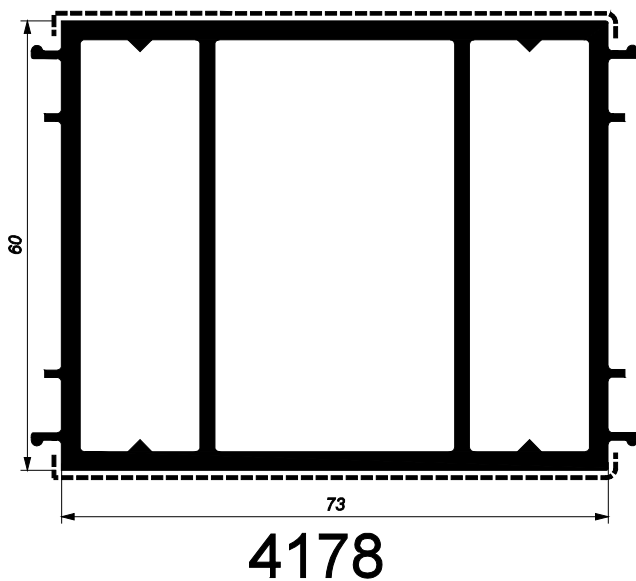
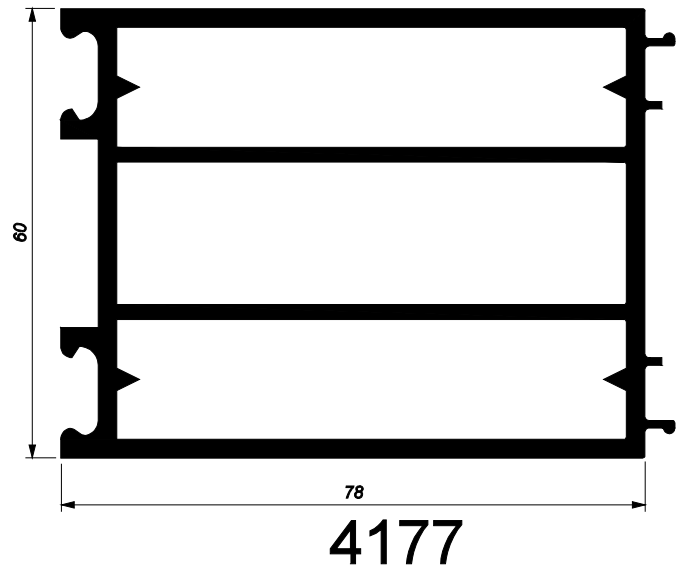
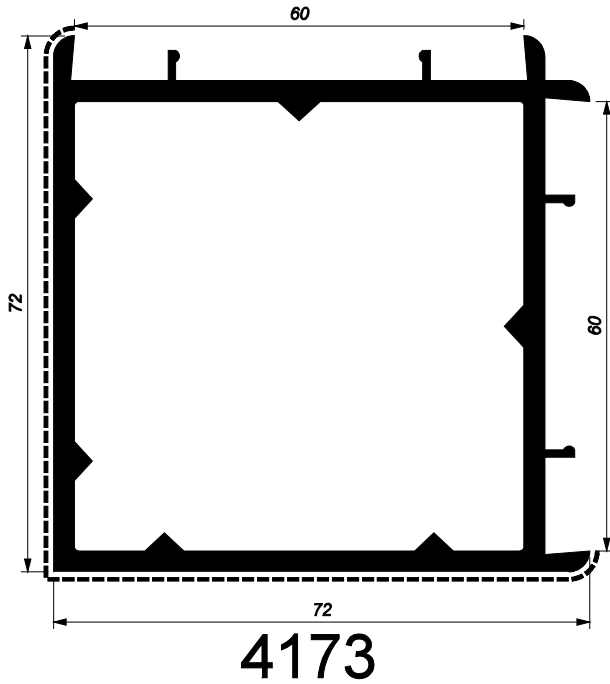
123	abc	lx	ly					
2329	Glazing bead 28mm Renaissance style	—	—	—	6 m	120 m	—	7080 m
3331	Glazing bead 31mm European style	—	—	—	6 m	120 m	120 m	8040 m
2332	Glazing bead 31mm Renaissance style	—	—	—	6 m	120 m	—	11400 m
2333	Glazing bead 31mm Softline style	—	—	—	6 m	120 m	—	—
2337	Glazing bead 35mm European style	—	—	—	6 m	—	—	—



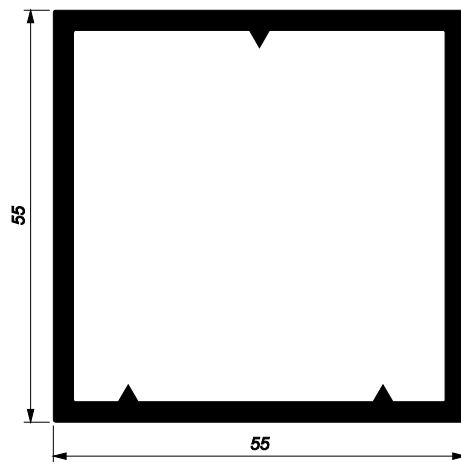
123	abc	lx	ly					
4292	Drip bar - European style	—	—	6222	6 m	120 m	120 m	11280 m
4290	Drip bar - Renaissance style	—	—	6590	6 m	120 m	—	9000 m
4291	Drip bar - Sofline style	—	—	6591	6 m	120 m	120 m	—
5929	Drip bar - Aluminium	—	—	6529	6 m	—	120 m	—
5922	Aluminium clip for drip bars	—	—	—	3 m	—	—	—
5907	Drip bar - Aluminium	—	—	6107	6 m	—	—	—
5917	Drip bar - Aluminium	—	—	6117	6 m	—	—	—
6858	Brush for aluminium drip bar	—	—	—	3 m	—	—	—



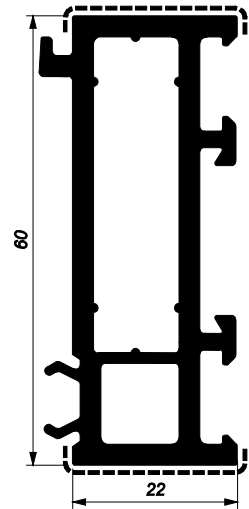
123	abc	ix	ly					
4173	Square corner post 60/60	55.8 cm ⁴	55.8 cm ⁴	5308	6 m	24 m	12 m	624 m
4177	Extension profile 78 mm	45.1 cm ⁴	75.0 cm ⁴	5018	6 m	24 m	—	648 m
4178	Extension profile 73 mm	45.1 cm ⁴	61.9 cm ⁴	5038	6 m	24 m	6 m	624 m
4179	Extension profile 78 mm	47.6 cm ⁴	69.2 cm ⁴	5038	6 m	24 m	6 m	624 m



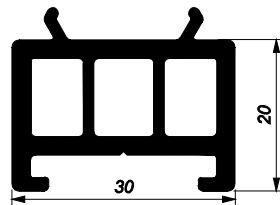
123	abc	I_x	I_y					
9111	Tube profile 55/55	26.3 cm ⁴	26.0 cm ⁴	5238	6 m	—	—	—
4260	Support profile 22 mm	20.6 cm ⁴	2.9 cm ⁴	5100	6 m	24 m	60 m	—
4015	Support profile 20 mm	—	—	—	6 m	—	—	3420 m
4016	Support profile 30 mm	—	—	—	6 m	—	—	—
4124	Extension profile	—	—	—	6 m	60 m	—	—
4180	Connection profile 4 mm	6.6 cm ⁴	0.07 cm ⁴	—	6 m	30 m	—	—
4182	Connection profile	—	—	—	6 m	120 m	—	—



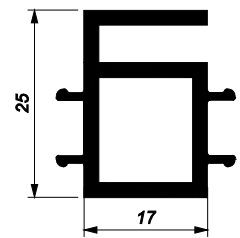
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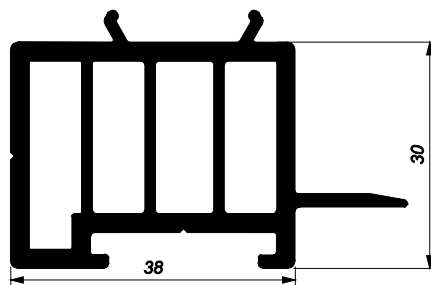
4260



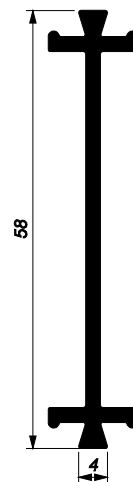
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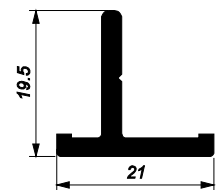
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4016

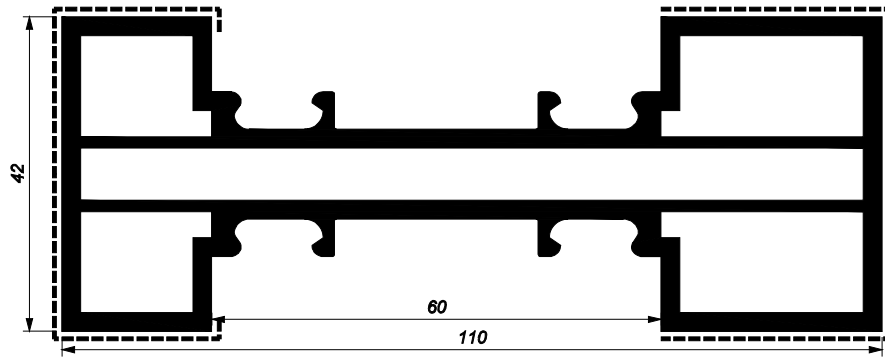


4180

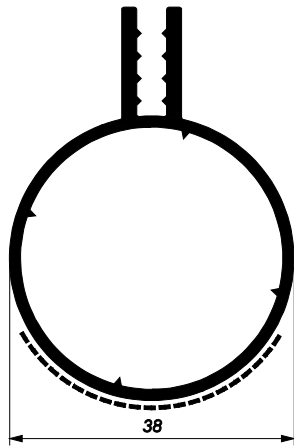


4182

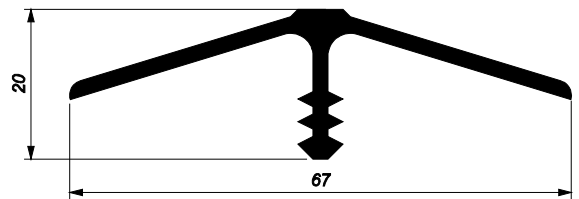
123	abc	ix	ly						
4181	connection profile 22 mm	147.3 cm ⁴	15.5 cm ⁴	5398	6181	4.5 m	9 m	9 m	522 m
4153	Extension profile	—	—	5248	—	6 m	60 m	6 m	—
4154	Extension profile	—	—	—	—	6 m	60 m	—	—
4155	Extension profile	—	—	—	—	6 m	12 m	60 m	—
4045	Round bay pole	—	—	—	—	6 m	60 m	—	4860 m



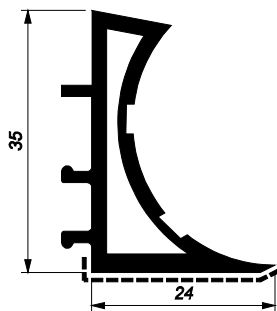
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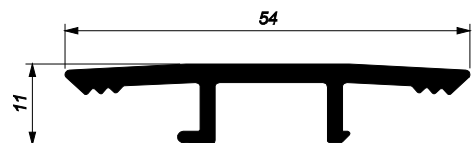
4153



4154

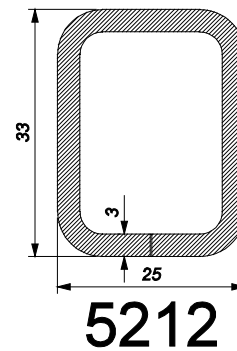
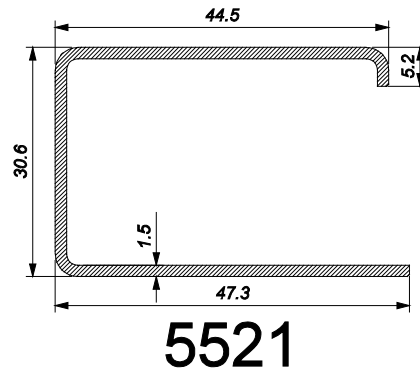
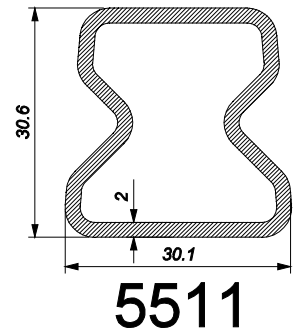
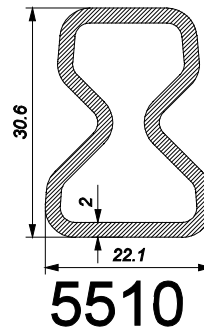
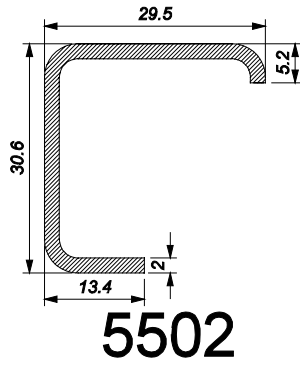
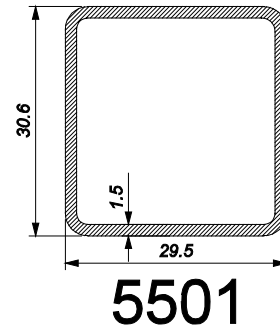
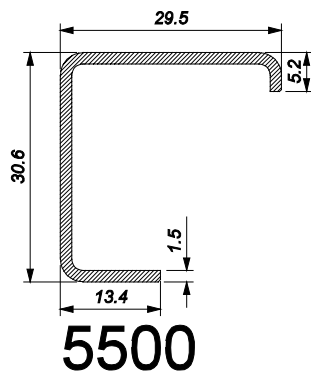


4155

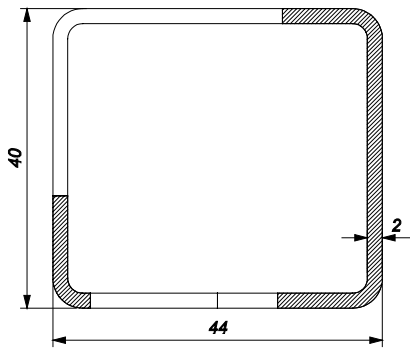


4045

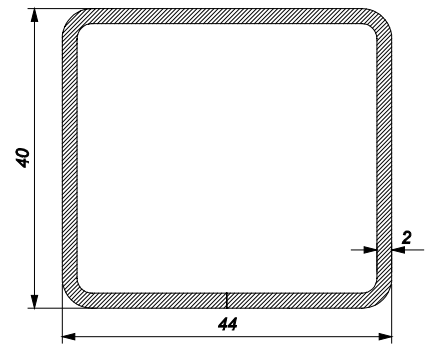
123	abc	ix	ly					
5500	Reinforcement for 2500 - 2520 - 2522	1.4 cm ⁴	0.9 cm ⁴	2500-2520-2522	6 m	—	—	—
5501	Reinforcement for 2500	2.3 cm ⁴	2.1 cm ⁴	2500	6 m	—	—	—
5502	Reinforcement for 2500 - 2520 - 2522	1.8 cm ⁴	1.1 cm ⁴	2500-2520-2523	6 m	—	—	—
5510	Reinforcement for 2510	2.1 cm ⁴	0.9 cm ⁴	2510	6 m	—	—	—
5511	Reinforcement for 2511	2.7 cm ⁴	2.2 cm ⁴	2511	6 m	—	—	—
5521	Reinforcement for 2521 - 2523	3.8 cm ⁴	5.3 cm ⁴	2521	6 m	—	—	—
5212	Reinforcement for 2212	3.8 cm ⁴	2.4 cm ⁴	2212	6 m	—	—	—



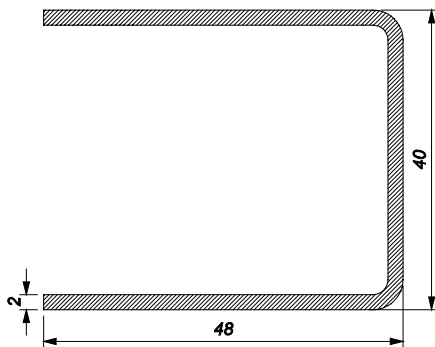
123	abc	ix	ly					
5207	Reinforcement for 2207 - 2217	7.5 cm ⁴	8.7 cm ⁴	2207-2217	6 m	—	—	—
5217	Reinforcement for 2207 - 2217	7.5 cm ⁴	8.7 cm ⁴	2207-2217	2 m	—	—	—
5227	Reinforcement for 2207 - 2217	7.5 cm ⁴	6.3 cm ⁴	2207-2217	2 m	—	—	—
5018	Reinforcement for 4177	0.3 cm ⁴	6.6 cm ⁴	4177	6 m	—	—	—
5038	Reinforcement for 4178 - 4179	4.2 cm ⁴	0.3 cm ⁴	4178-4179	6 m	—	—	—



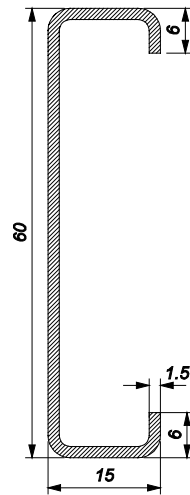
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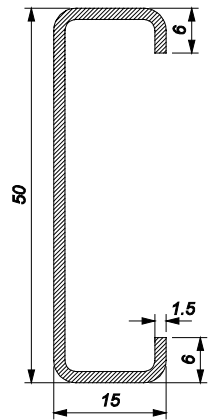
5217








5227

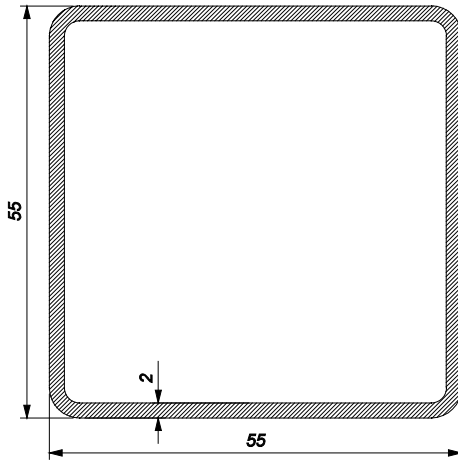


5018

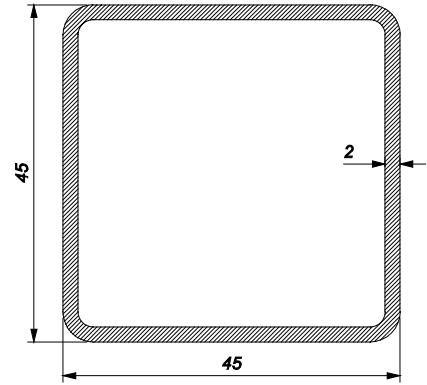


5038

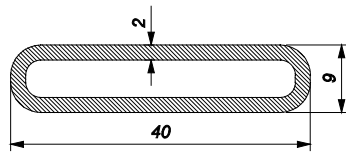
123	abc	I_x	I_y					
5308	Reinforcement for 4173	19.1 cm ⁴	19.1 cm ⁴	4173	6 m	—	—	—
5238	Reinforcement for 9111	10.1 cm ⁴	10.1 cm ⁴	9111	6 m	—	—	—
5100	Reinforcement for 4260	2.4 cm ⁴	0.2 cm ⁴	4260	6 m	—	—	—
5248	Reinforcement for 4153	1.6 cm ⁴	1.6 cm ⁴	4253	6 m	—	—	—
5398	Reinforcement for 4181	94.4 cm ⁴	0.2 cm ⁴	4181	6 m	—	—	—



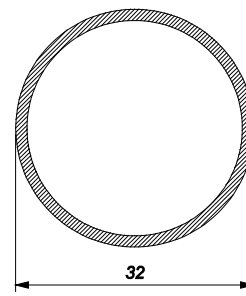
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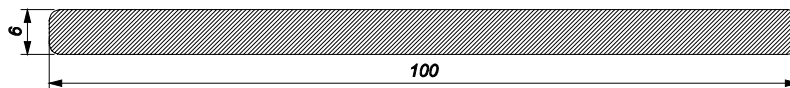
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5100

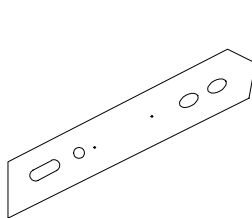


5248

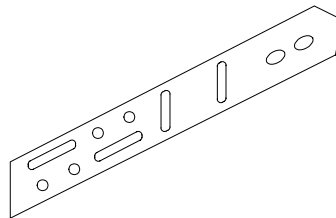


5398

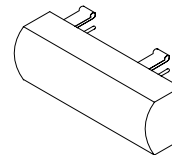
123	abc	lx	ly					
6911	Fixing lug 140 mm	—	—	—	1 stuk	—	—	—
6921	Fixing lug 170 mm	—	—	—	1 stuk	—	—	—
6000	Drainage cover	—	—	—	1 stuk	—	—	—
6001	Locating wedge for vent section	—	—	—	1 stuk	—	—	—
6852	Gasket	—	—	—	700 m/rol	—	—	—
6305	Black glass supporting block	—	—	—	1 stuk	—	—	—
6300	Glass supporting block 7 mm	—	—	—	1 stuk	—	—	—
6301	Glass supporting block 11 mm	—	—	—	1 stuk	—	—	—
6557	Weldable block for reinforcement	—	—	2207-2217	1 stuk	—	—	—
6955	Alu mechanical joint	—	—	2510	1 stuk	—	—	—
6956	L-profile for mechanical joint	—	—	2510-2511	1 paar	—	—	—
6957	Alu mechanical joint	—	—	2511	1 stuk	—	—	—



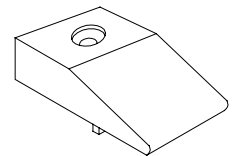
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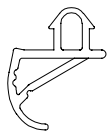
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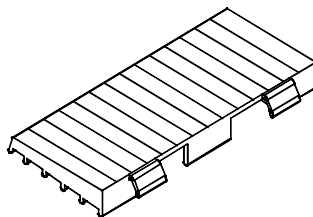
6000



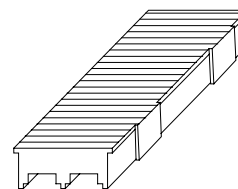
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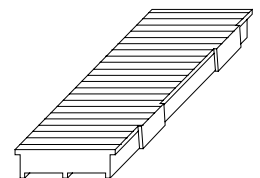
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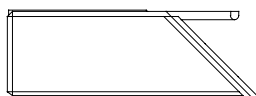
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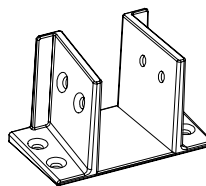
6300



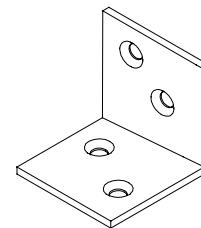
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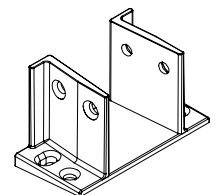
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6955

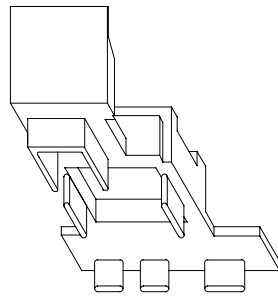


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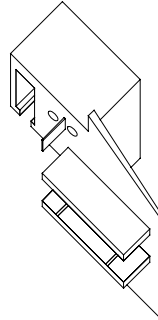


6957

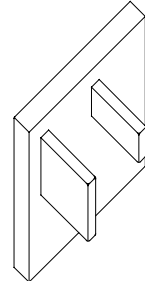
123	abc	lx	ly					
6012	End cap for 2212	—	—	2212	1 paar	—	—	—
6107	End cap for 5907	—	—	5907	1 paar	—	—	—
6117	End cap for 5917	—	—	5917	1 paar	—	—	—
6181	End cap for 4181	—	—	4181	1 stuk	—	—	—
6222	End cap for 4292	—	—	4292	1 paar	—	—	—
6590	End cap for 4290	—	—	4290	1 paar	—	—	—
6591	End cap for 4291	—	—	4291	—	—	—	—
6529	End cap for 5929	—	—	5929	—	—	—	—



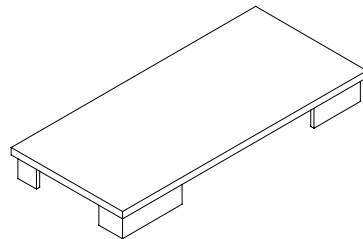
6012



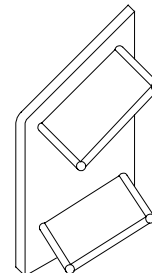
6107



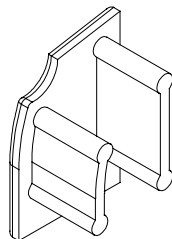
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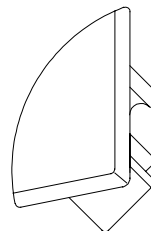
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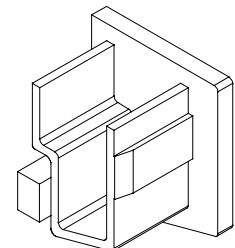
6222



6590



6591



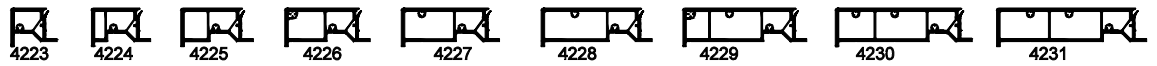
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3. COMPLEMENTARY PROFILES

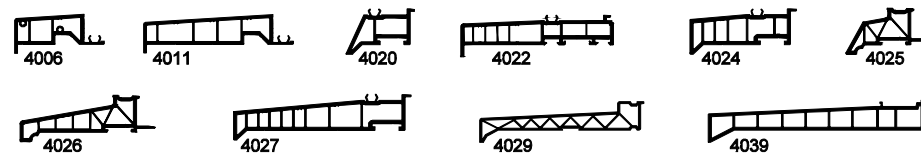
3. COMPLEMENTARY PROFILES

3.1. WINDOW AND DOOR FINISHING SYSTEMS

PROFILE PACKERS



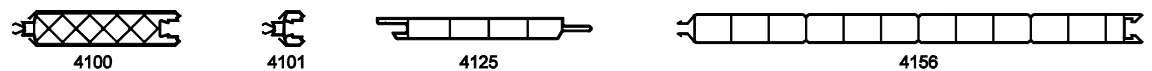
CILLS



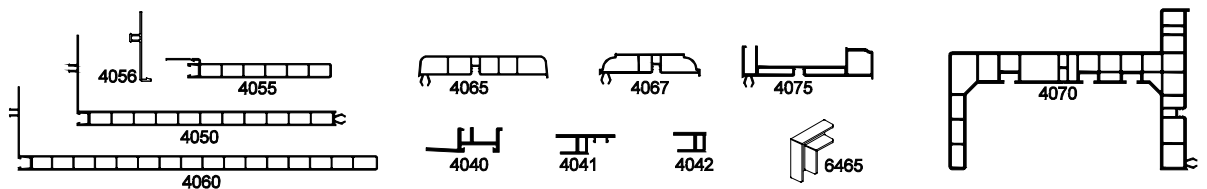
GEORGEAN BARS



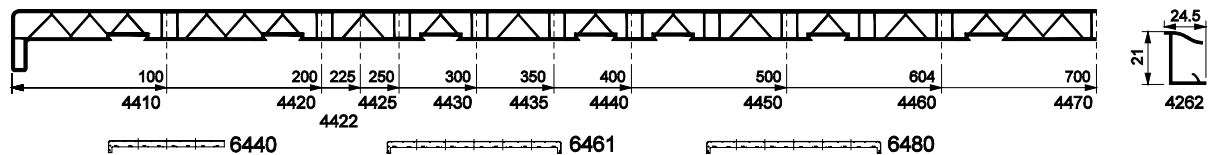
PANELS



3.2. WINDOW FINISHING SYSTEMS



3.3. WINDOW BOARDS

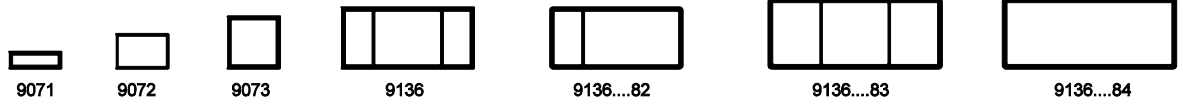


3.4. ROLLER SHUTTER SYSTEMS

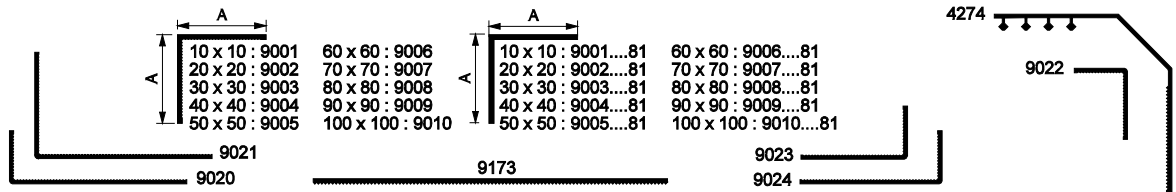


3.5. UNIVERSAL PROFILES

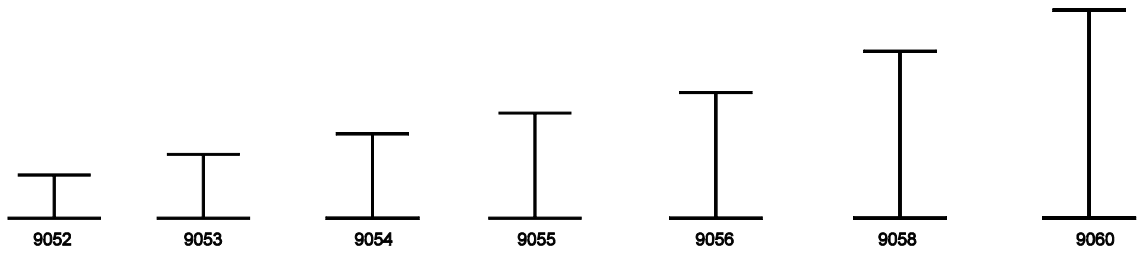
TUBE PROFILES



CORNER PROFILES



I-PROFILES



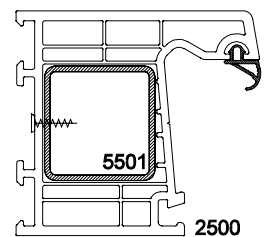
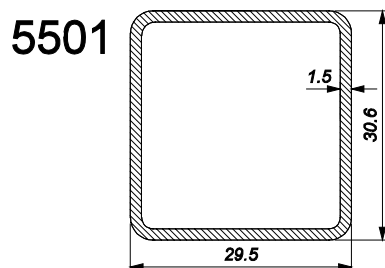
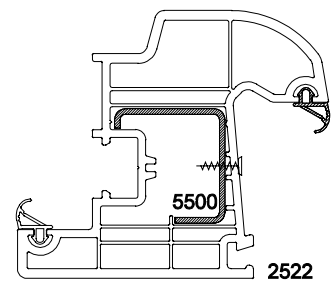
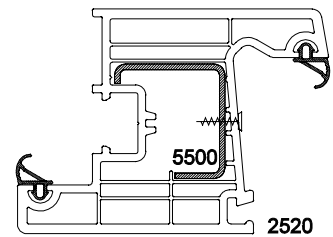
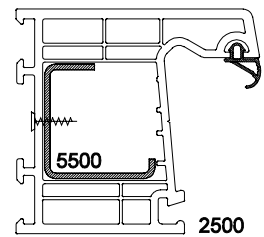
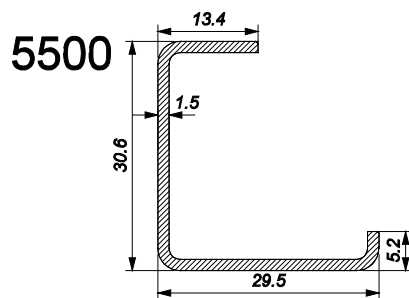
4. DRAWINGS

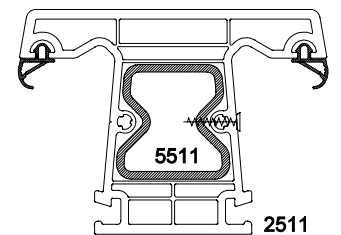
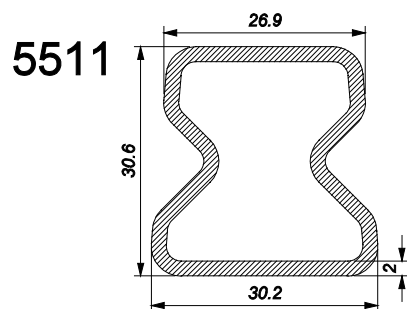
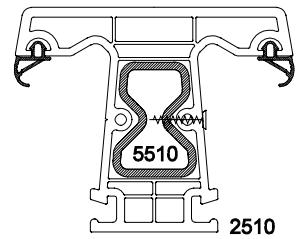
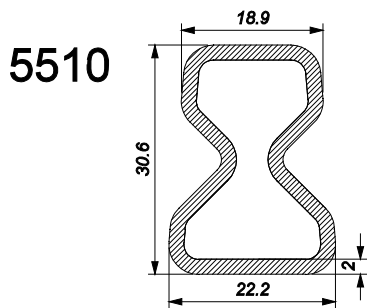
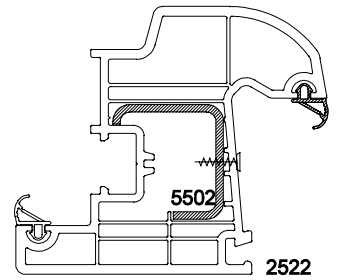
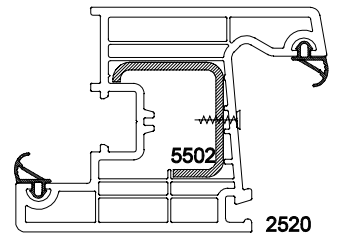
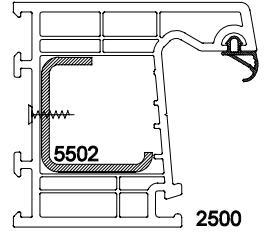
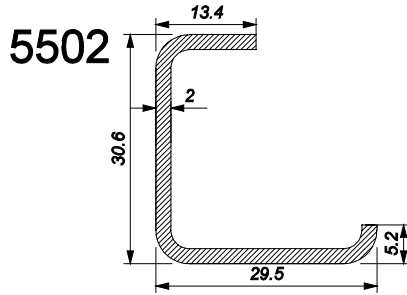
4. DRAWINGS

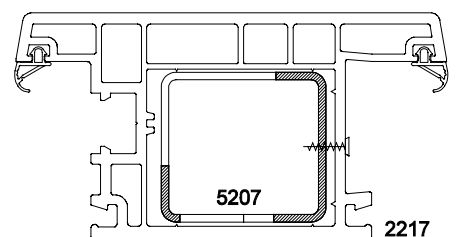
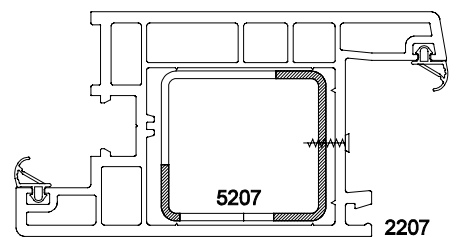
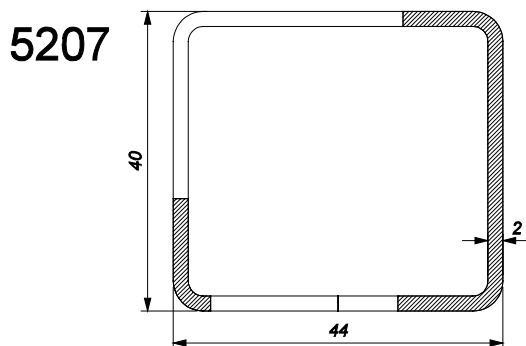
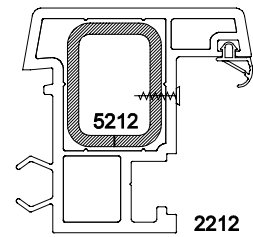
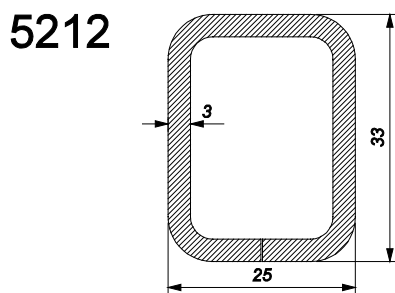
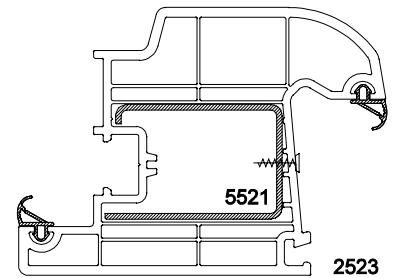
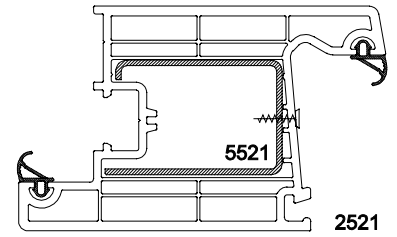
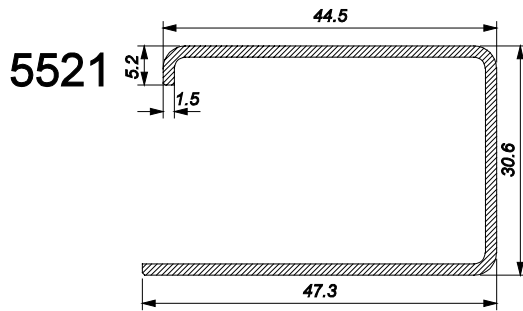
4.1 COMBINATION DRAWINGS

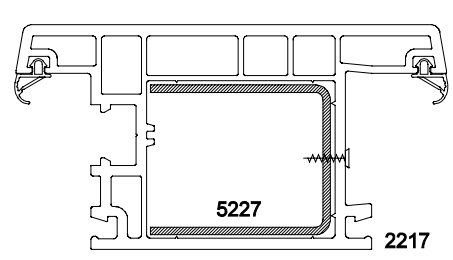
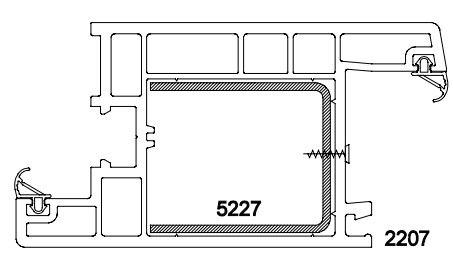
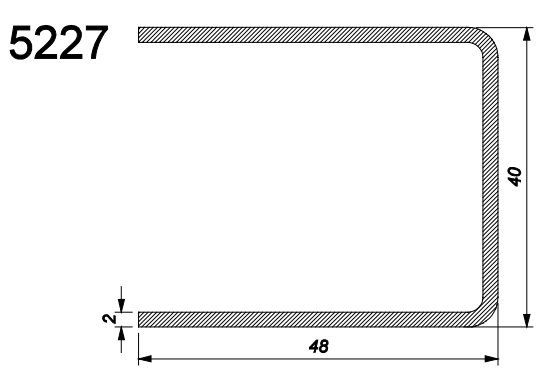
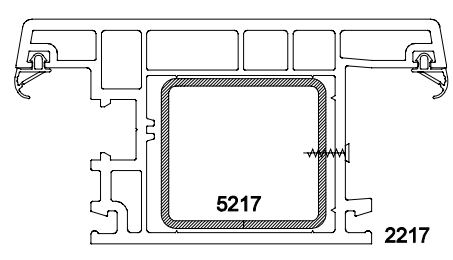
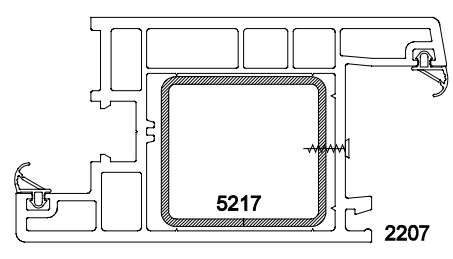
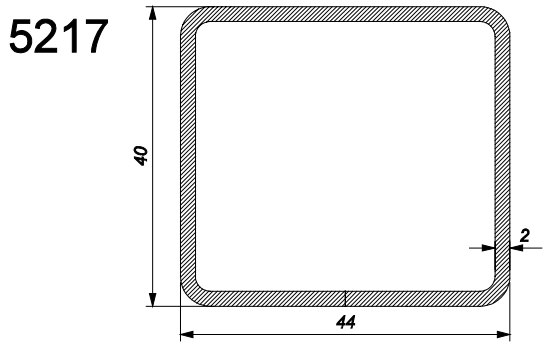
4.1.1. REINFORCEMENTS

SCALE 1/1 - SCALE 1/2

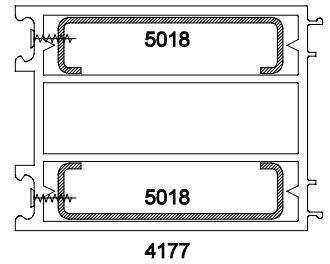
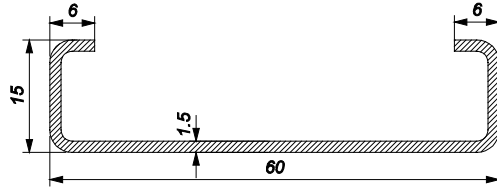




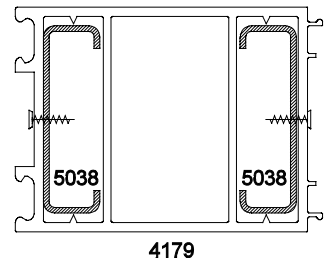
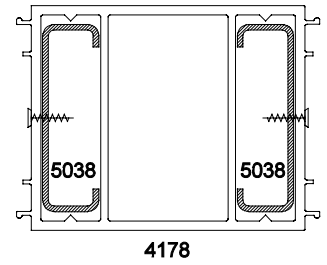
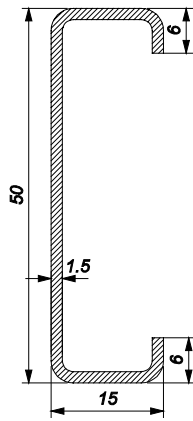




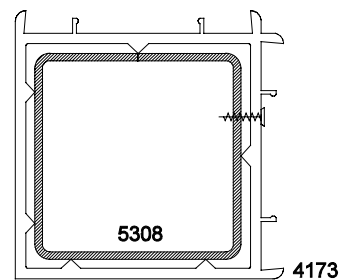
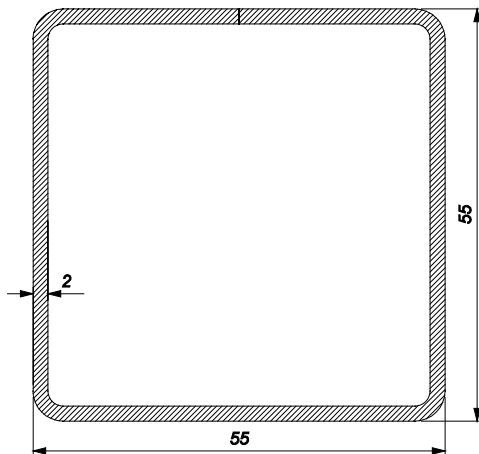
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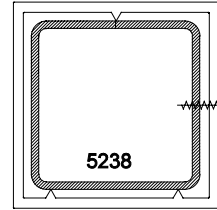
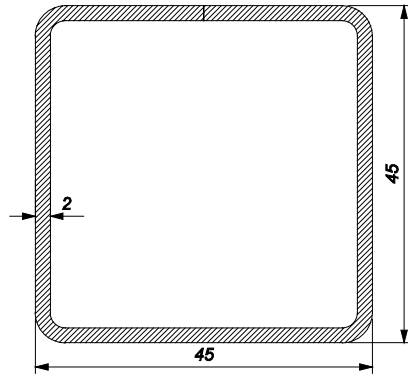
5038



5308

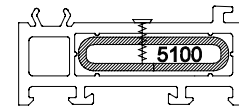
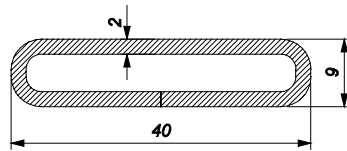


5238



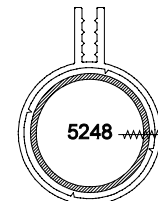
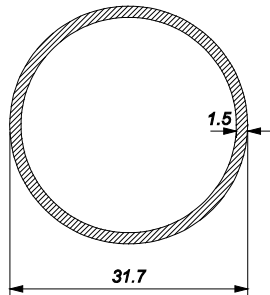
9111

5100



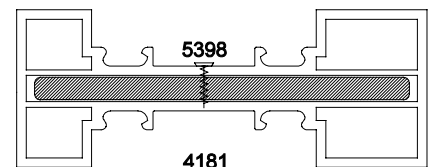
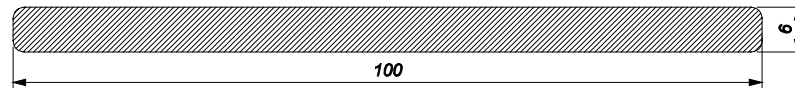
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5248



4153

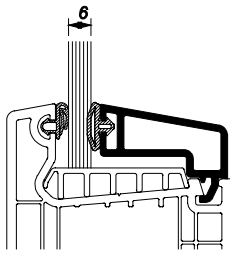
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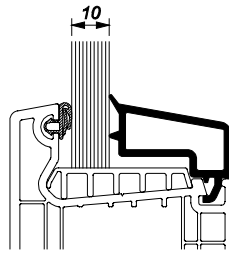
4181

4.1.2. GLAZING BEADS

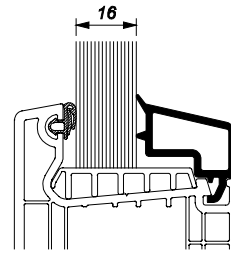
SCALE 1/2



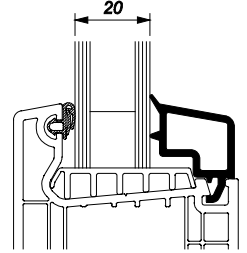
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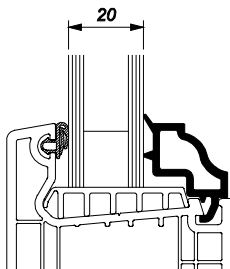
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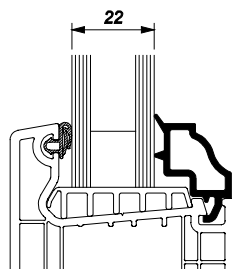
2316



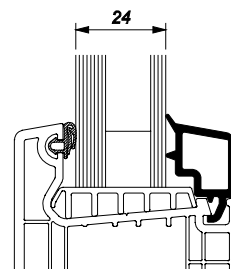
2320



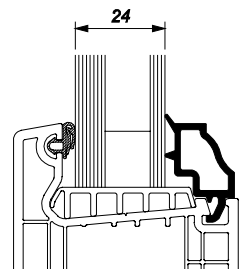
2321



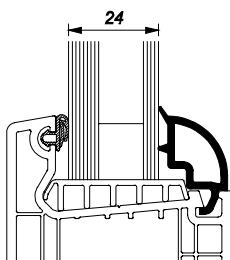
2323



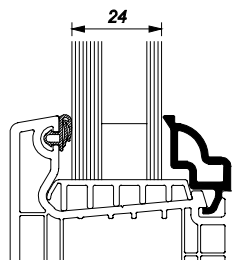
2324



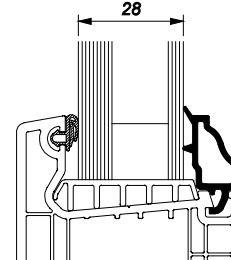
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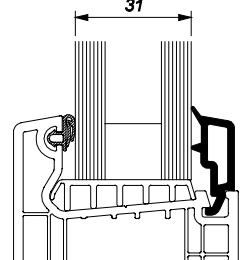
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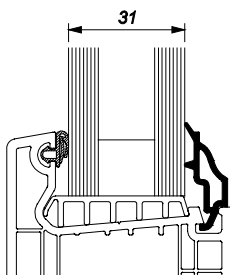
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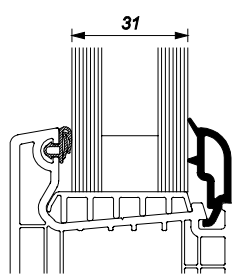
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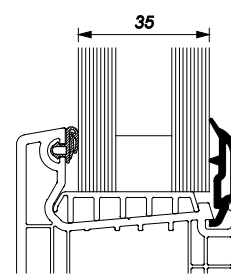
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2332



2333

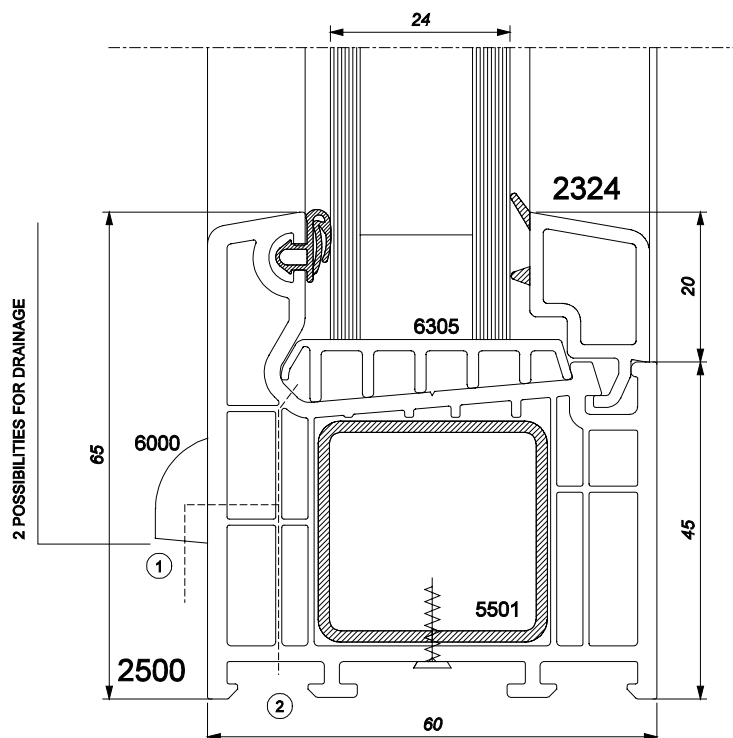
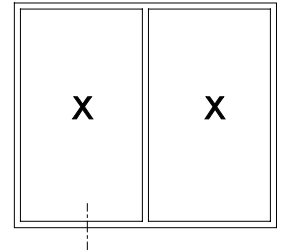
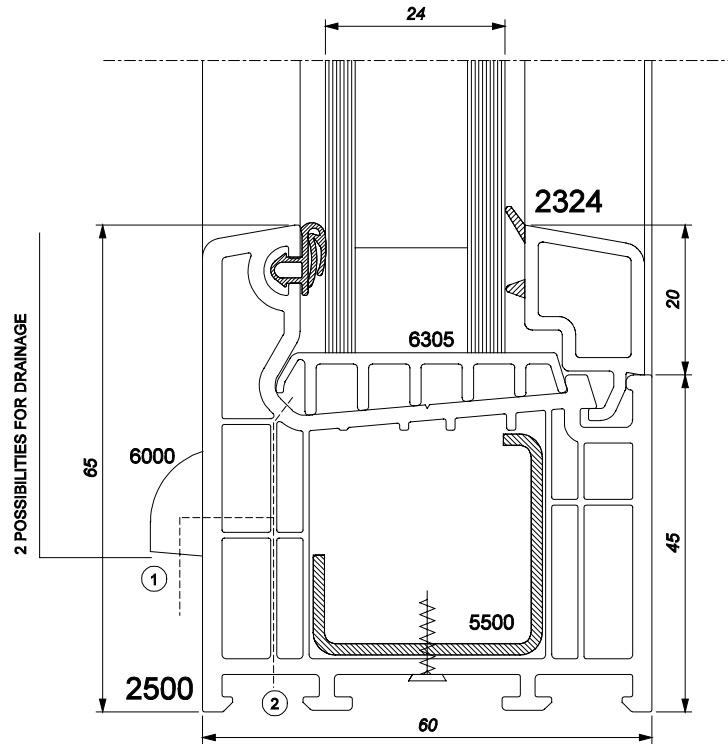


2337

4.2. SECTION DRAWINGS

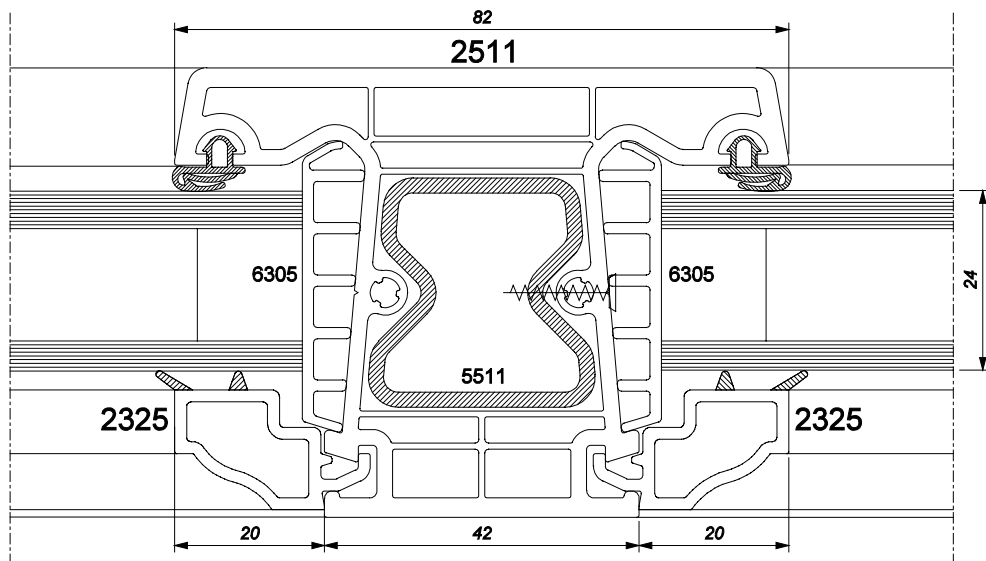
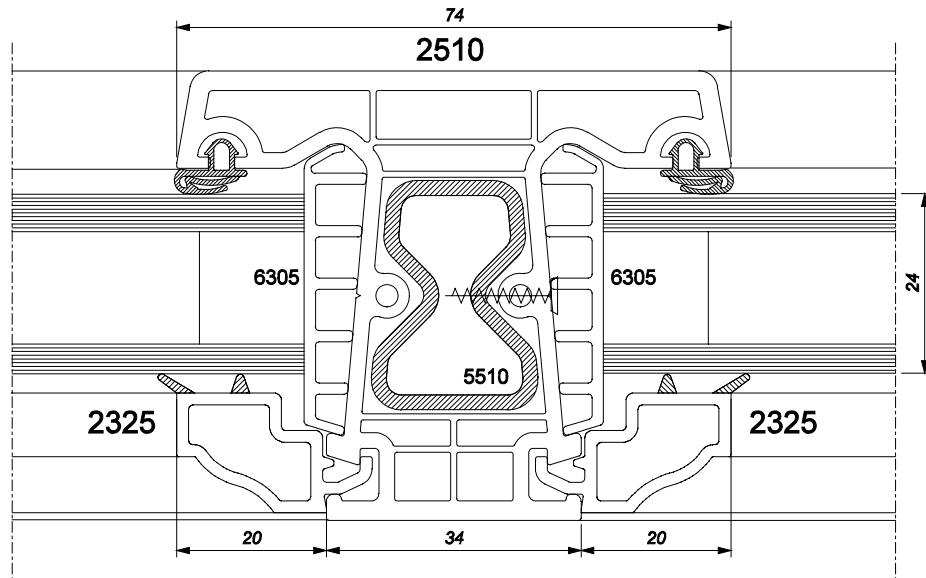
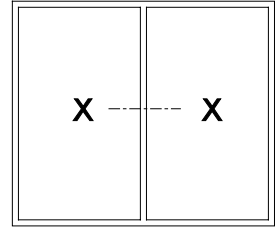
4.2.1. VERTICAL SECTION FRAME PROFILE

SCALE 1/1



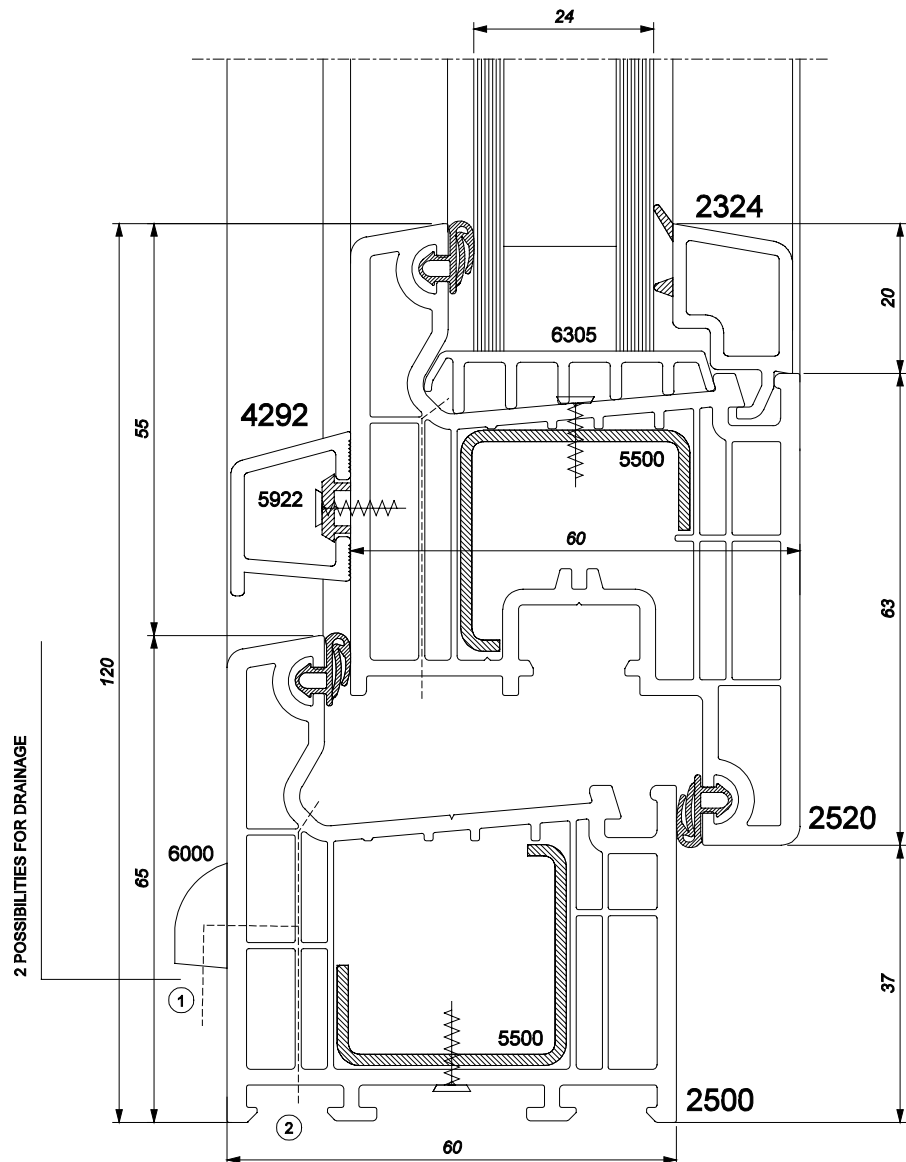
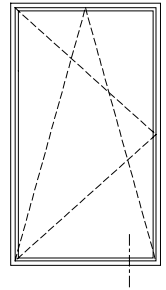
4.2.2. HORIZONTAL SECTION TRANSOM

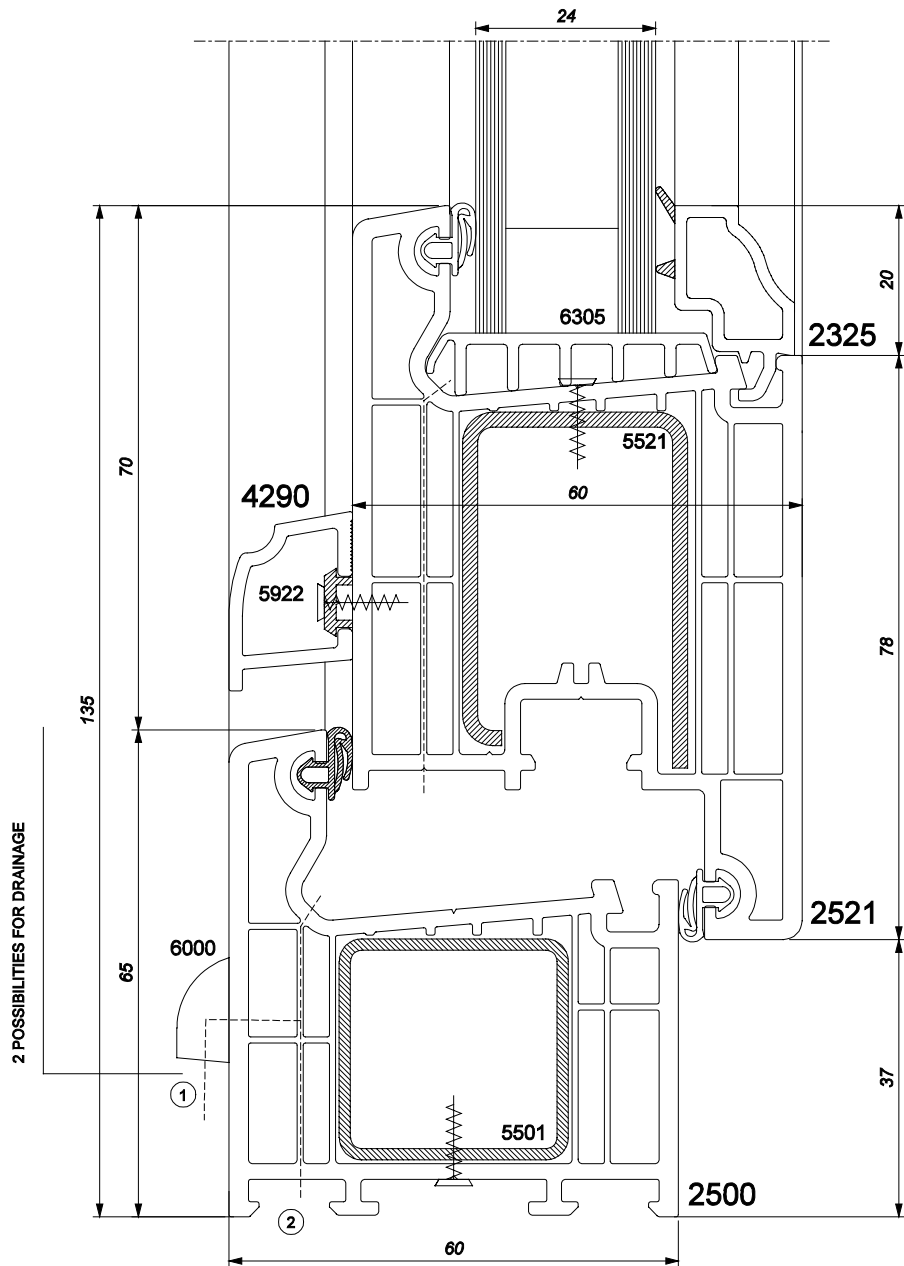
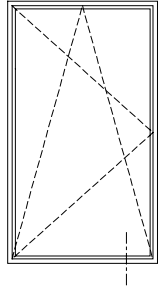
SCALE 1/1

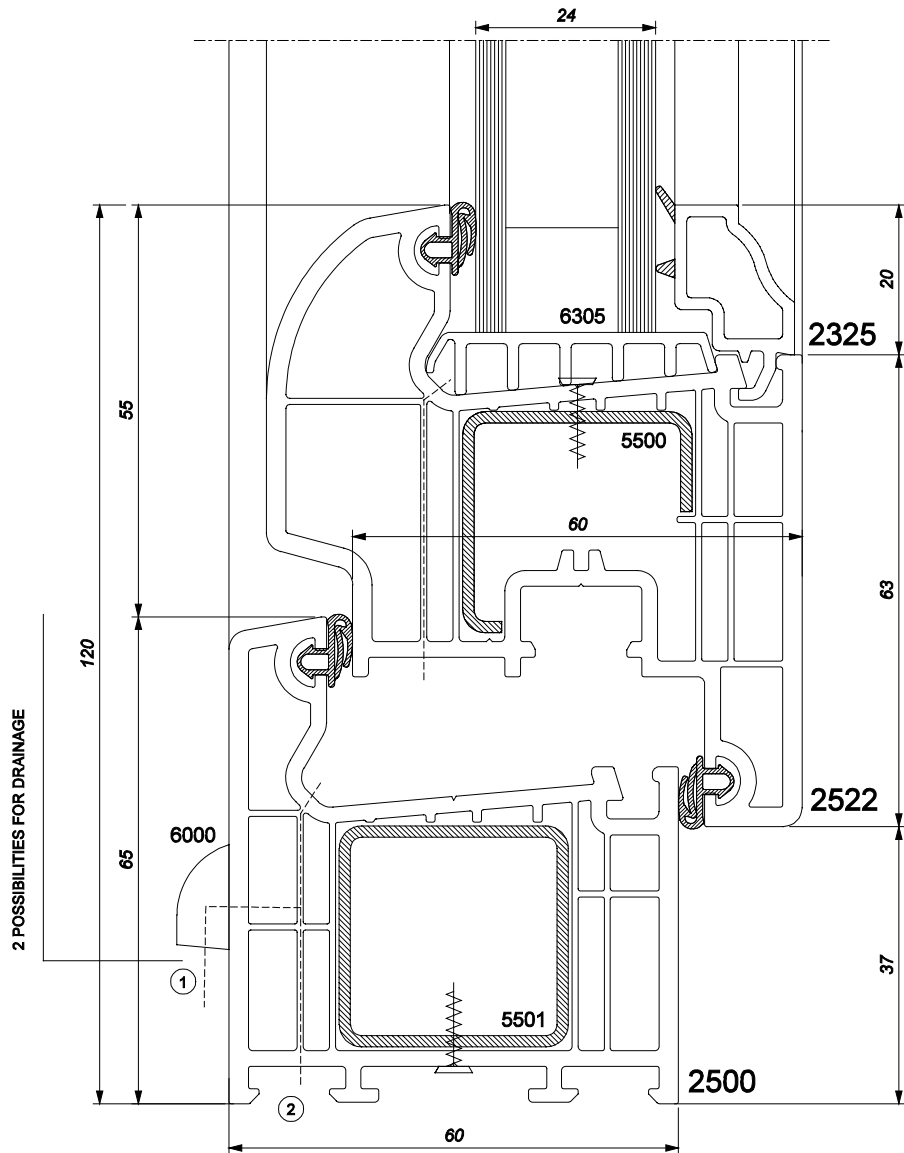
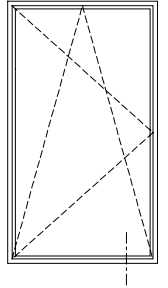


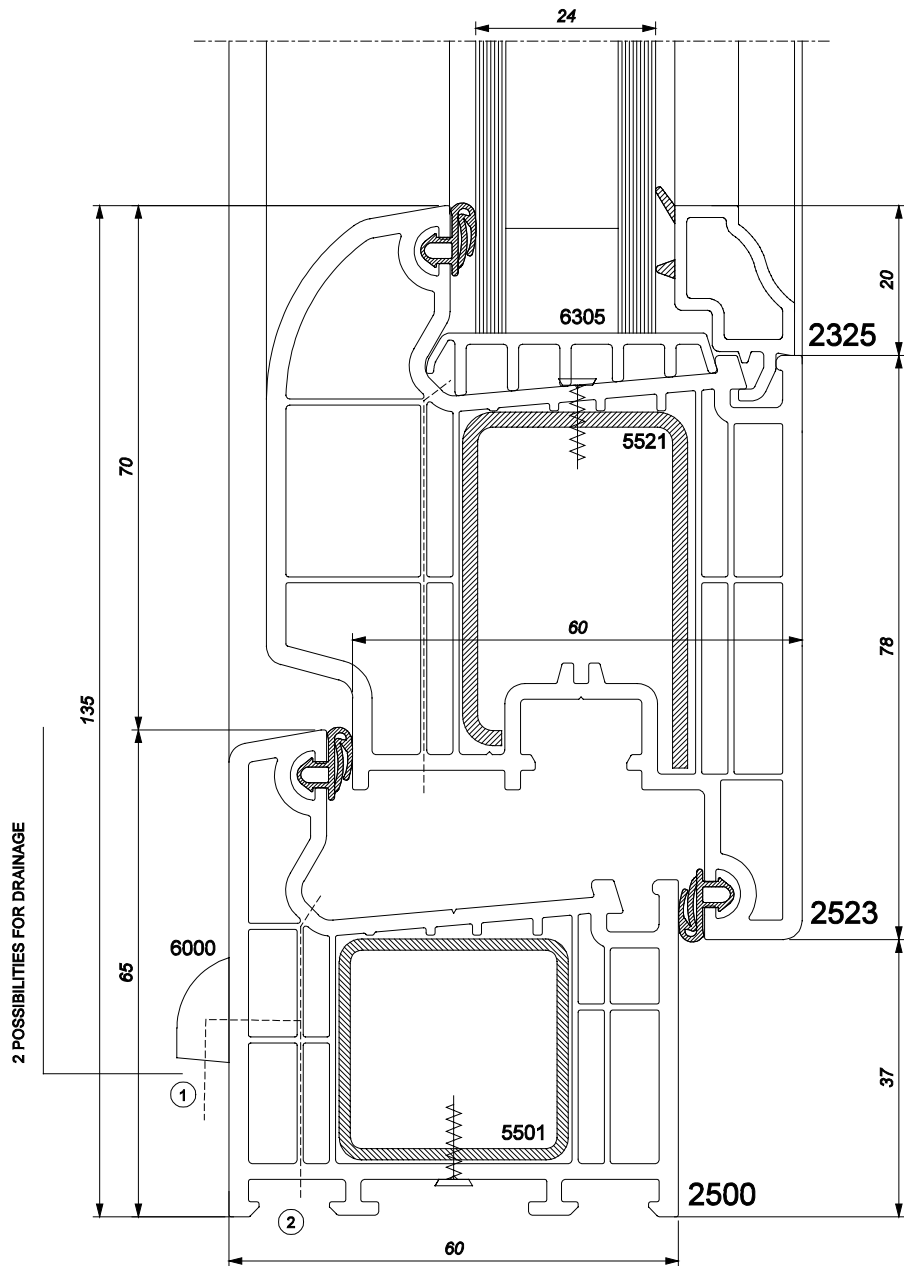
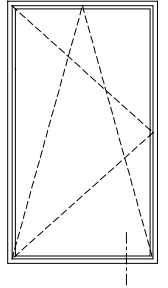
4.2.3. VERTICAL SECTION FRAME AND SASH PROFILE

SCALE 1/1



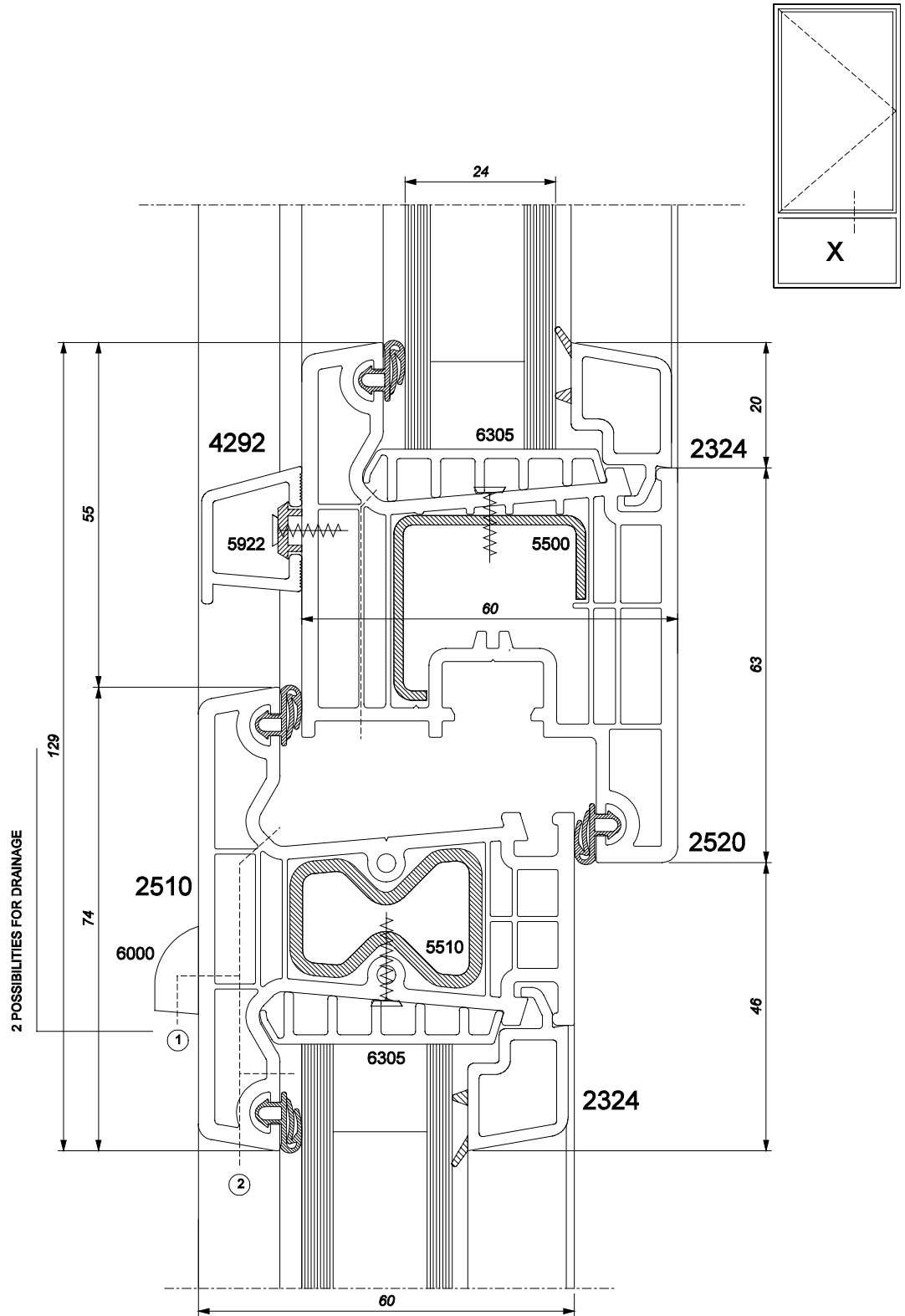


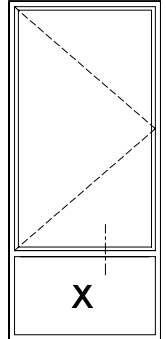
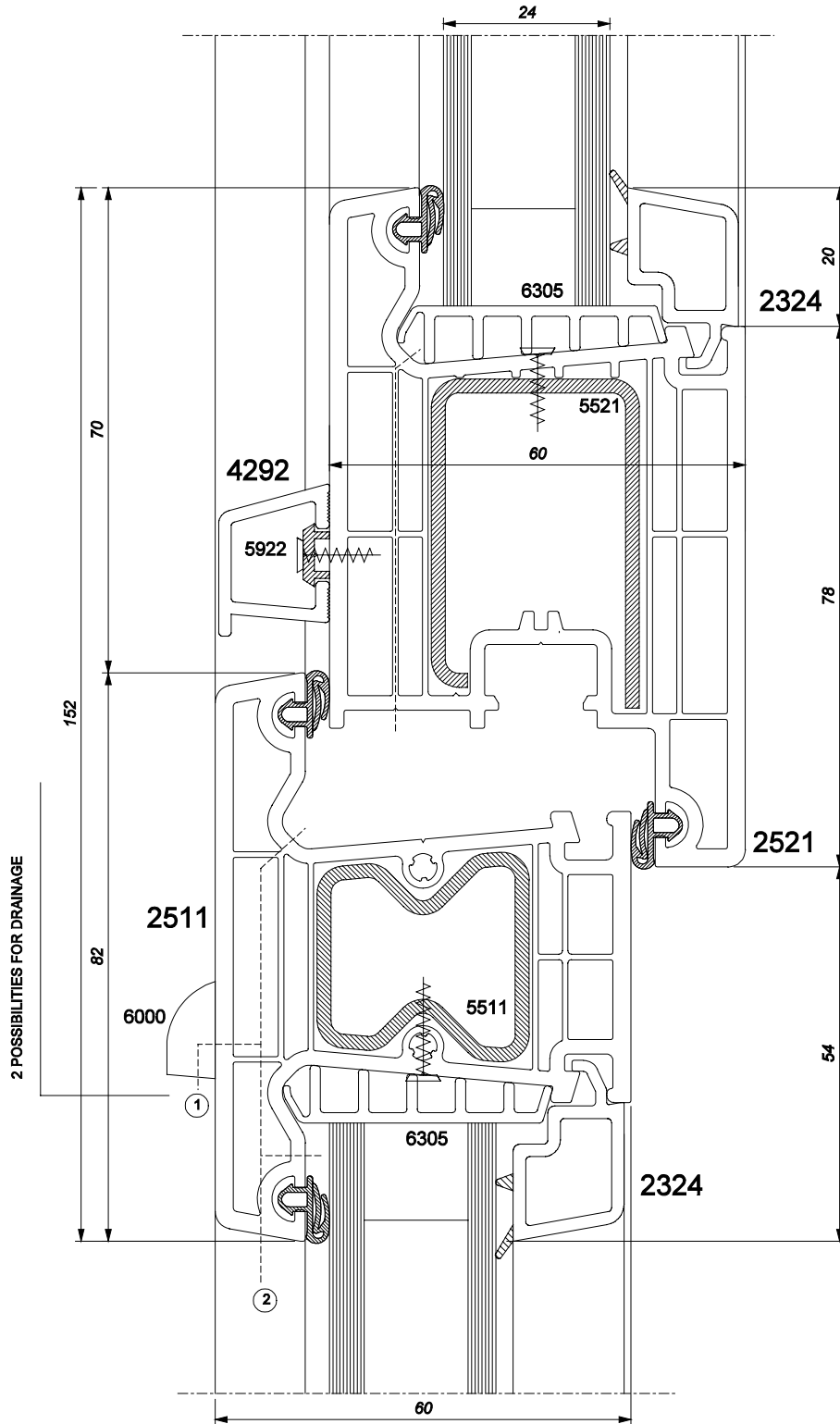


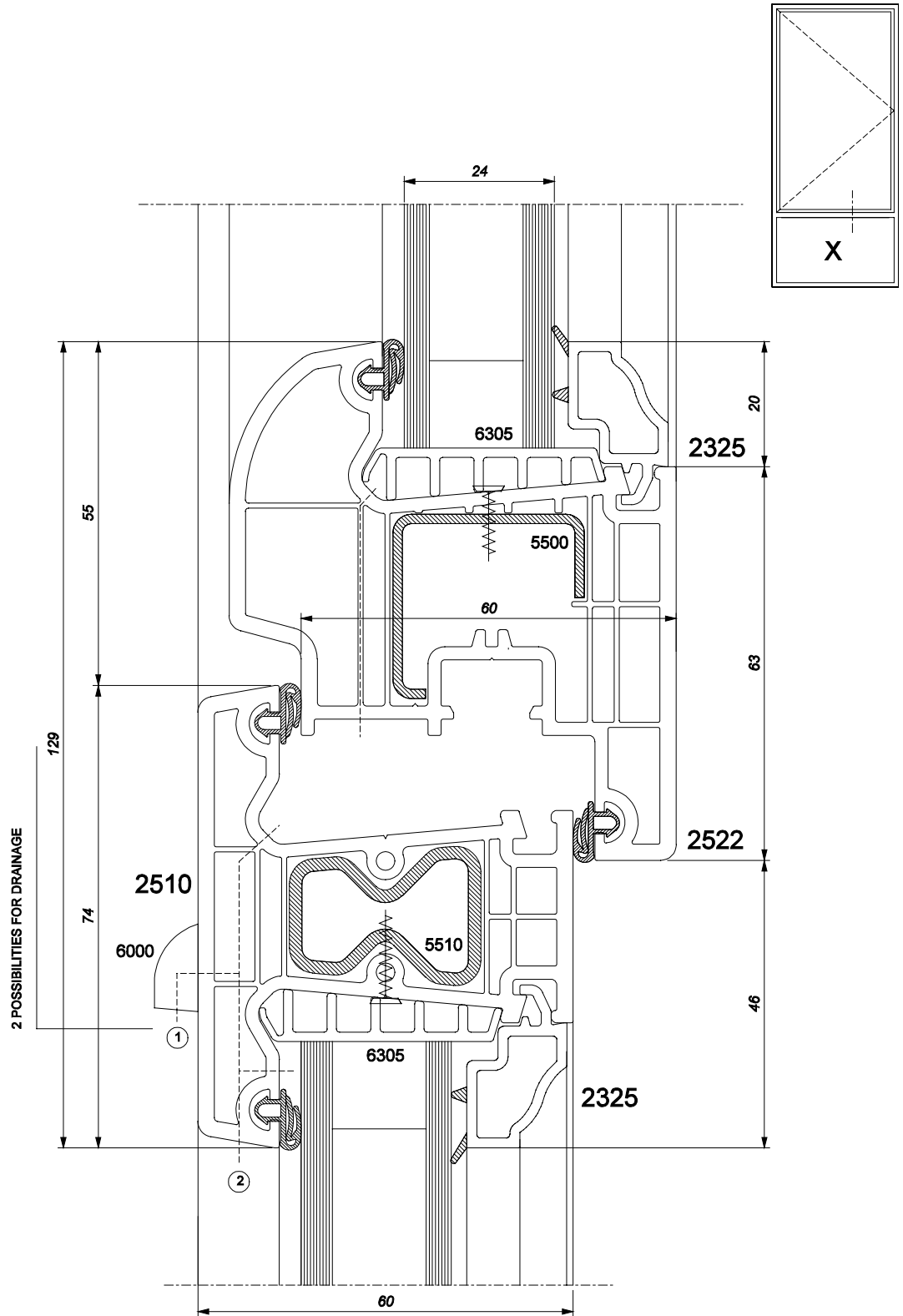


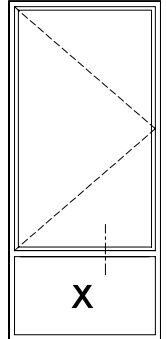
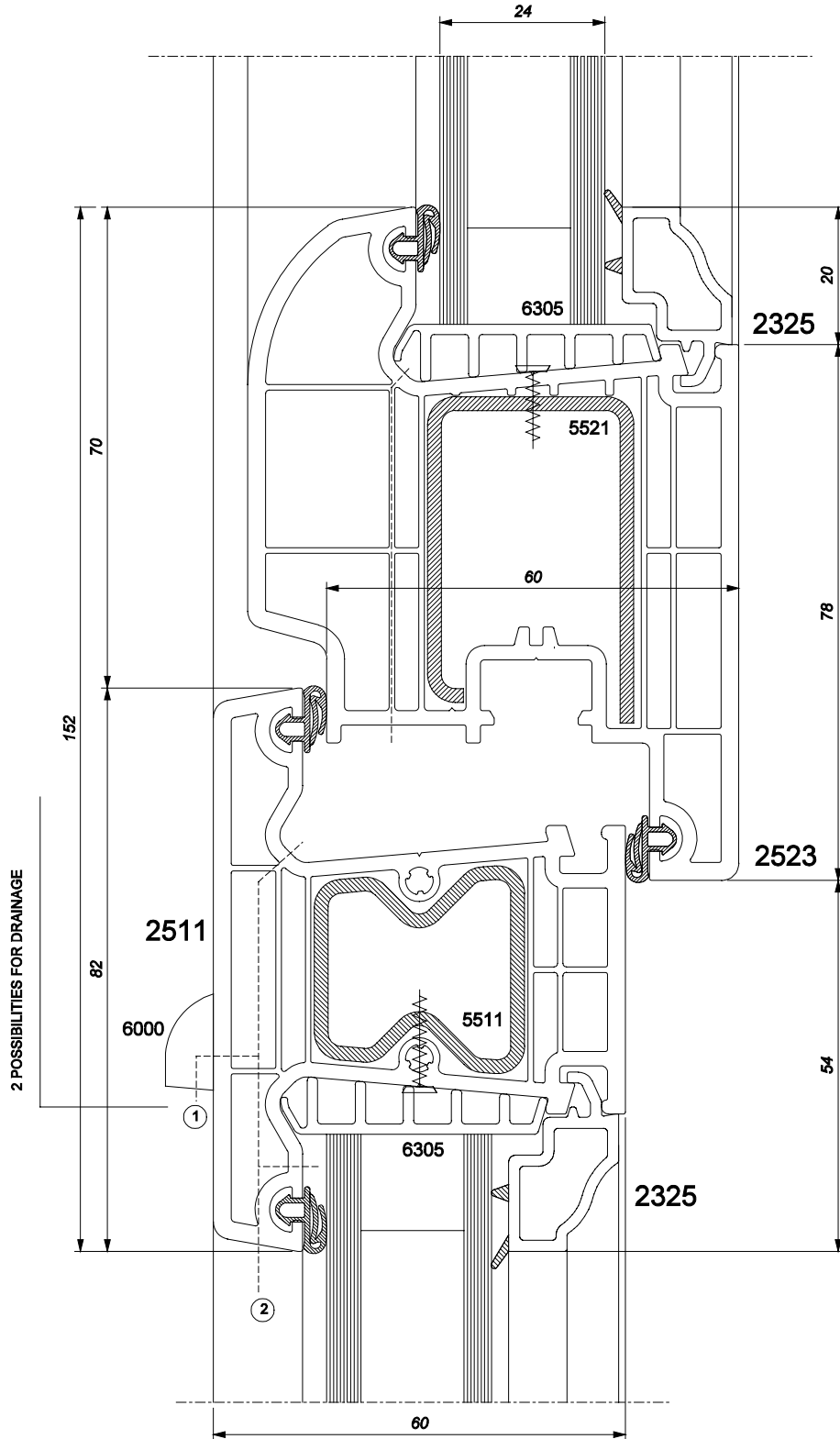
4.2.4. VERTICAL SECTION T-PROFILE AND SASH PROFILE

SCALE 1/1



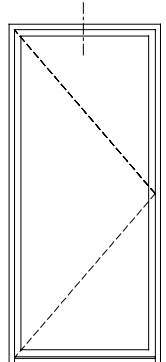
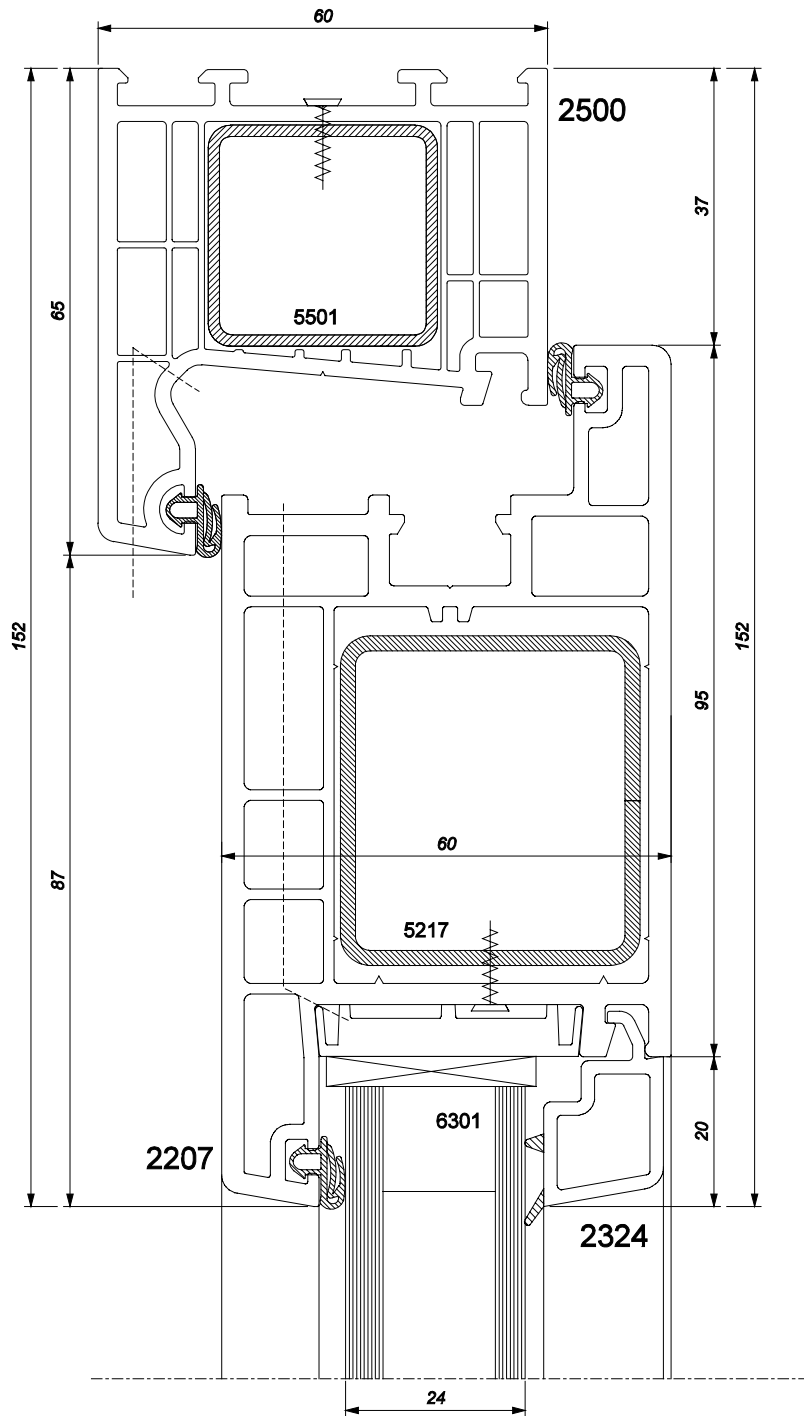






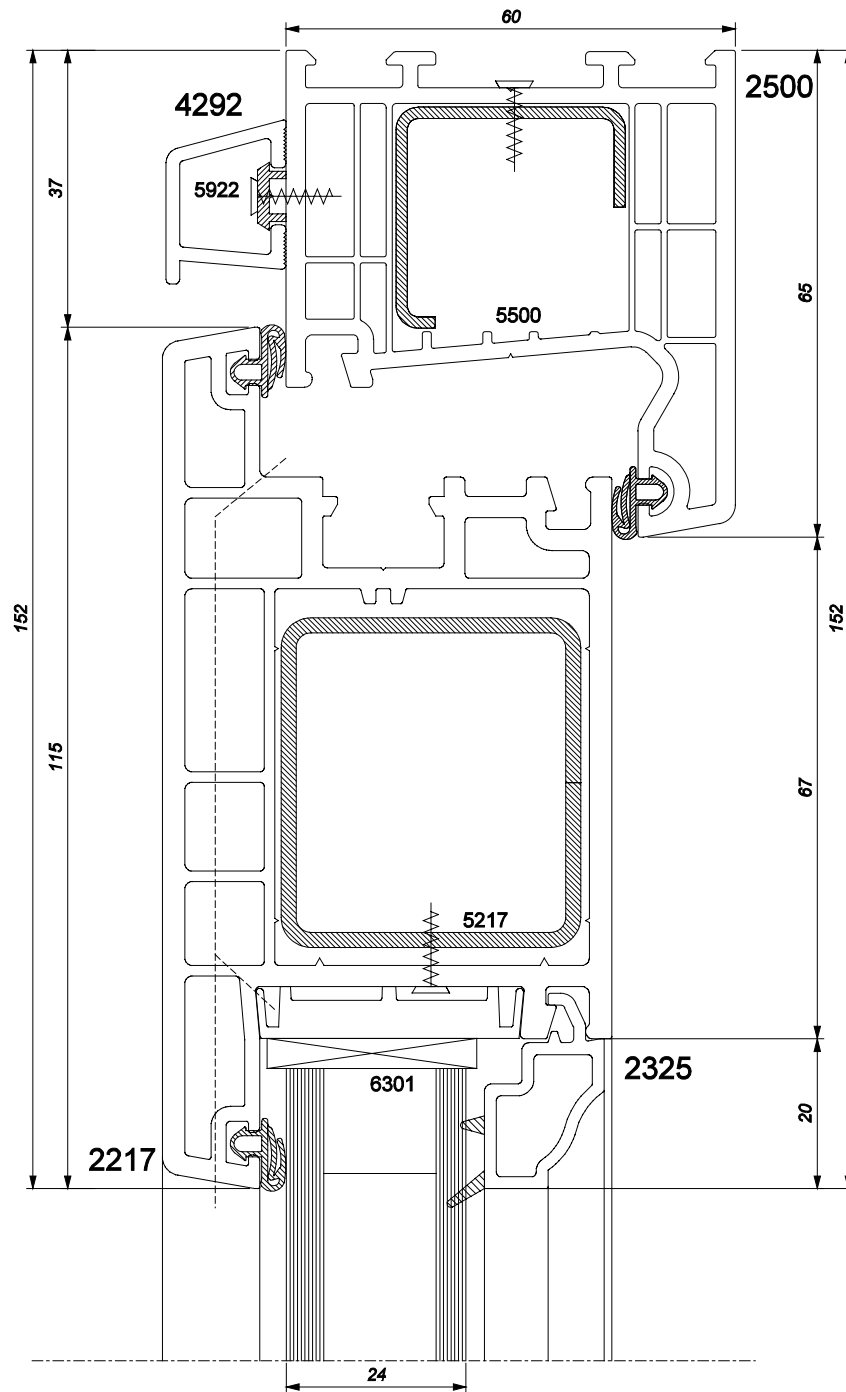
4.2.5. VERTICAL SECTION INWARDS OPENING DOOR

SCALE 1/1



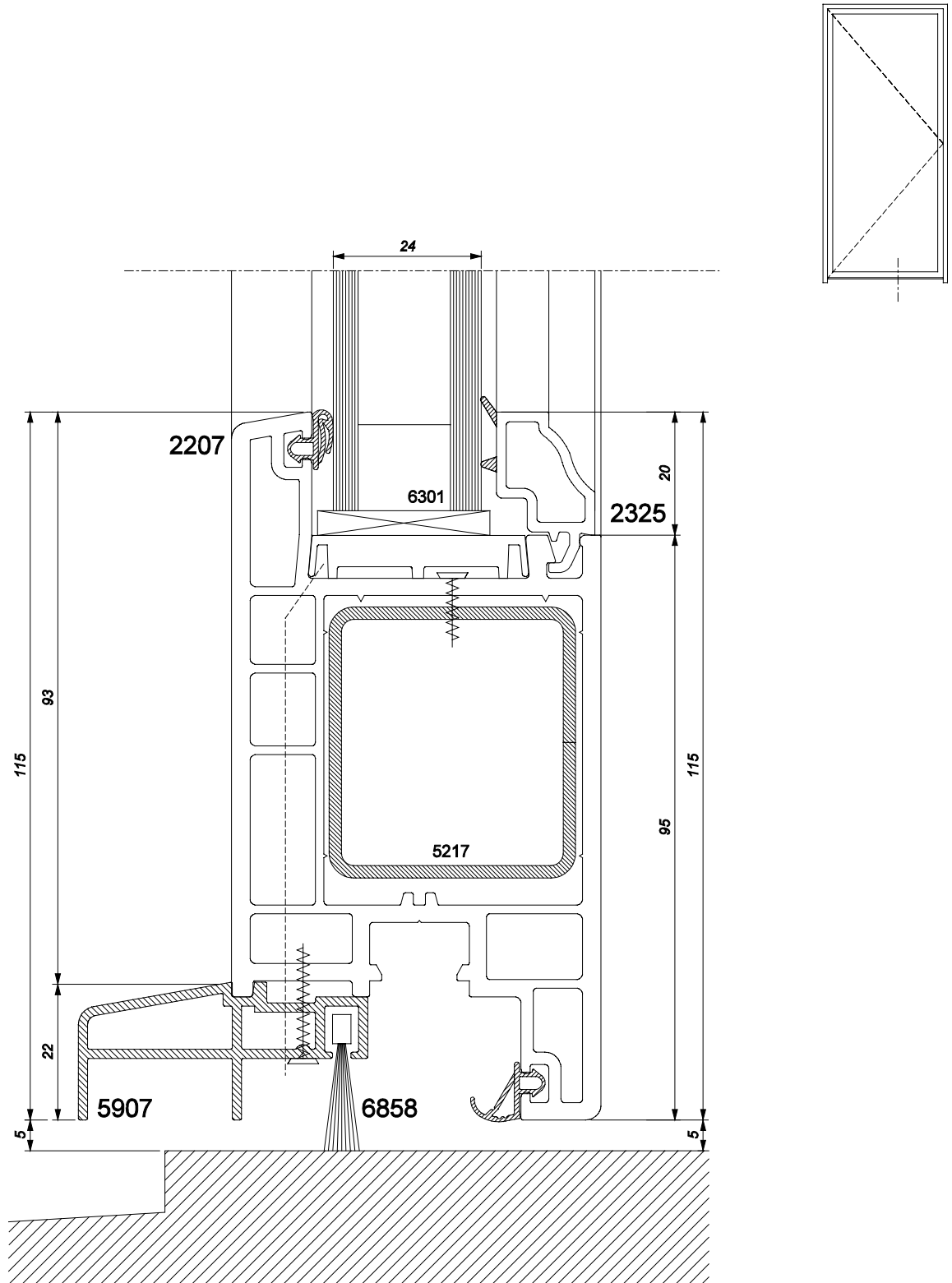
4.2.6. VERTICAL SECTION OUTWARDS OPENING DOOR

SCALE 1/1



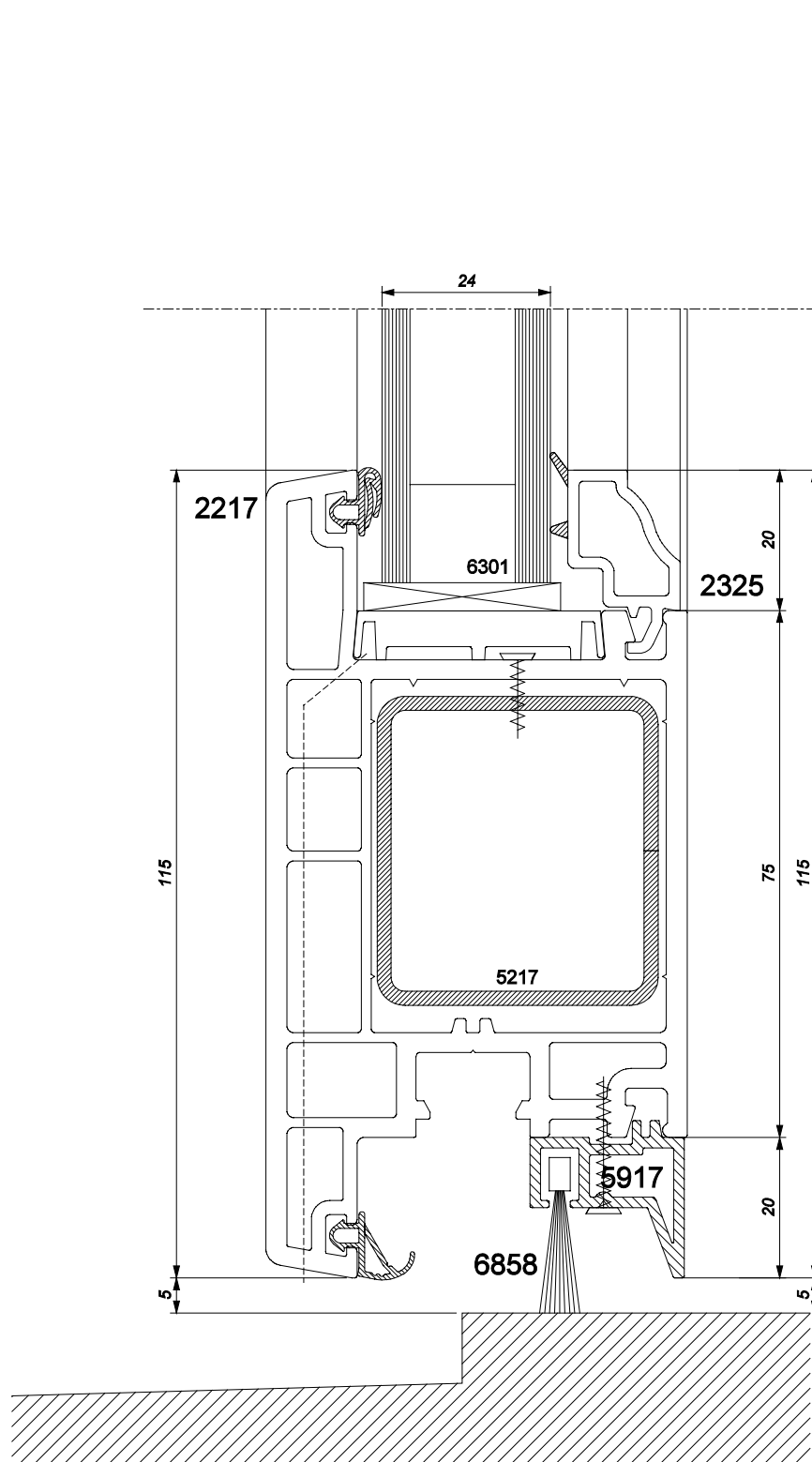
4.2.7. VERTICAL SECTION INWARDS OPENING DOOR

SCALE 1/1



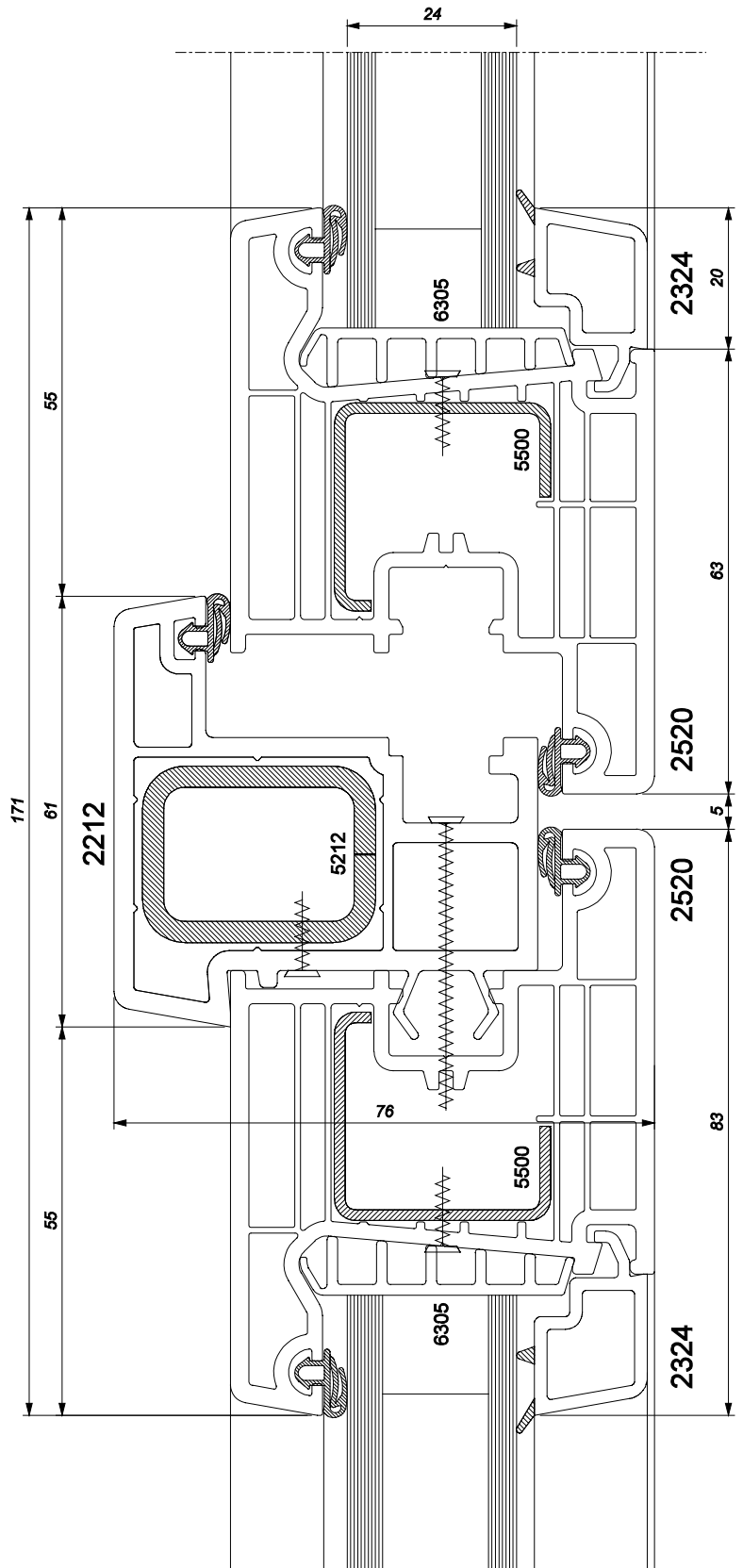
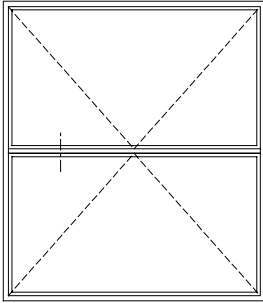
4.2.8. VERTICAL SECTION OUTWARDS OPENING DOOR

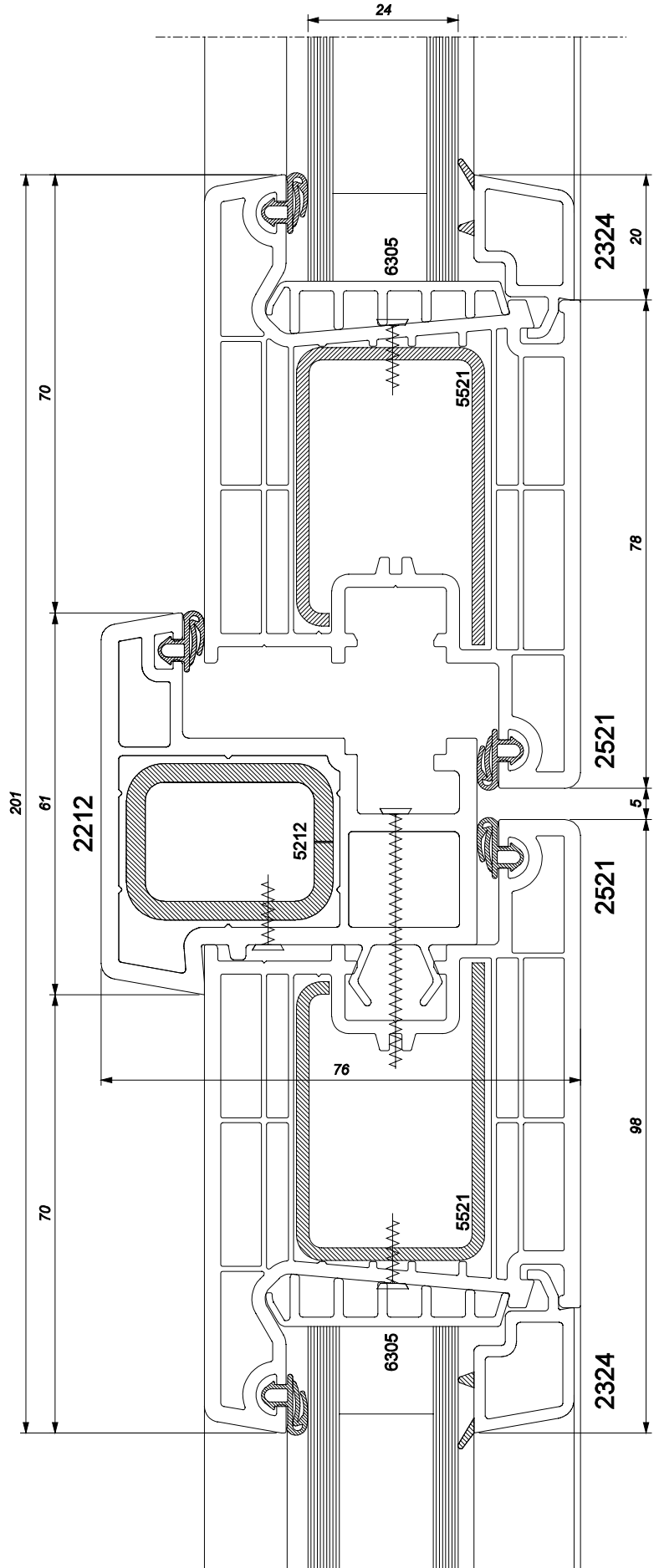
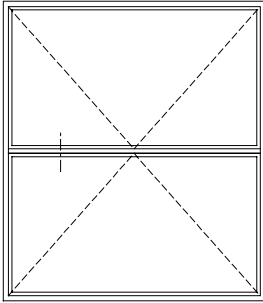
SCALE 1/1

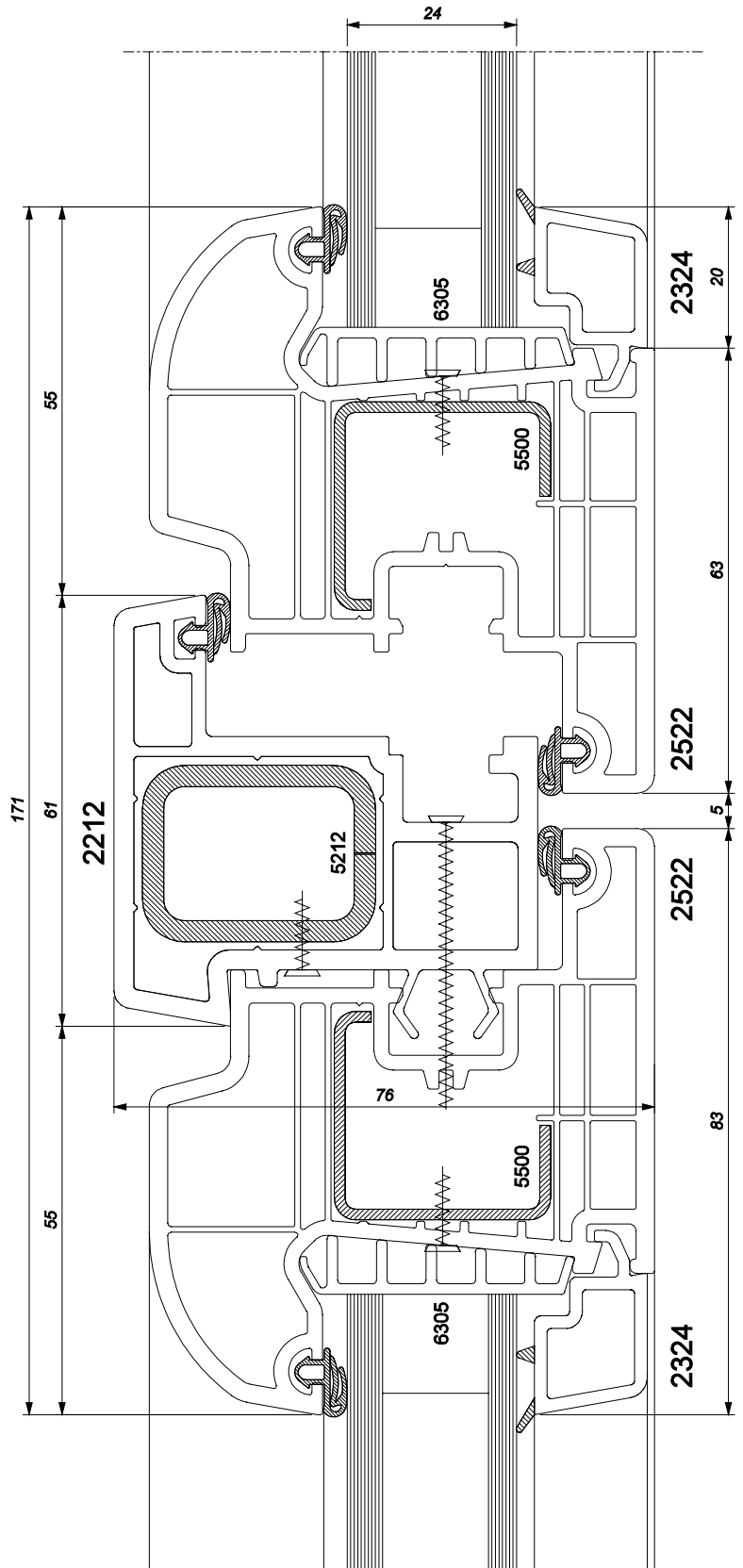
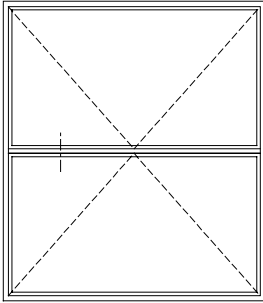


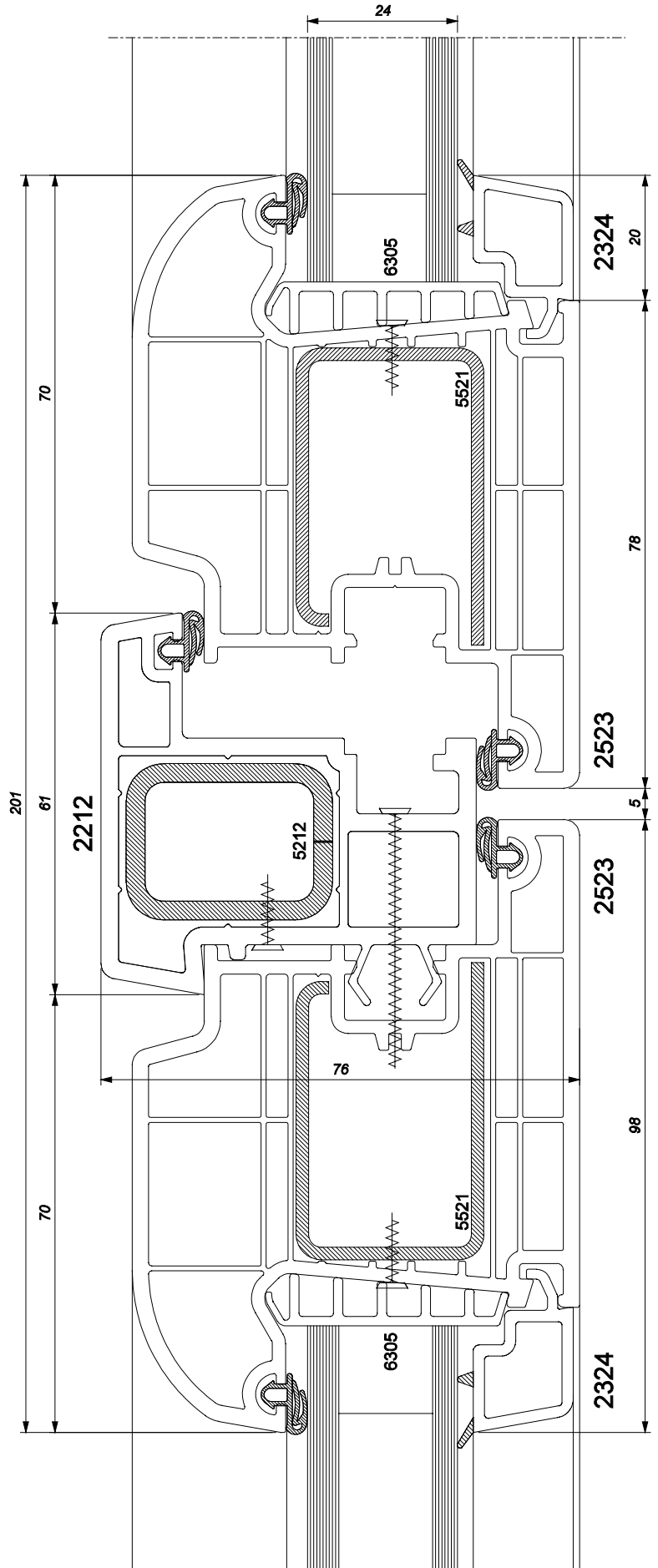
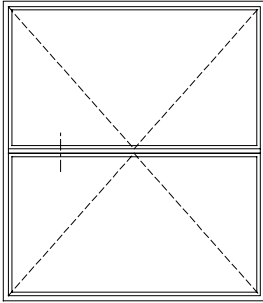
4.2.9. HORIZONTAL SECTION DOUBLE OPENING WINDOW

SCALE 1/1



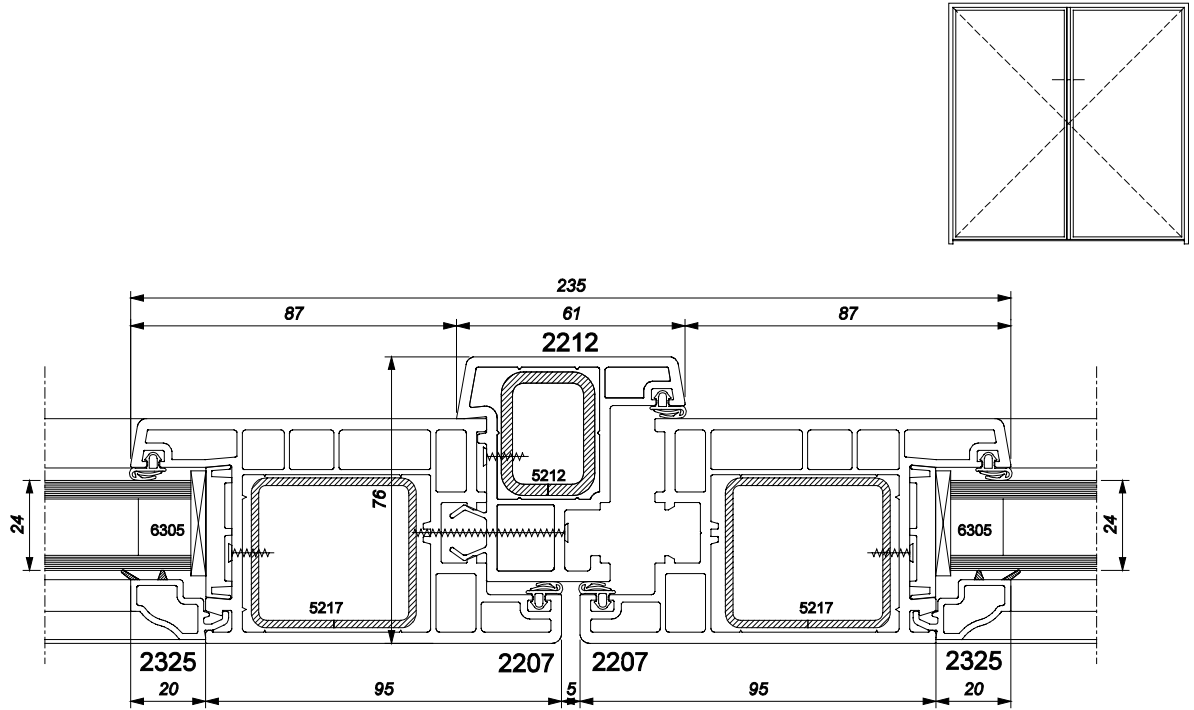






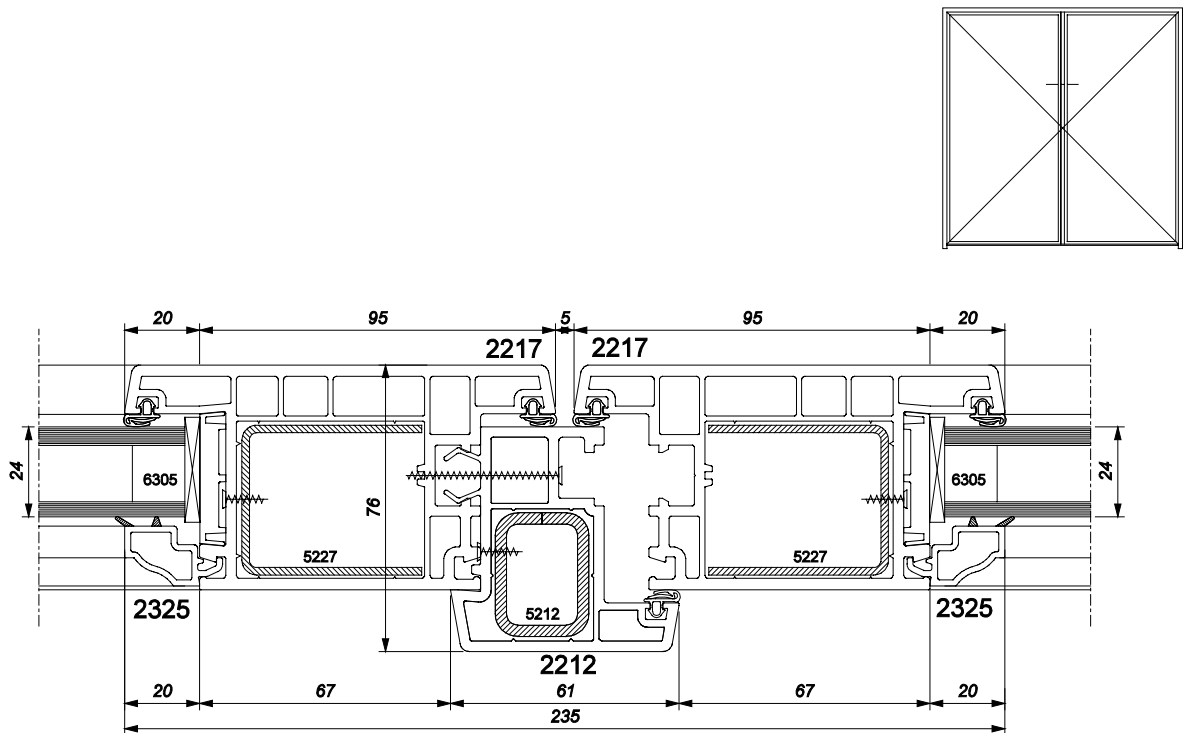
4.2.10. HORIZONTAL SECTION DOUBLE INWARDS OPENING DOOR

SCALE 1/2



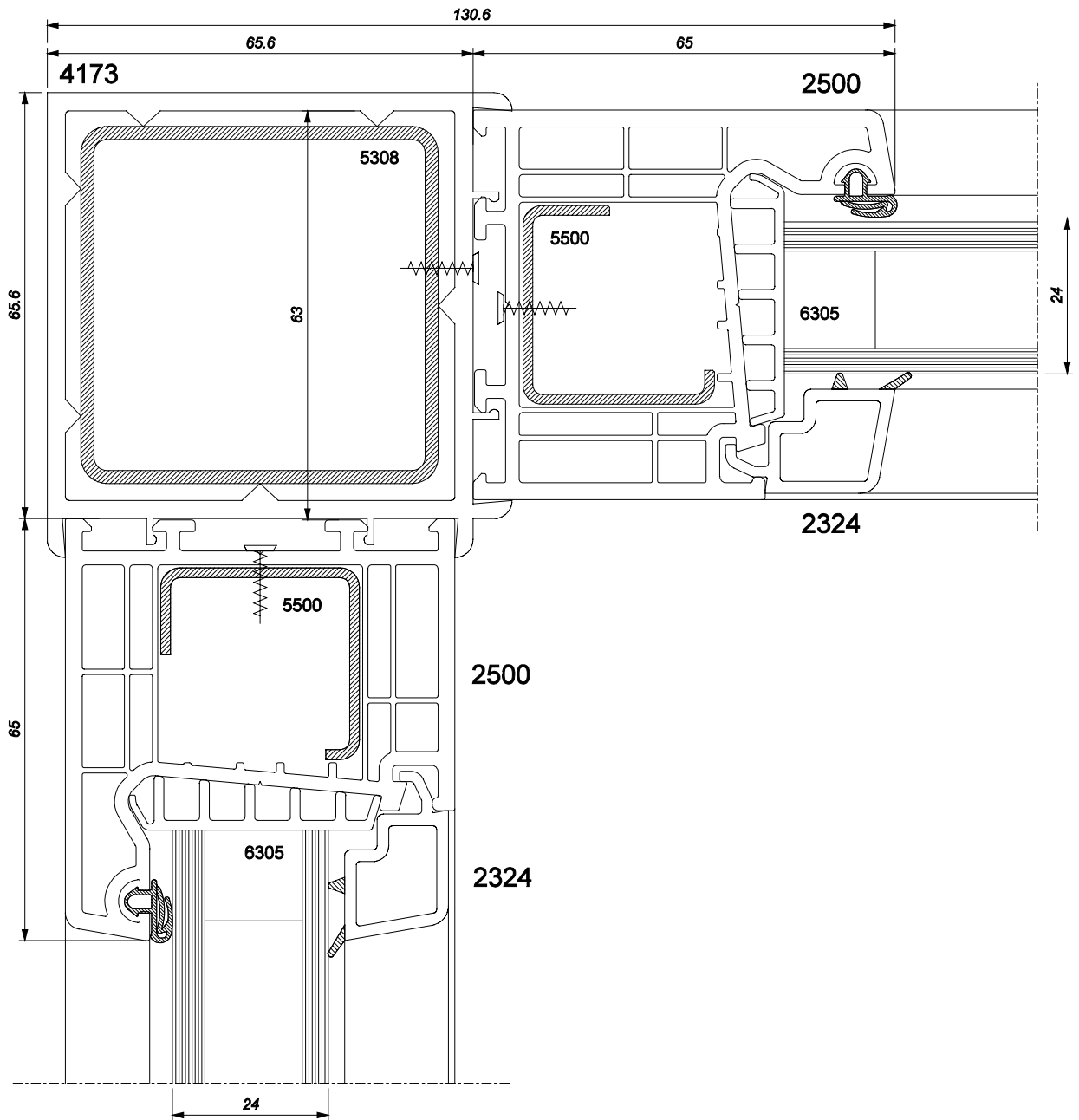
4.2.11. HORIZONTAL SECTION DOUBLE OUTWARDS OPENING DOOR

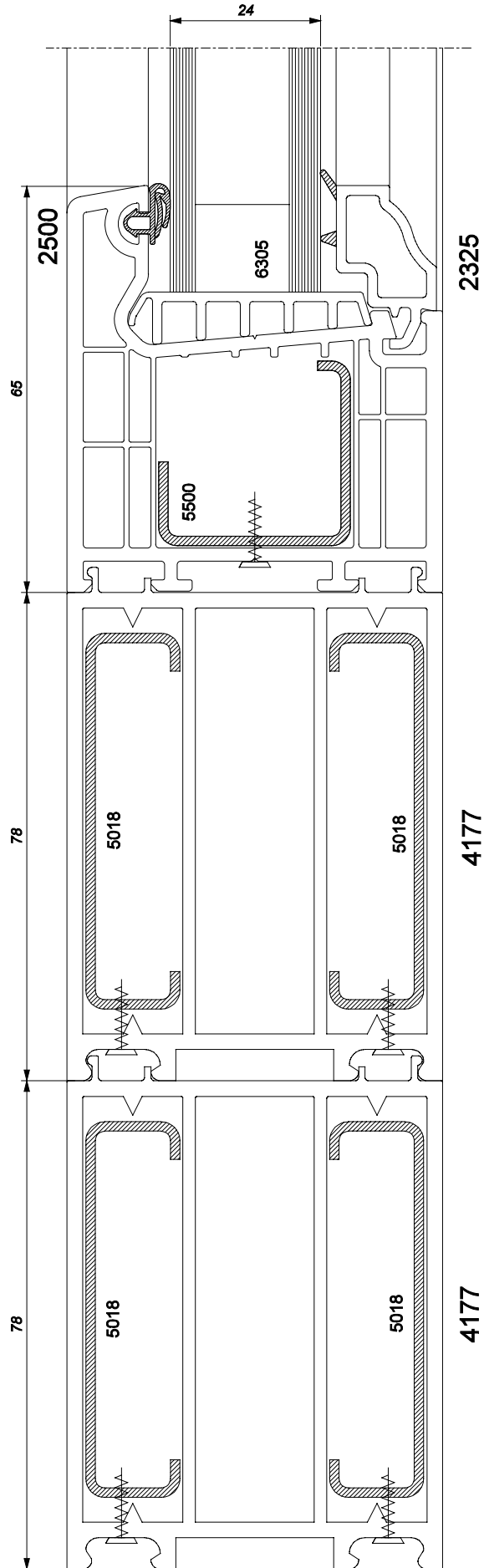
SCALE 1/2

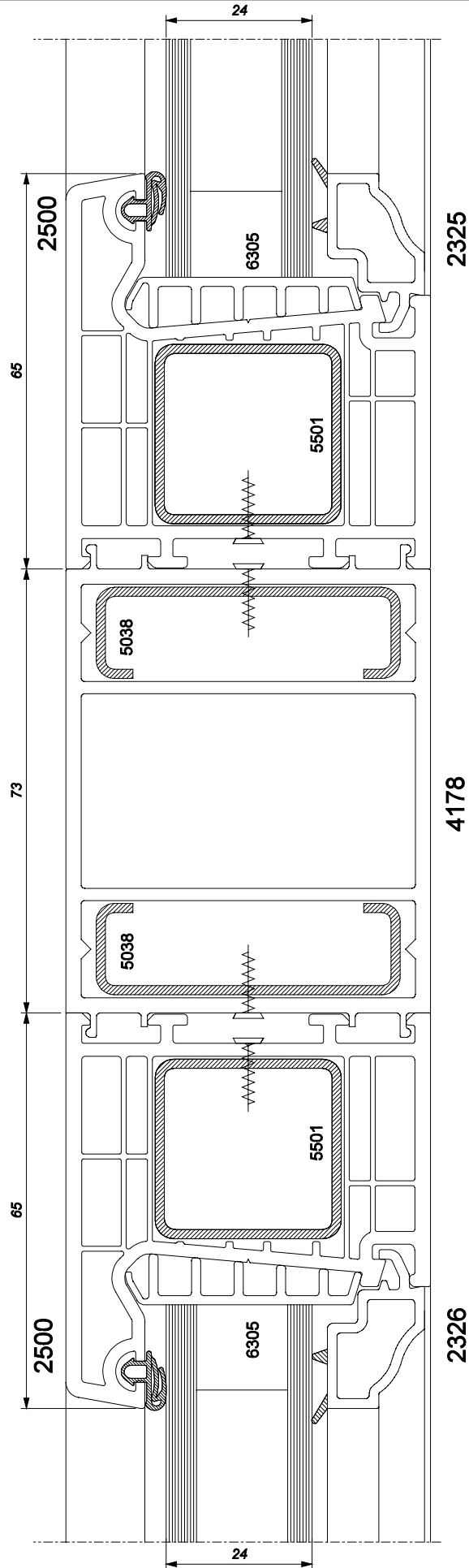


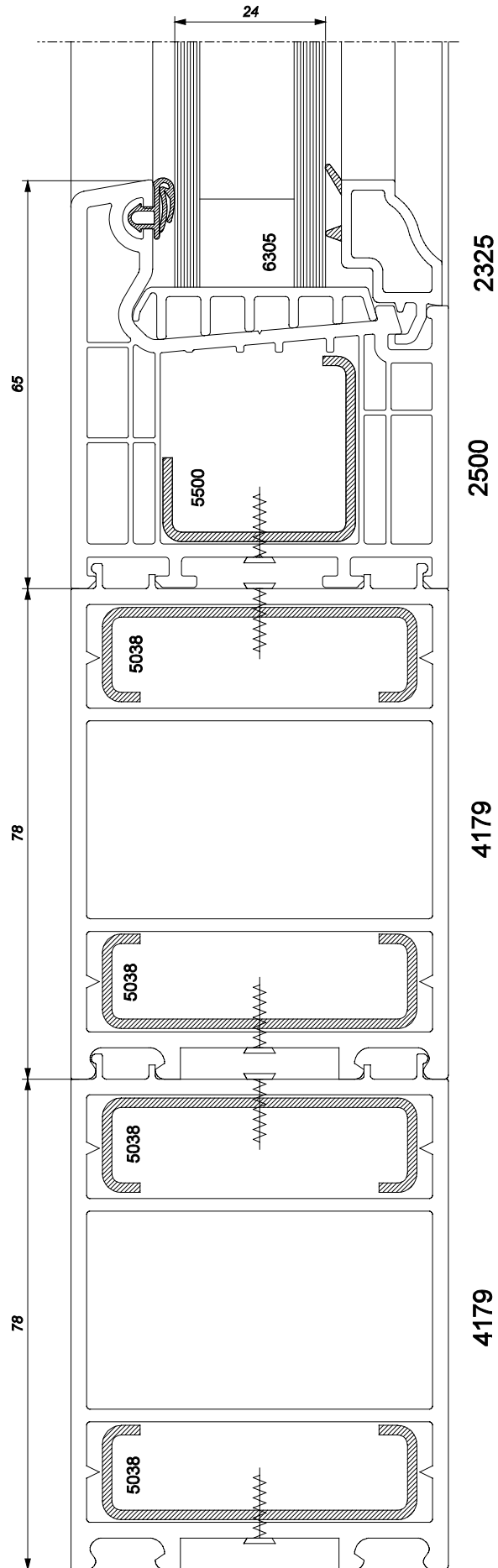
4.2.12.JUNCTION SYSTEMS

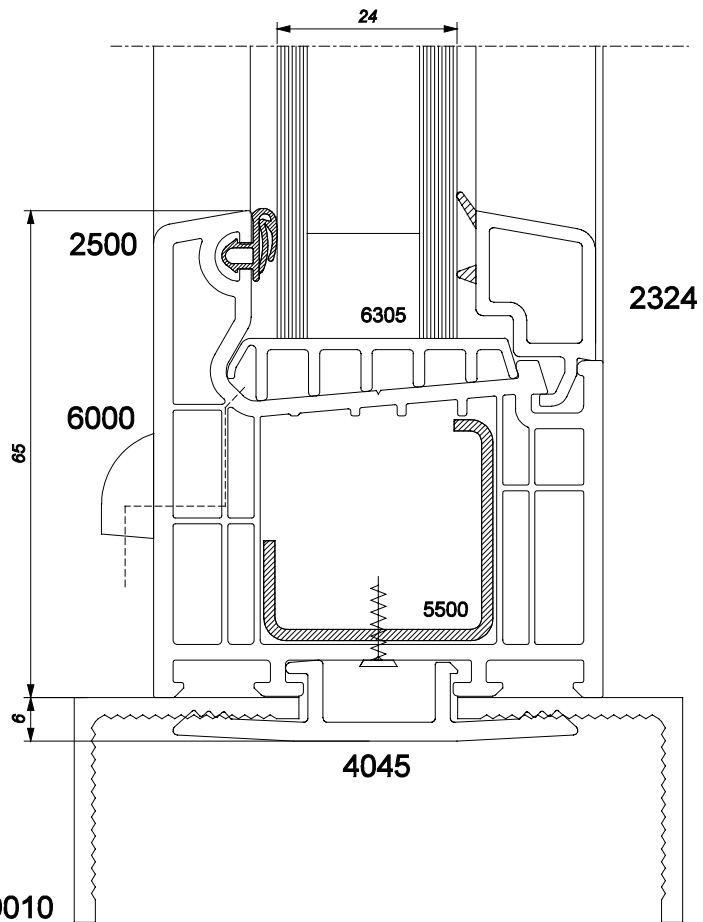
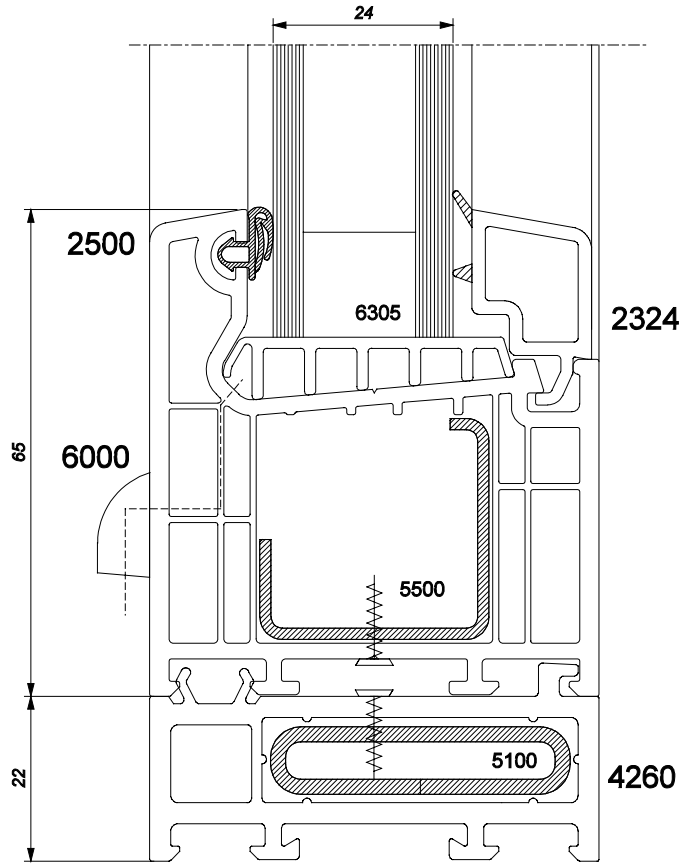
SCALE 1/1

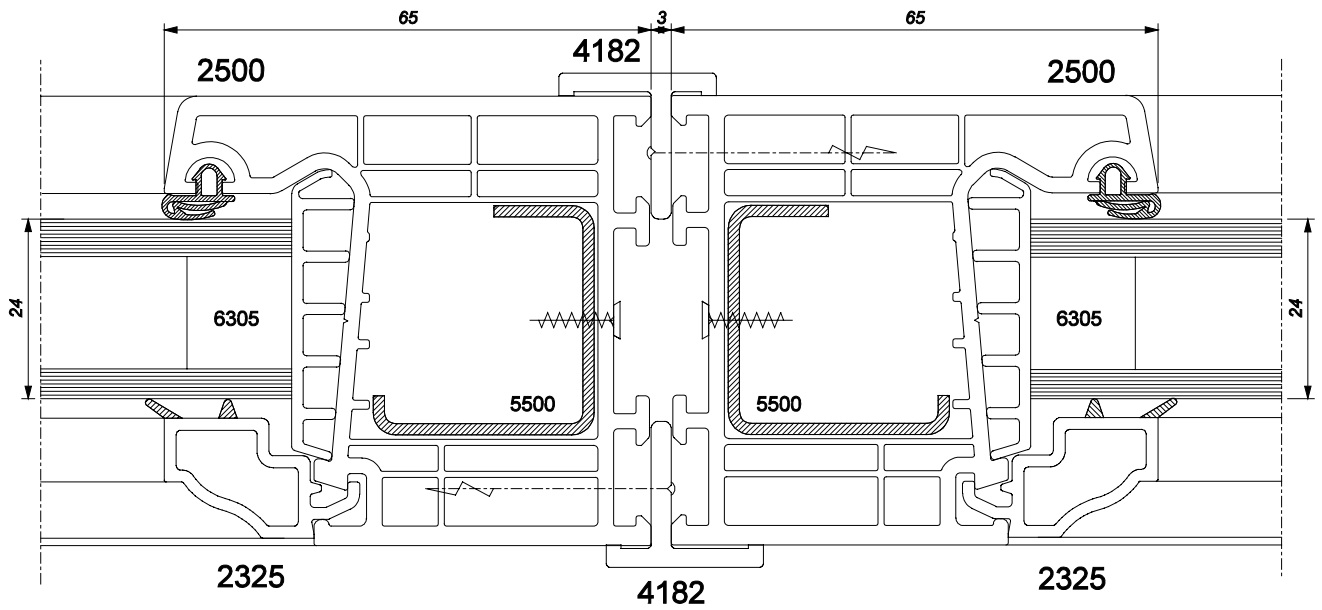
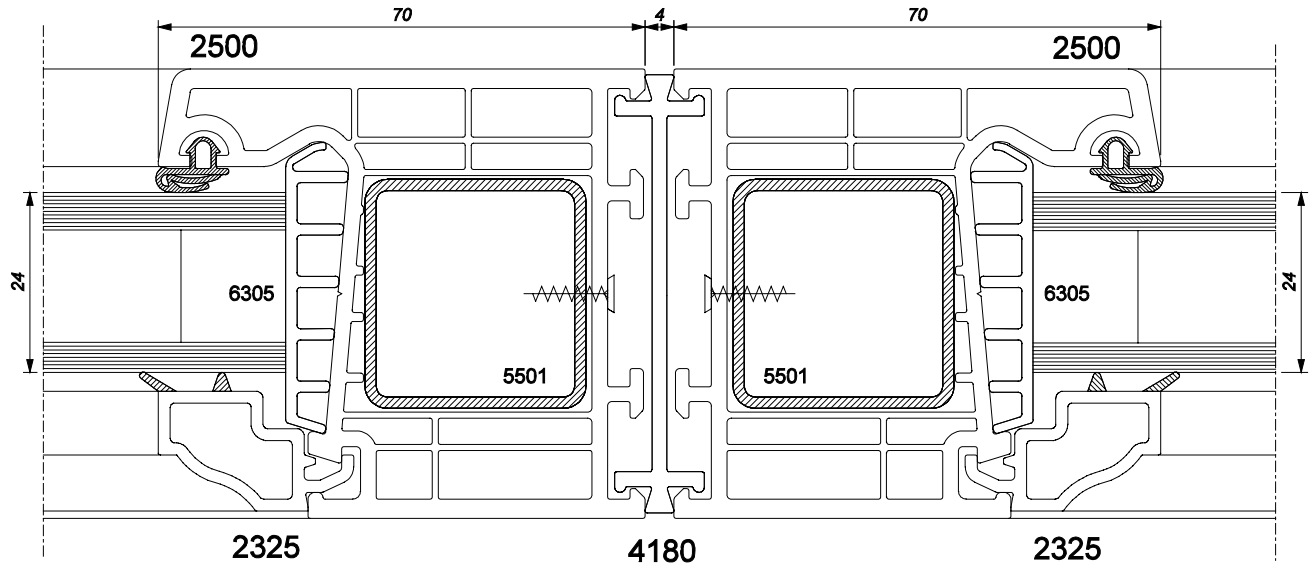








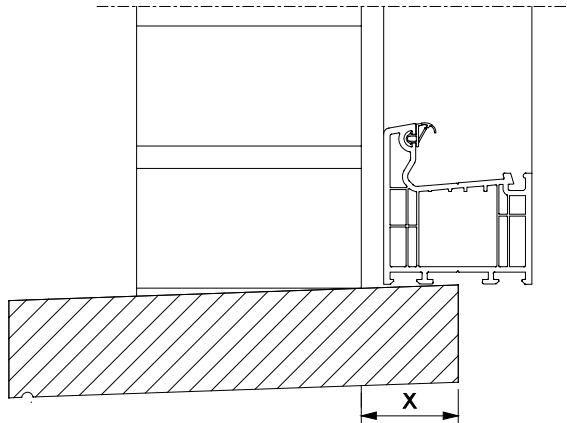




ANGLE	X = DEDUCTIONVALUE (cm)	Y = DEDUCTIONVALUE (cm)
115	3.95	0.60
120	3.85	0.65
125	3.70	0.80
130	3.60	0.90
135	3.50	1.10
140	3.40	1.25
145	3.30	1.40
150	3.20	1.60
155	3.10	1.75
160	3.00	1.95
165	2.95	2.10
170	2.85	2.30
175	2.75	2.45

4.3. INSTALLATION DRAWINGS

4.3.1. PLACEMENT OF BLUE STONE



WINDOWS

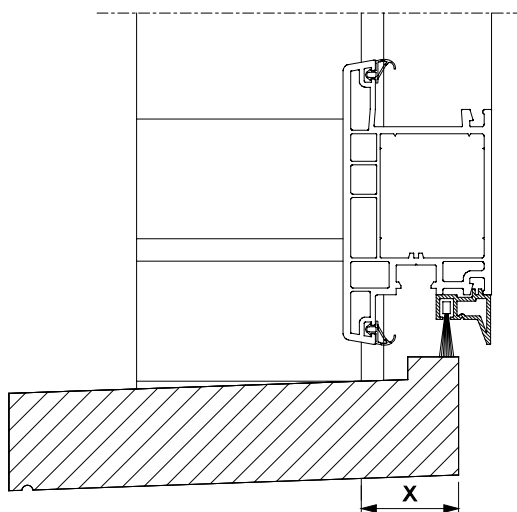
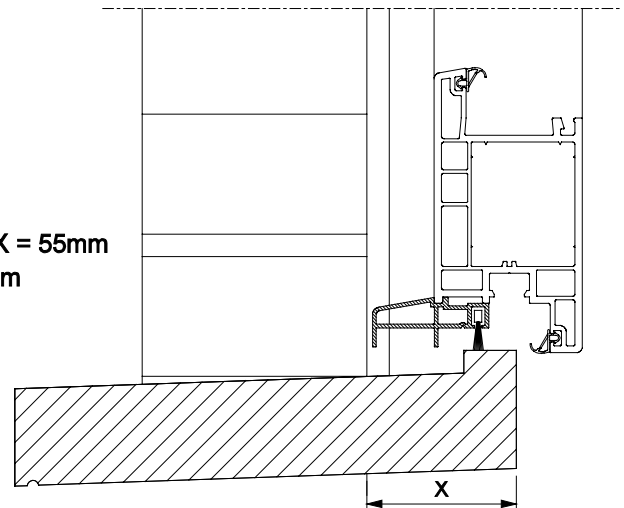
Without roller shutter (drawing) : X = 35mm

With reveal liner 4720 : X = 95mm

SINGLE DOOR - OPEN IN

Without roller shutter (drawing) : X = 55mm

With reveal liner 4720 : X = 115mm



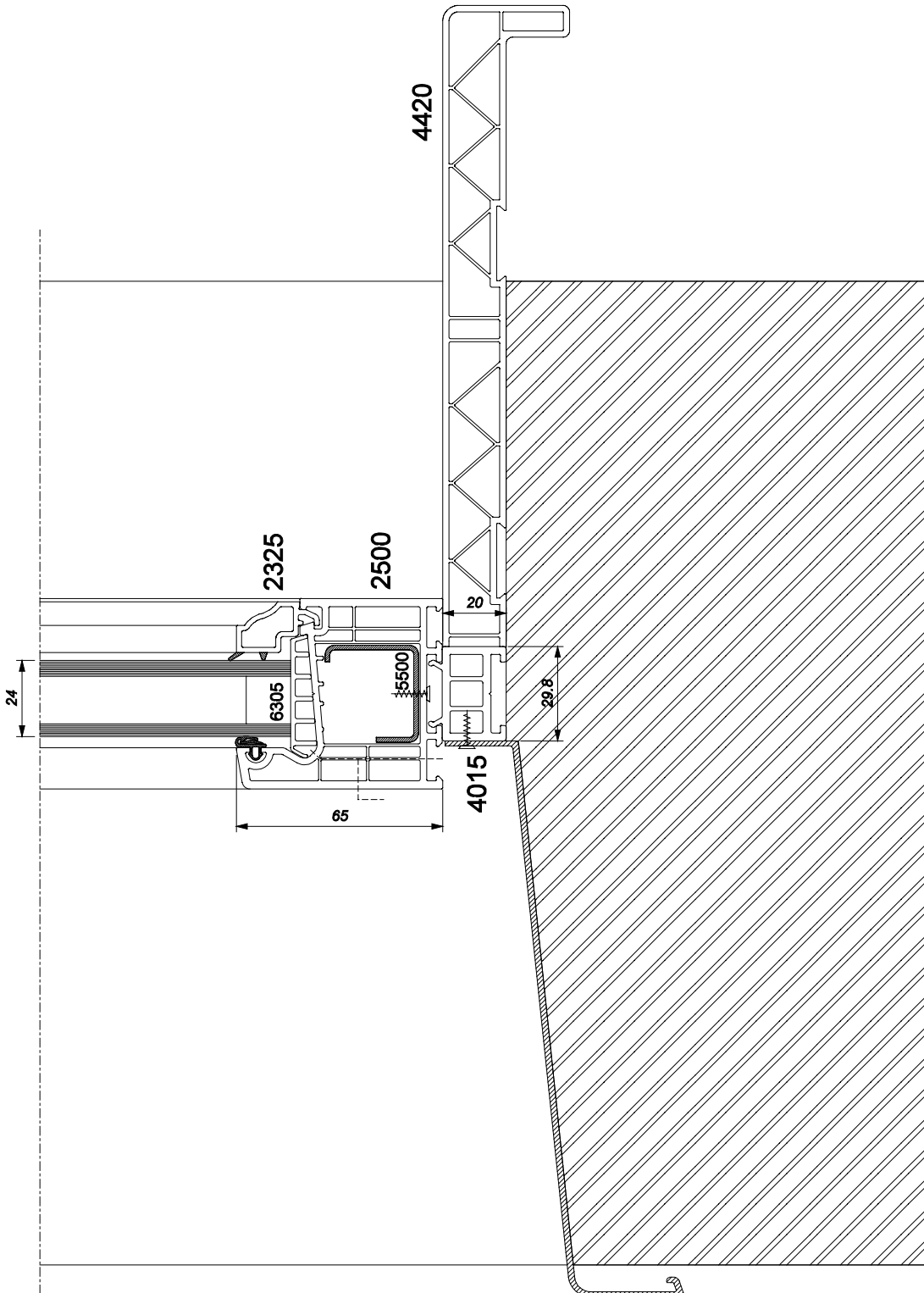
SINGLE DOOR - OPEN OUT

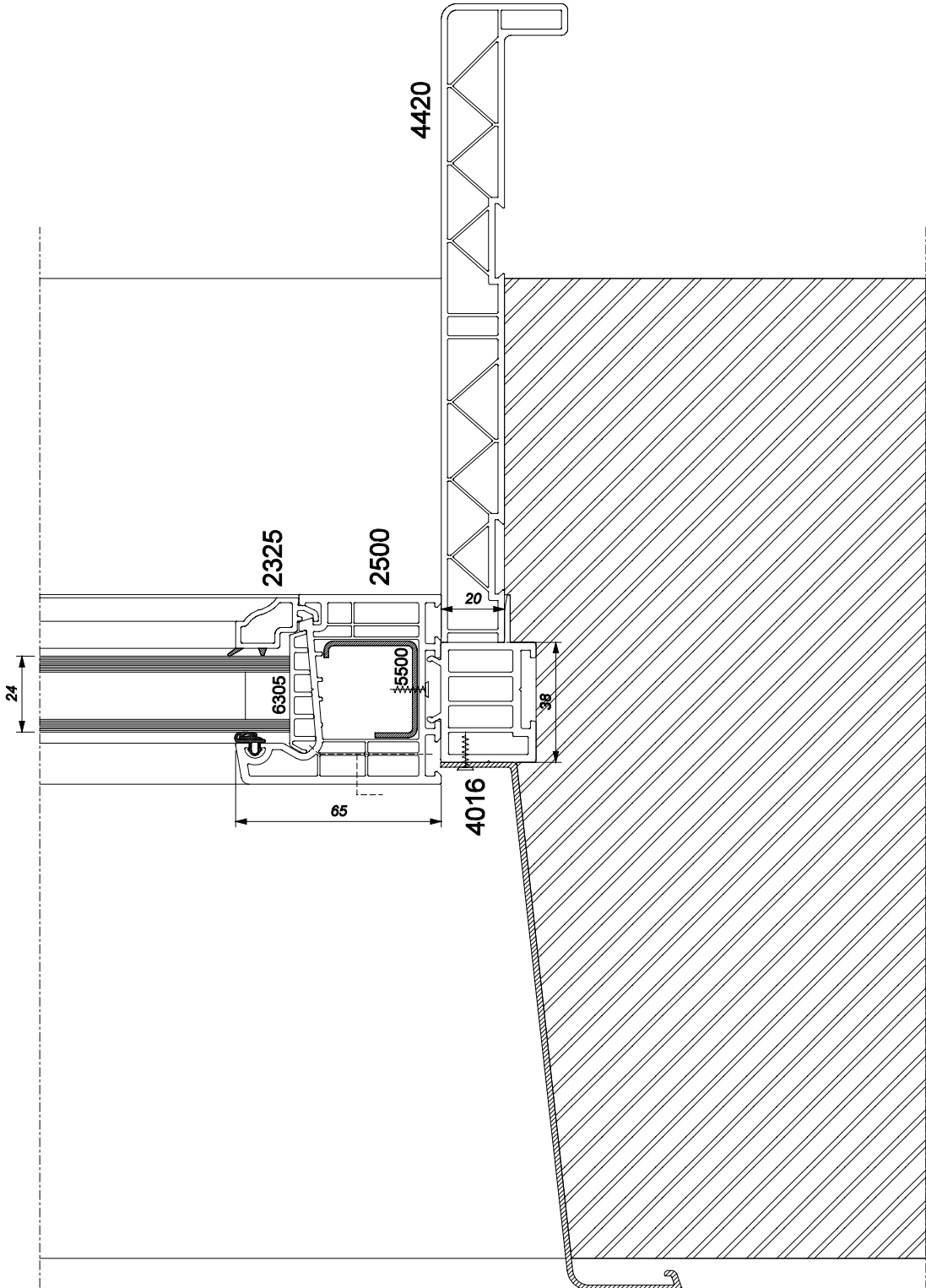
Without roller shutter (drawing) : X = 35mm

With reveal liner 4720 : X = 95mm

4.3.2. APPLICATION WIDENING PROFILE

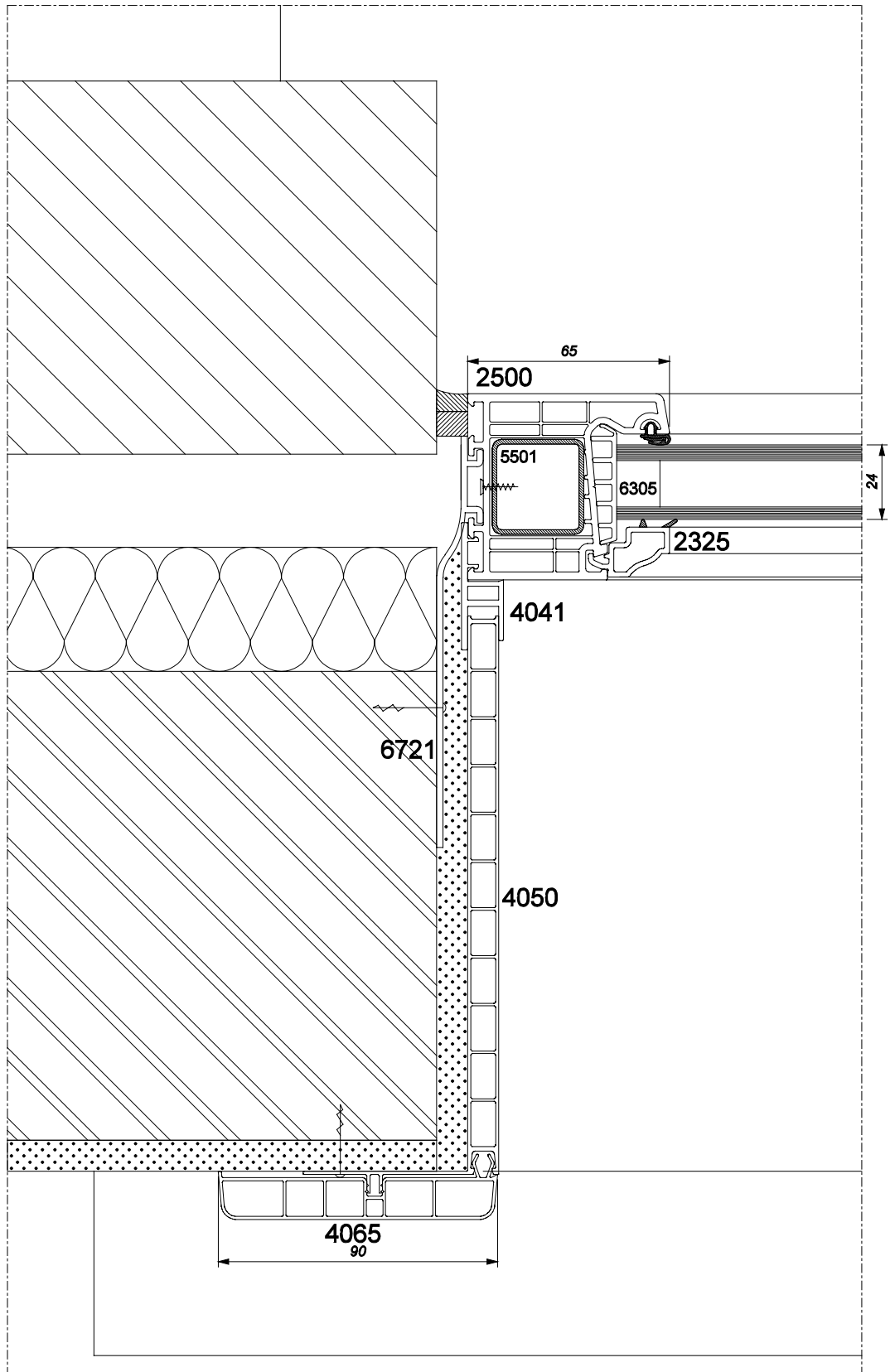
SCALE 1/2

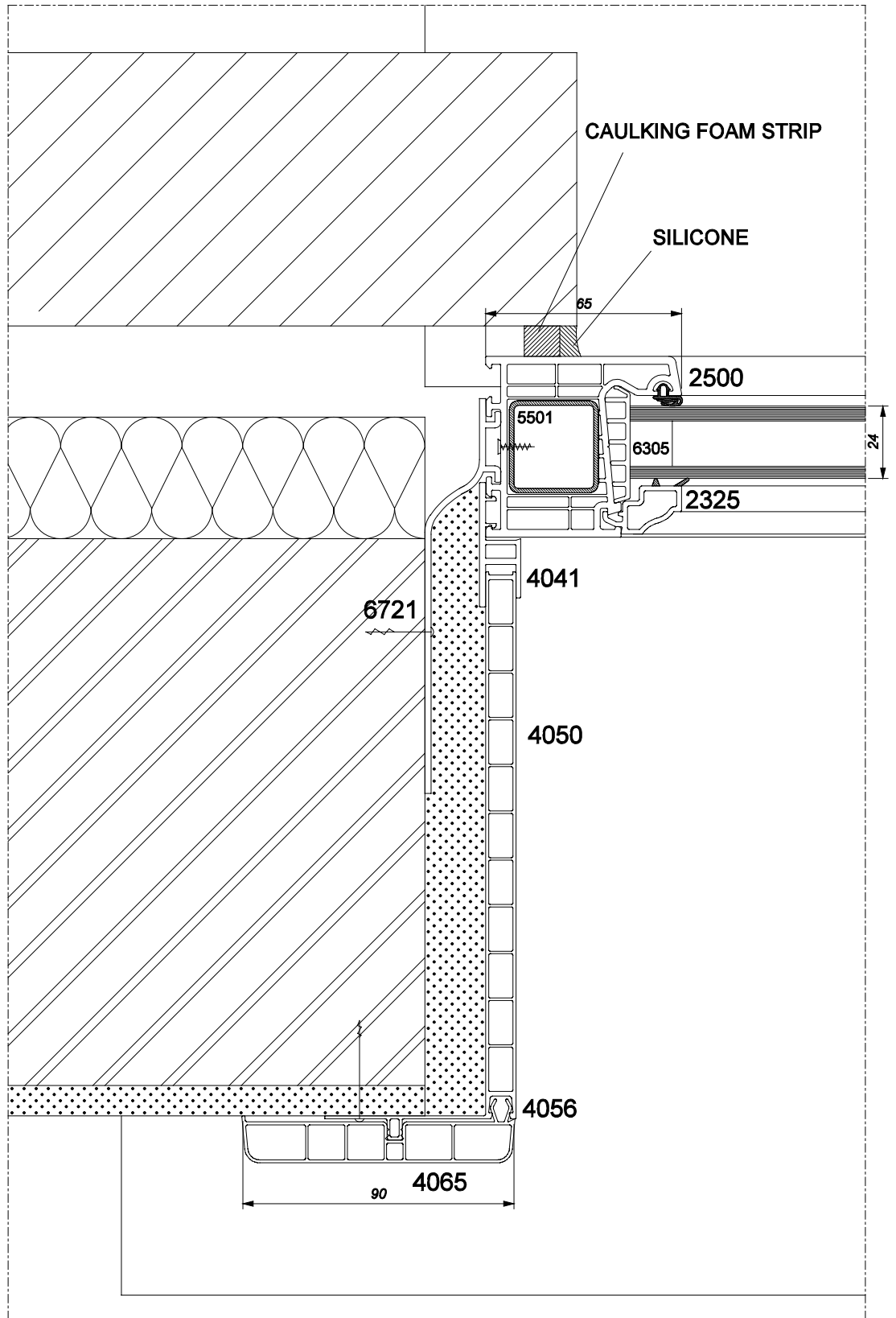




4.3.3. HORIZONTAL WALL SECTION

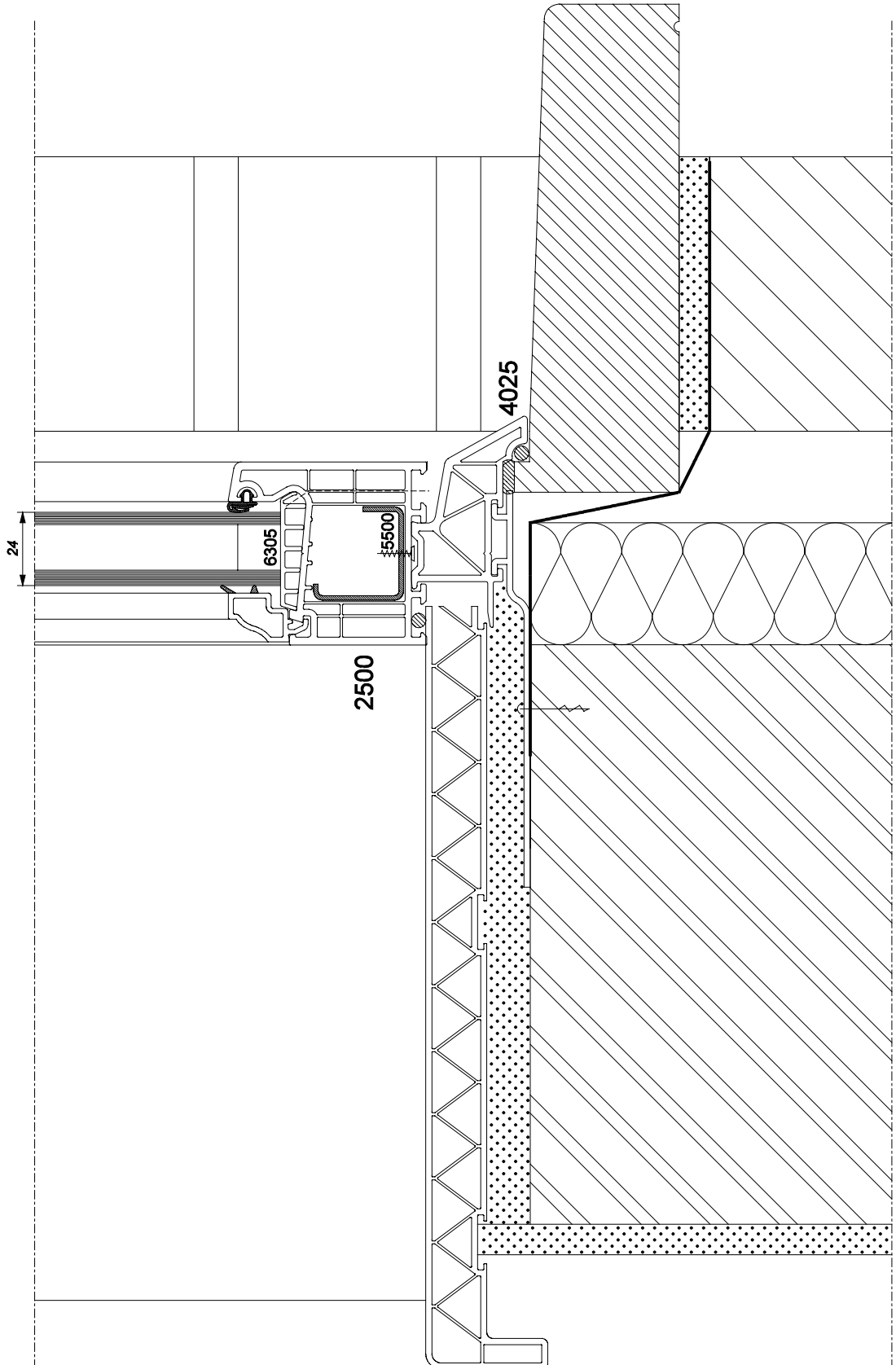
SCALE 1/2





4.3.4. VERTICAL WALL SECTION

SCALE 1/2



5. DIRECTIVES OF FABRICATION

5. DIRECTIVES OF FABRICATION

5.1. STORAGE OF THE PROFILES

Most profiles are delivered in lengths of 6m. They are delivered in either steel or wooden stillages or cardboard cartons.

Profiles are best stored horizontally, and supported in such a way that the profile may not suffer permanent deformation. For rigid profiles support arms should be spaced at 1m intervals and protected so as not to damage or mark the profile. Smaller more lexible profiles i.e. glazing beads, should be given more regular support either a continuous shelf or arms as previously described but at 0.5m intervals. The surface on which the profiles are stocked has to be free off materials that can lead to damage. It is recommended to stock the main profiles not higher than 1.0 m and the other profiles not higher than 0.5 m in order to reduce the load on the lowest row of profiles.

In case the profiles are stored outside they should be protected against rain and direct sunlight and sufficiently ventilated so as not to create a greenhouse effect. Profiles should be removed with care from their place or storage preferably without sliding one profile along another which can result in surface damage or scratching.

It is IMPERATIVE to acclimatize the - unpacked - profile for minimum 24 hours to an ambient workshop temperature of 15 °C before starting to work with it. Profiles which are too cold can develop internal stresses and tensions after welding further they will not undergo a good homogenisation at the weld. Either or both of these circumstances can result in poor weld strength and/or ruptured welds.

5.2. CUTTING OF THE PROFILES

The sawing machine for the cutting of PVC-profiles should not be used to cut any other type of material such as wood, metal or aluminum, as this can cause contamination of the surfaces to be welded. Neither should the saw blade ever be lubricated. Contaminated cutting surface can result in poor weld strength and/or ruptured welds. The fabricators must ensure that the saw is operating accordancing the manufactures recommendations, and that the blade dimension, number & set of the teeth, and the speed are suitable for the cutting of PVC. The cutted profiles should be welded within 24 hours of being cut. It has to be possible to install the sawing machine at exact specified angles, normally being 45° or 90°, thus enabling correct and constant saw cuts. Saw cuts should also be square and perpendicular to the external faces. The max. allowed inaccuracy is '15 in the horizontal and vertical plane. The lengths of profiles cut must also incorporate the amount of 'burn off' required for the welder, either 2.5 mm or 3 mm per weld. In order to calculate the correct lengths of profile required for each window or door etc., then we recommend the use of a suitable computer program.

5.2.1. Generalities (fig. 1 and 2)

The total length of the cutted profile is increased by 5 till 6 mm (according the type of the used welding machine.)

1st cut at 45°

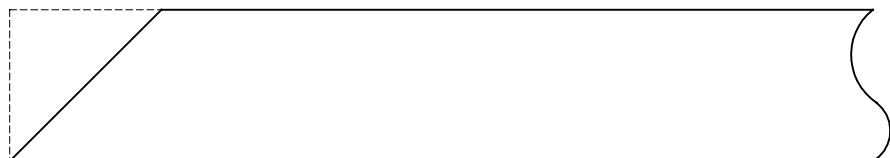
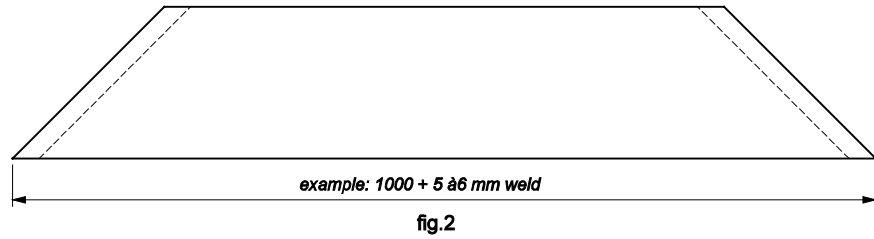
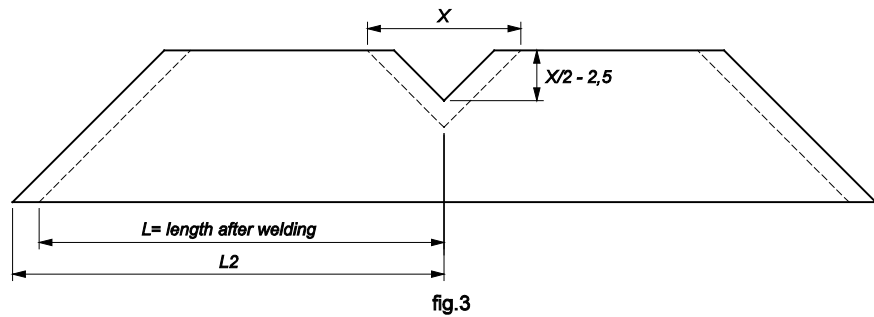


fig.1

Second cut

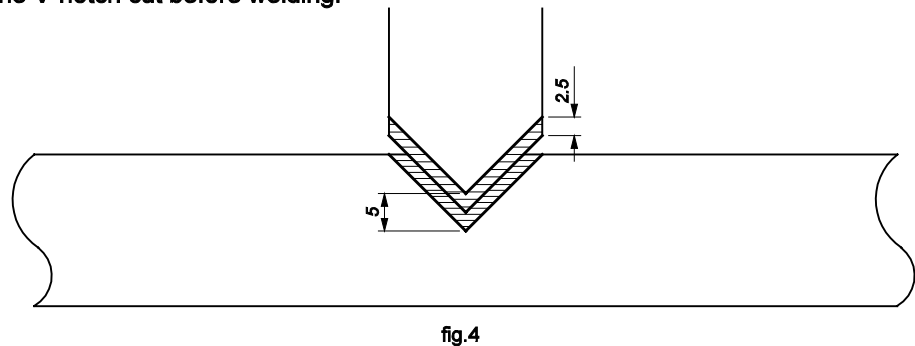


5.2.2. V-NOTCH CUTS IN OUTER FRAMES (fig. 3 en 4)



Example: Position of the T-profile to the corner : L=500
 Position of the V-notch cut: $L2 = L + 2,5 = 500 + 2,5 = 502,5$ to the cutted profile end.

Result of the V-notch cut before welding:

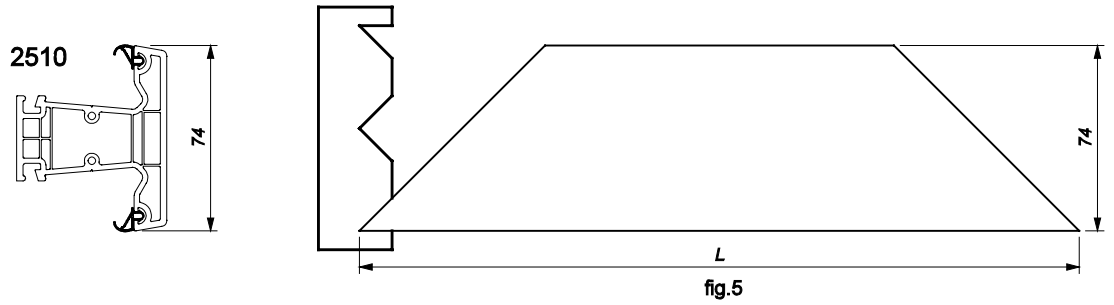


The depth of the V-notch cut is determined by the size of the T-profile. It is calculated as 1/2 of the overall width of the T-profile - 2.5 mm (according the type of the used welding machine). It is recommended to chamfer the point of the T-profile before welding.

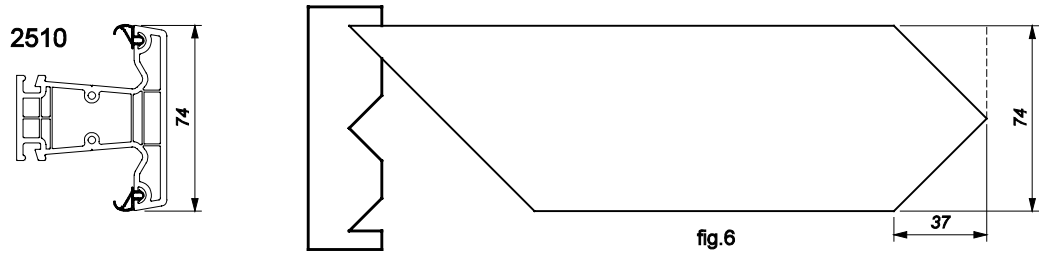
5.2.3. TRANSOM/MULLION CUTS

5.2.3.1. T-profile 2510 (fig.5 till fig.7)

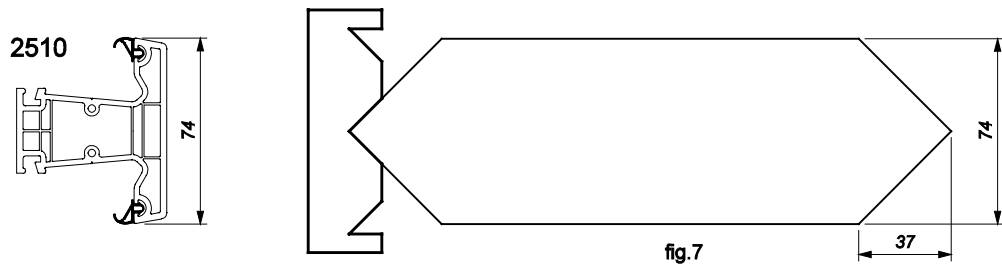
1° cutting of the profile length



2° rotate the profile 180° on the saw table

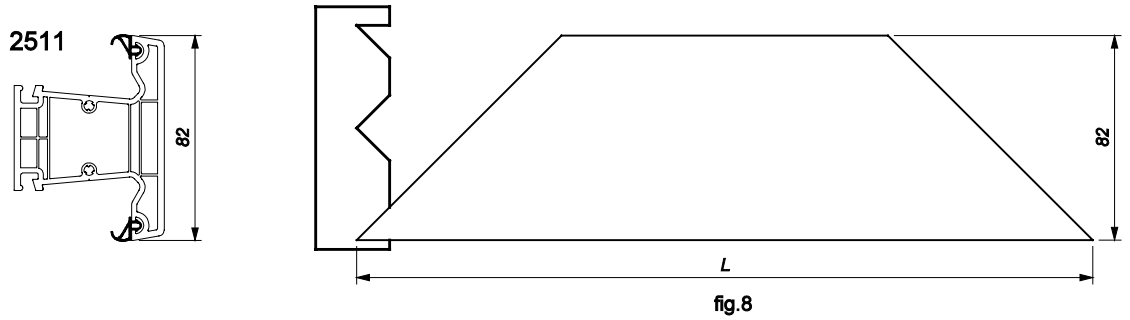


3° for the last cut, turn the profile as shown below and move the profile over a length = 1/2 of the overall width of the T-profile (for T-profile 2510 is this 37mm)

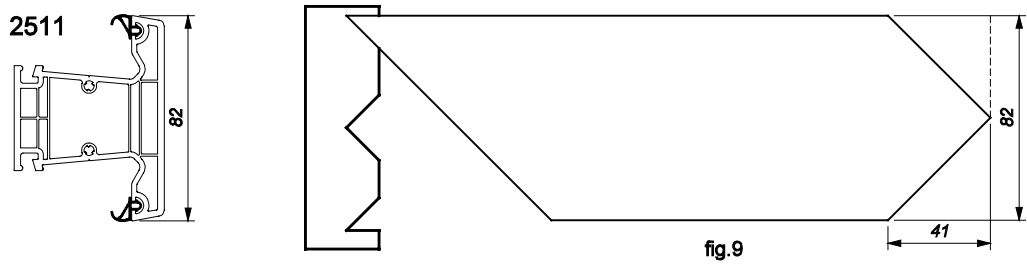


5.2.3.2. T-profile 2511 (fig.8 till fig.10)

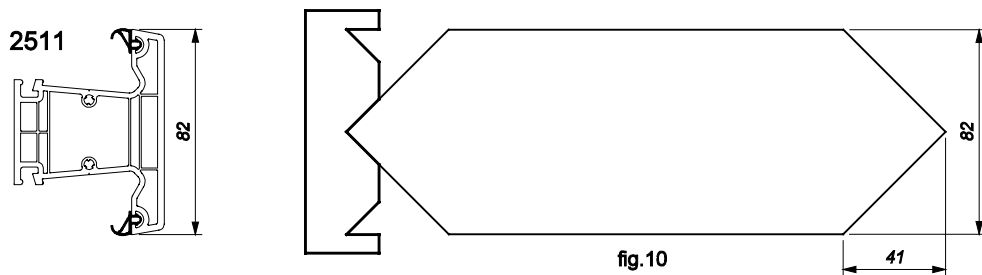
1° cutting of the profile length



2° rotate the profile 180° on the saw table



3° for the last cut, turn the profile as shown below and move the profile over a length = 1/2 of the overall width of the T-profile (for T-profile 2511 is this 41mm)



5.2.4. CALCULATION OF THE LENGTHS (FIG. 10)

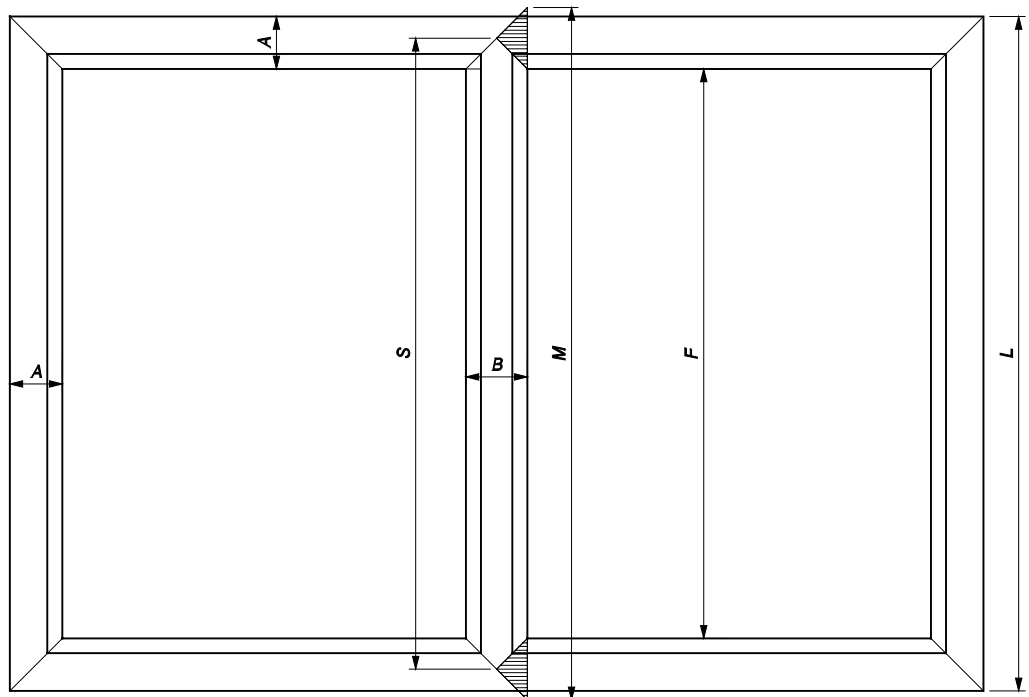


fig.11

Where: $F = L - 2A$

Cutting length of transom/mullion:

$$M = F + 2B$$

therefore $M = (L - 2A) + 2B$

Example: 2500 and 2510

If $L = 1500$ mm and where 2500 ($A = 65$ mm) and for 2510 ($B = 74$ mm)

then $M = 1500 - (65 \times 2) + (74 \times 2)$

$M = 1518$ mm (+ 5 mm for the weld depending the used welding machine)

in this case $M = L + 18$ mm

this method of calculation is also applicable for all other profiles.

5.2.5. HOW TO CALCULATE THE CENTRES OF THE TRANSOM/MULLION (FIG. 12)

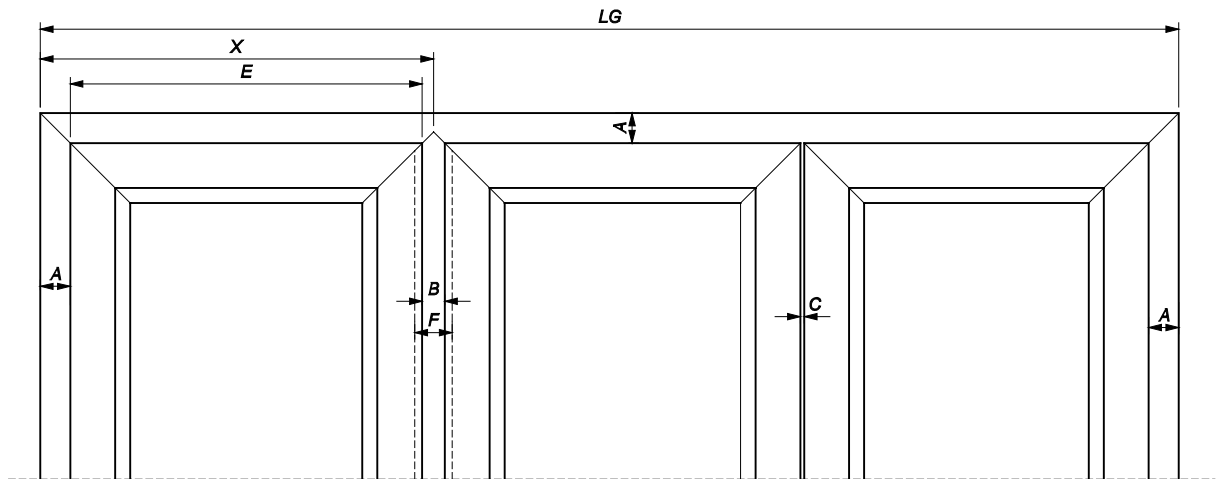


fig.12

Example: 3 sashes (2500, 2510)

X = center of mullion

LG = overall width of the window

E = width of the sash

For the mullion 2510:

F = small face = 34 mm

B = 18 mm (because B = small face - 2 overlaps of 8 mm)

For the outer frame 2500:

A = 37 mm

C = 5 (clearance between the 2 vents)

1° calculate the width of the sash E:

with LG = 1800 mm then $E = [LG - (2A + B + C)] : 3$

$$E = [1800 - (2 \times 37 + 18 + 5)] : 3$$

$$E = 567,6 \text{ mm}$$

2° calculate the centers of the mullions:

$$X = A + E + (B : 2)$$

$$X = 37 + 567,6 + (18:2)$$

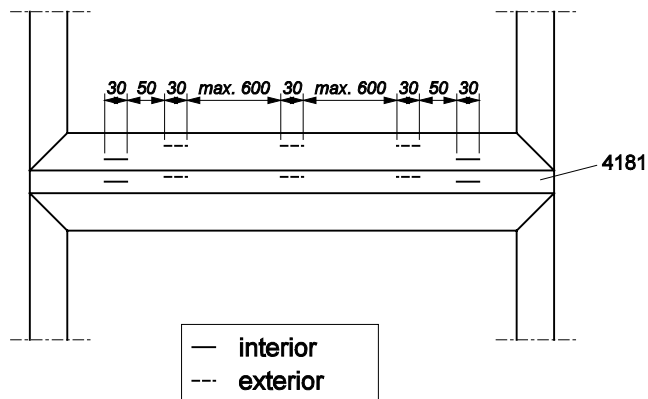
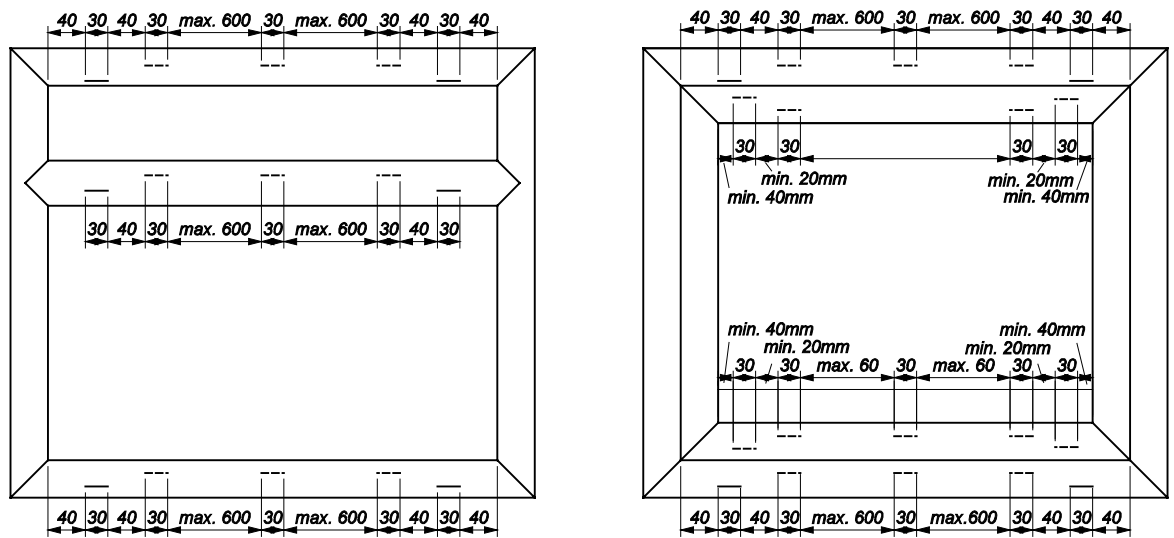
$$X = 613,6 \text{ mm}$$

5.3. DRAINAGE AND DECOMPRESSION

Condensation and water infiltration has to be evacuated. This evacuation happens via the drainage chamber of the profile and in no case via the reinforcement chamber. All horizontal main profiles must be drained and ventilated (decompressed) by means of slots measuring 5 x 30 mm or 6 mm diameter holes. The position of the slots/holes in the glazing rebate regarding the external ones should be off-set by a minimum of 50 mm, if not then the airflow may prevent drainage and there is also the possibility of a whistling sound occurring.

For the purpose of drainage minimum 2 slots or holes per profile are required per window element. The maximum axe-distance between 2 slots or holes on the side of the glazing rebate is 600mm and 1300mm on the external of the profile. Any externally visible drainage slots must be protected from wind pressure by proprietary caps, in the matching color of the profile. In case the external drainage slot/hole is on the bottom side of the profile a special developed sill with lowered 'nose', which makes the drainage possible, has to be screwed or clipped on the frame profile.

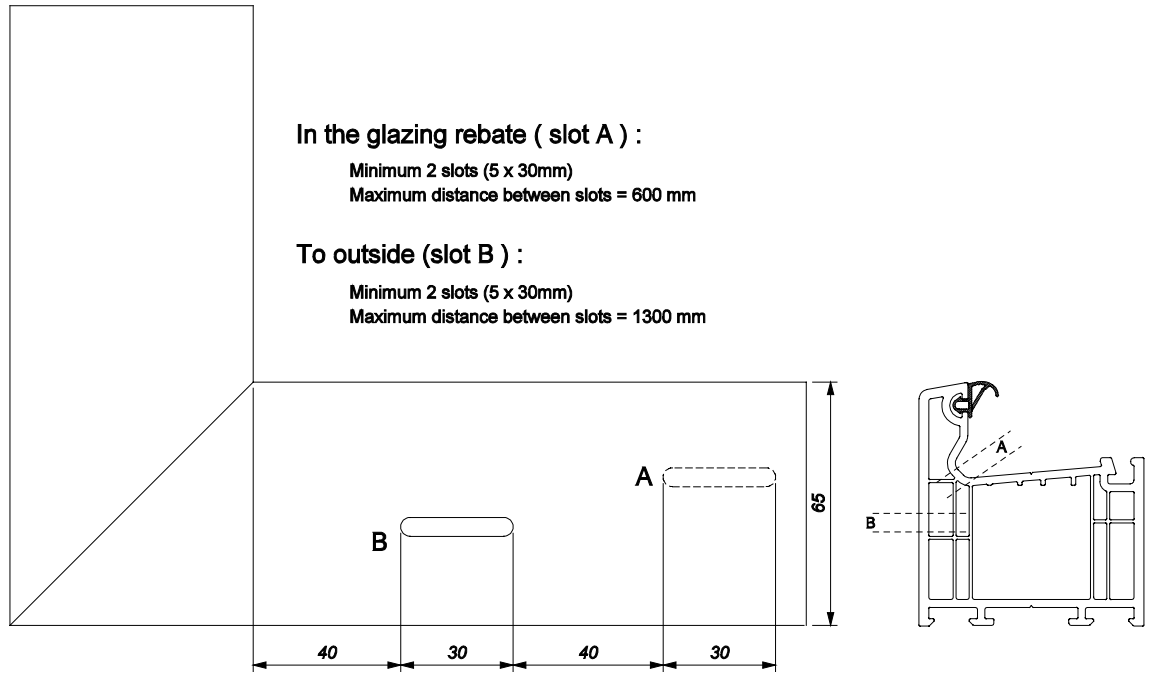
For the purpose of decompressing minimum 2 decompression slot (5 x 30 mm) or two 6 mm diameter holes are required per window element. An alternative solution for the decompression is the interruption of the external gasket (of the frame profile) over a length of 30 mm in the middle of the window element. The maximum axe-distance between 2 slots or holes is 1300 mm.



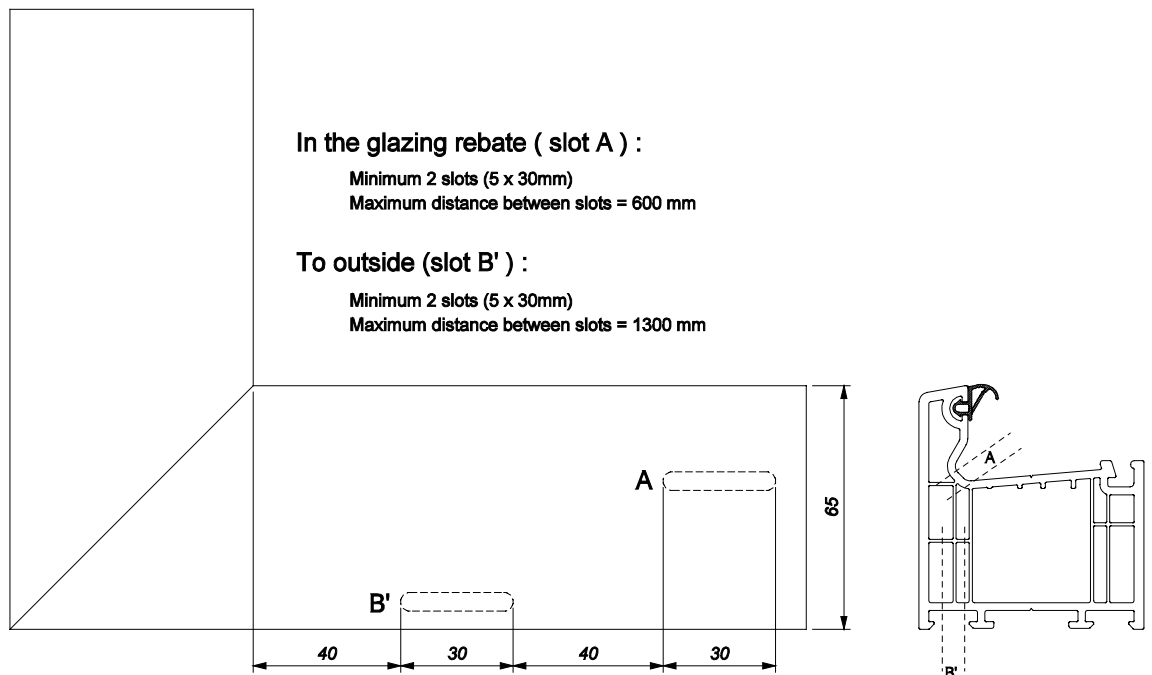
5.3.1. DRAINAGE

5.3.1.1. Outer frame 2500

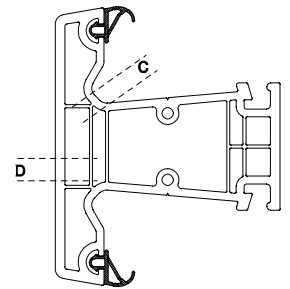
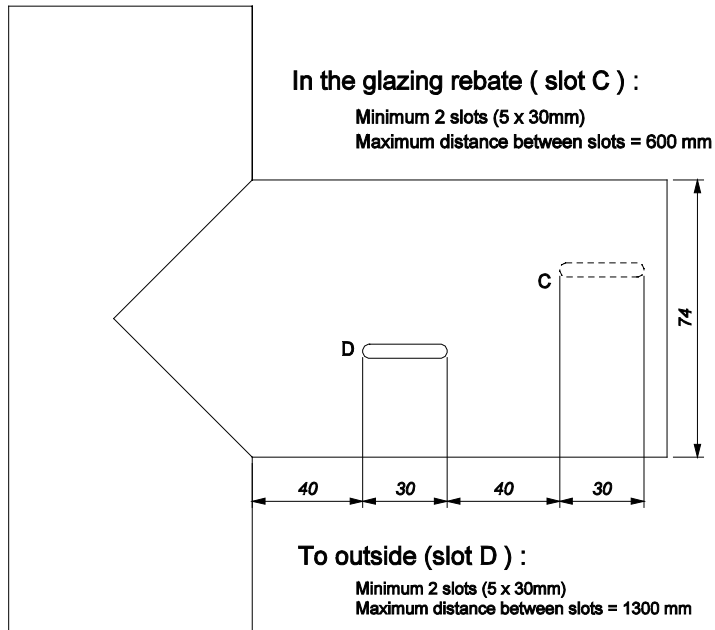
TYPE 1: Drainage to the front



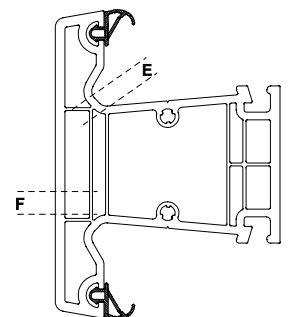
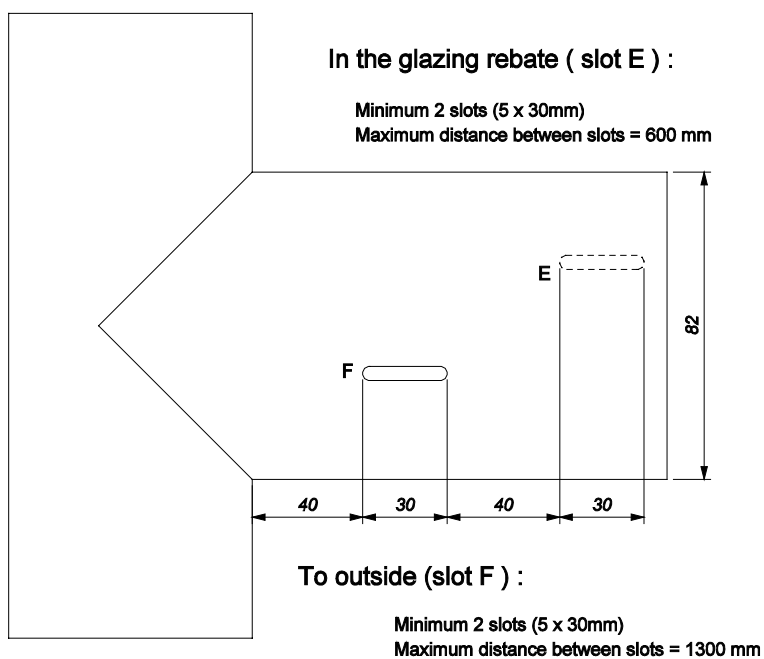
TYPE 2: Drainage downwards



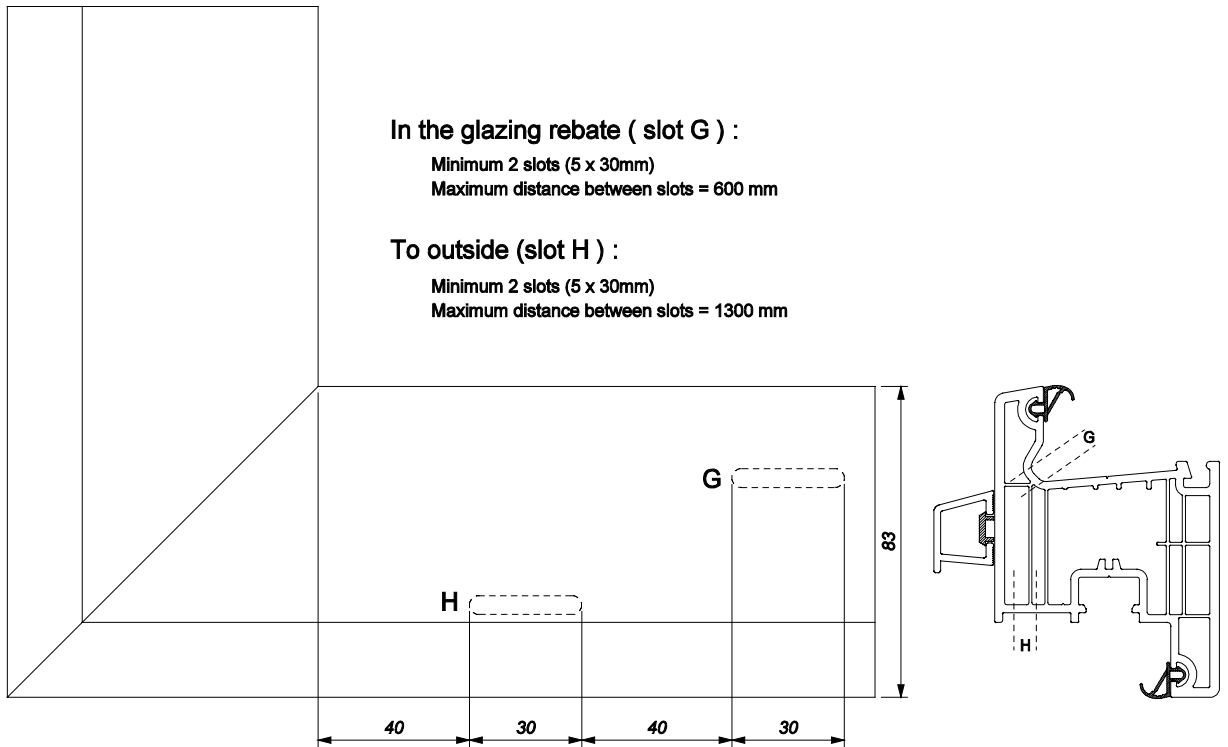
5.3.1.2. T-profile 2510



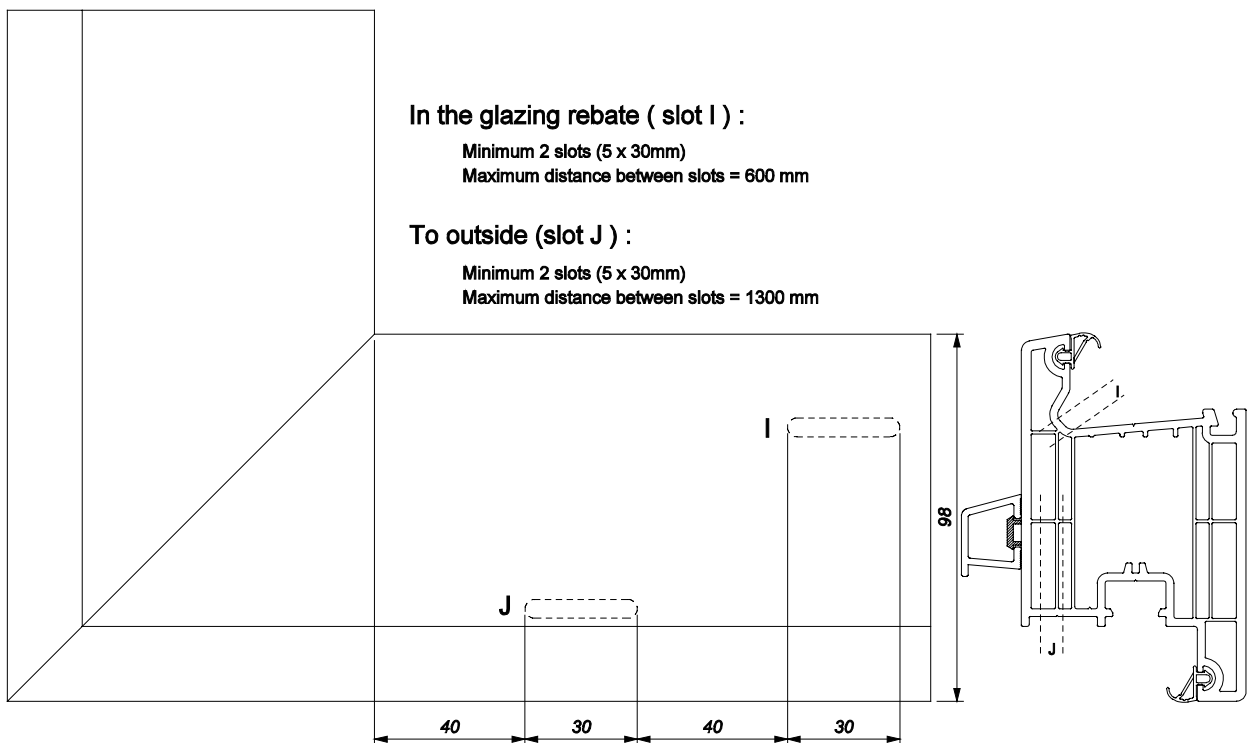
5.3.1.3. T-profile 2511



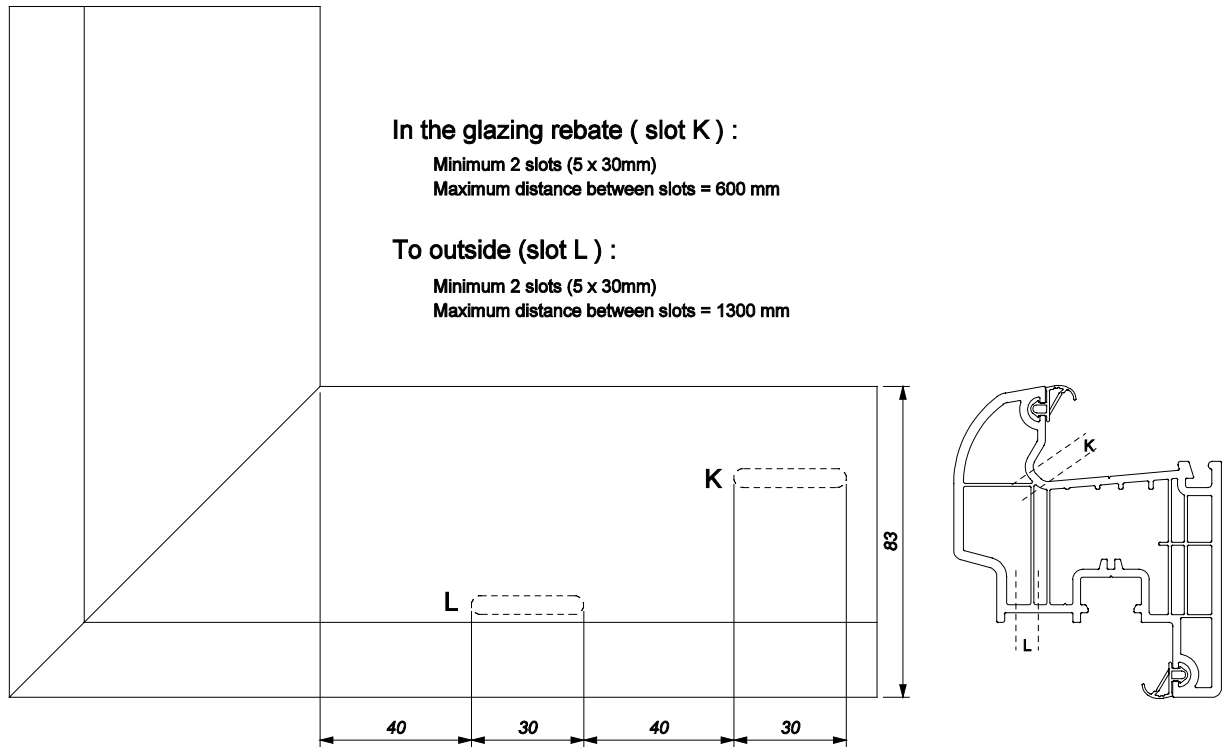
5.3.1.4. Sash profile 2520



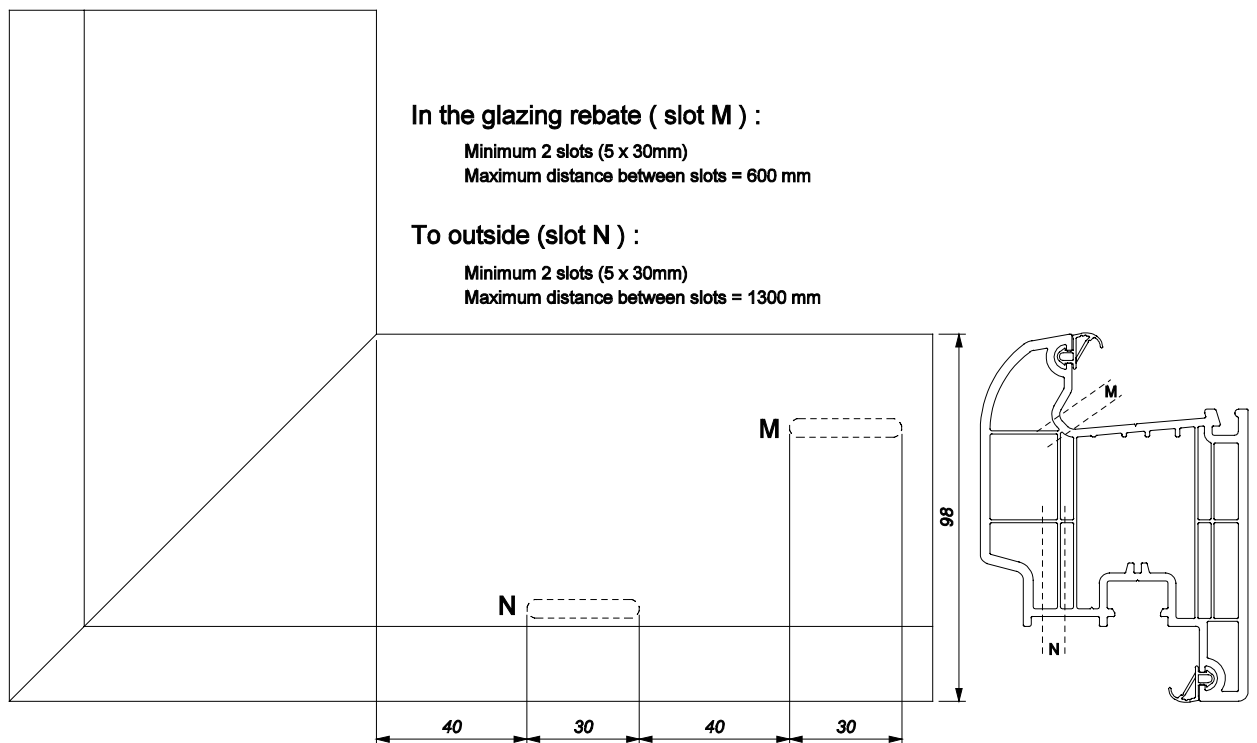
5.3.1.5. Sash profile 2521



5.3.1.6. Sash profile 2522

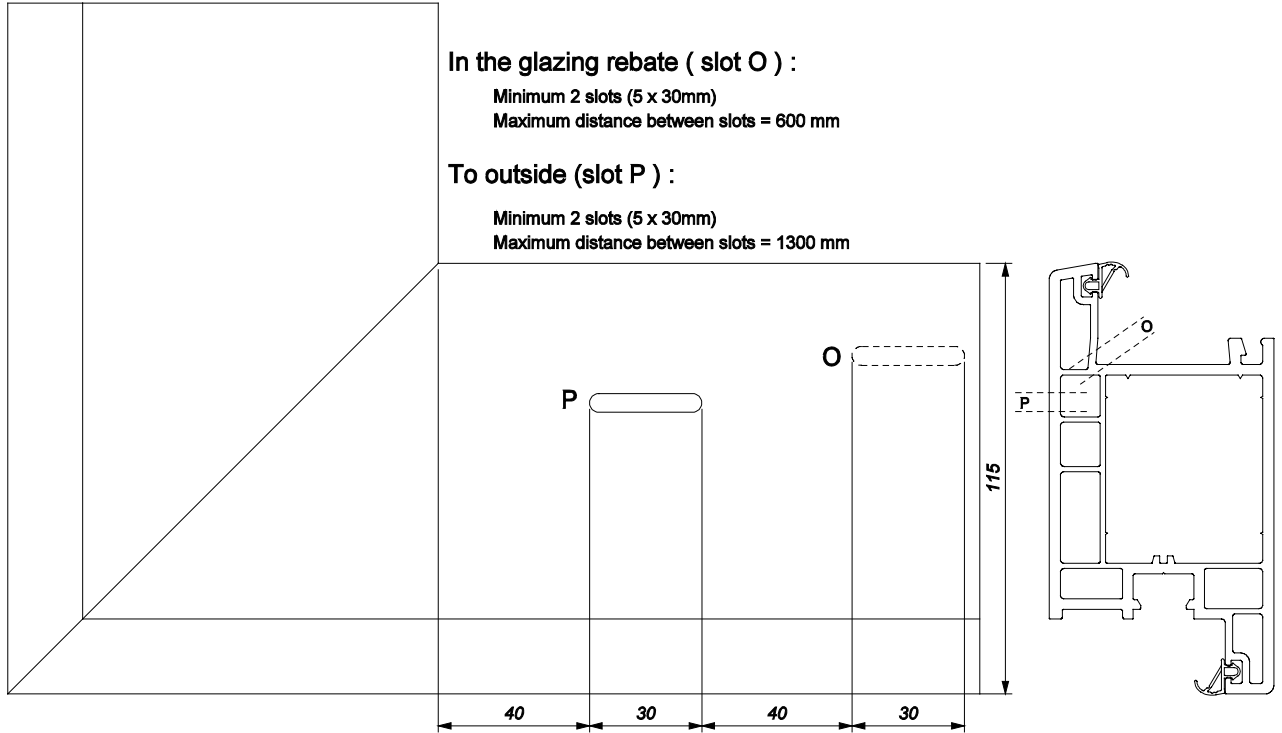


5.3.1.7. Sash profile 2523

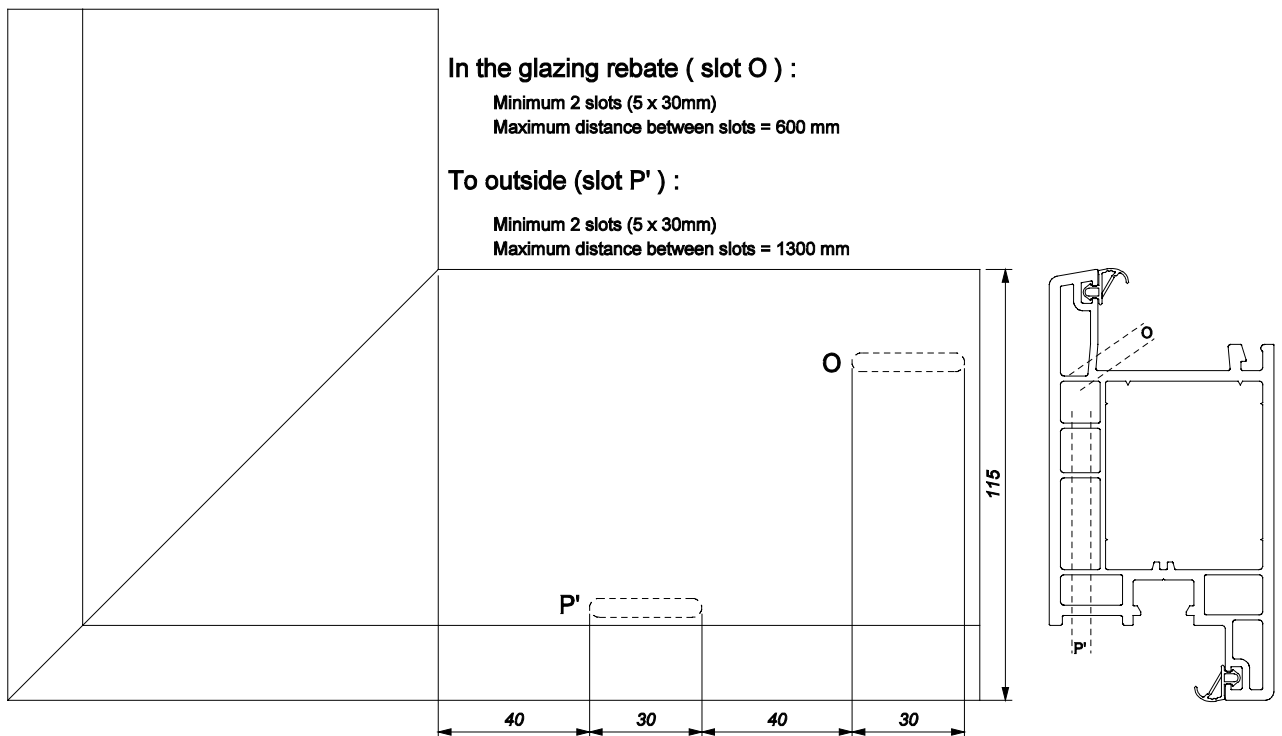


5.3.1.8. Sash profile 2207

TYPE 1: Drainage to the front

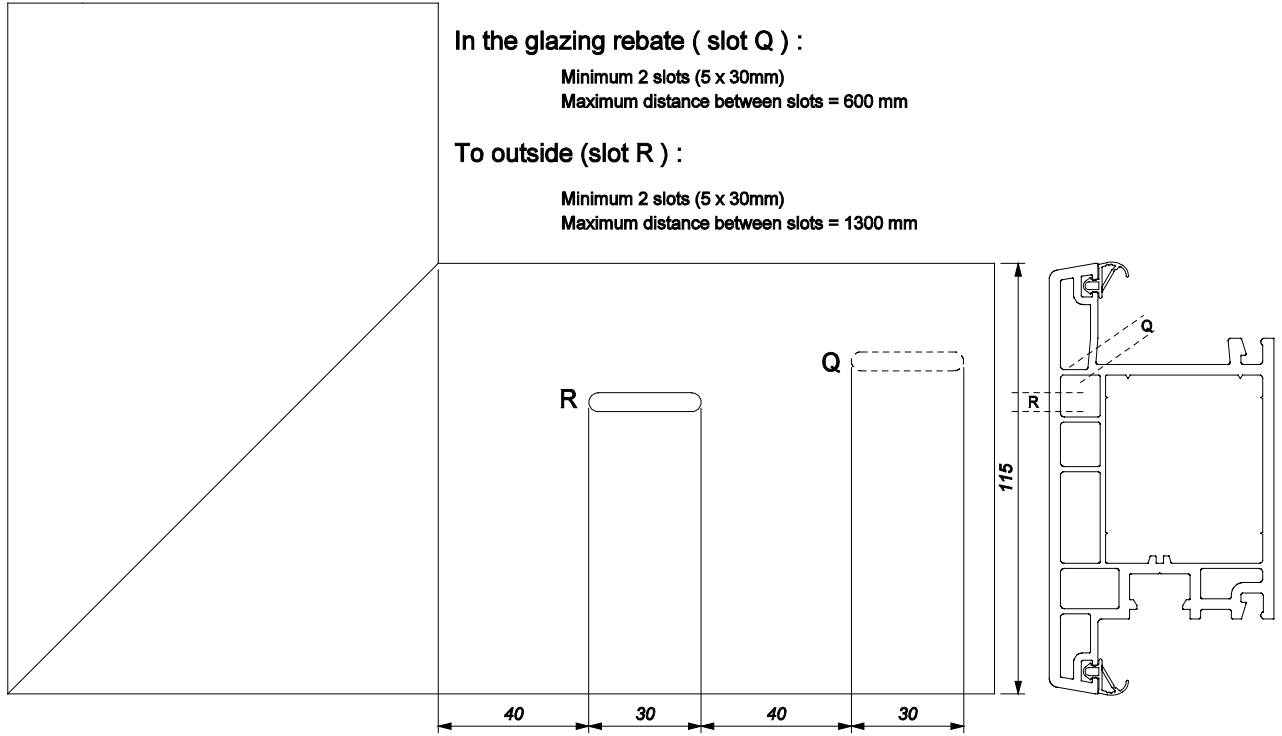


TYPE 2: Drainage downwards

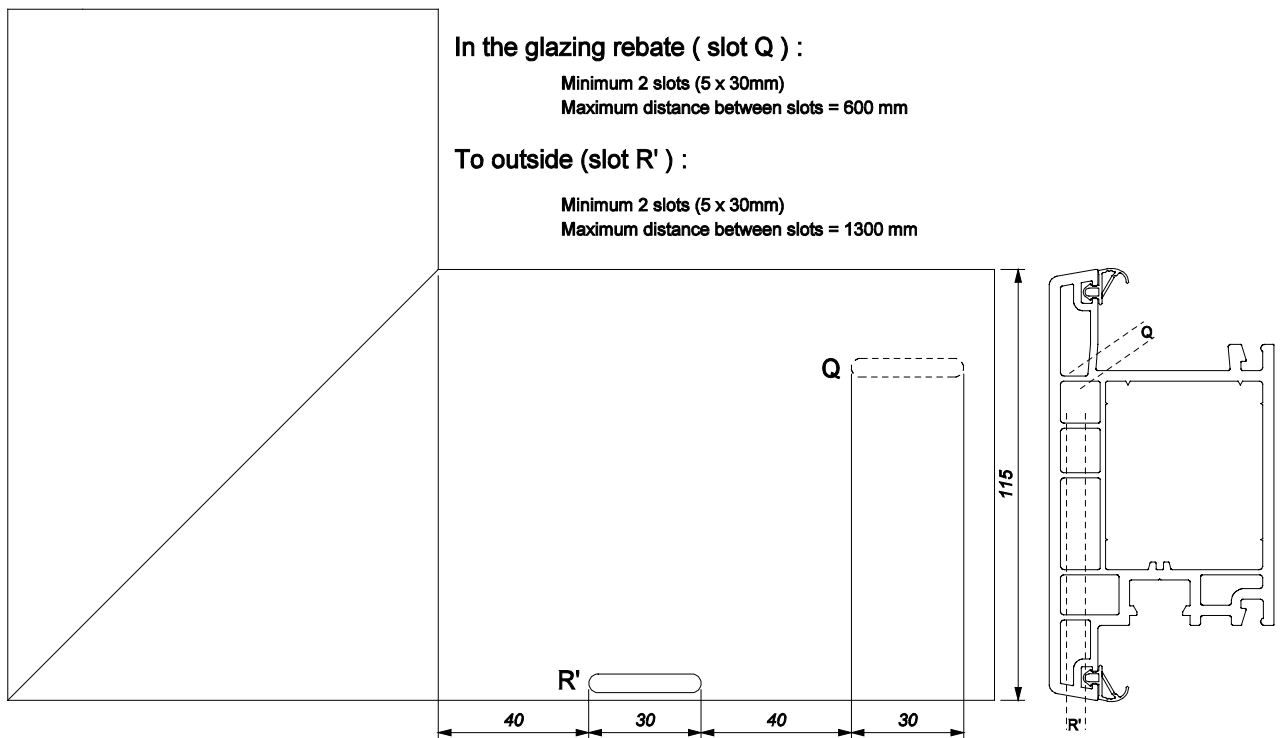


5.3.1.9. Sash profile 2217 (only in case of the lowest profile of the sash)

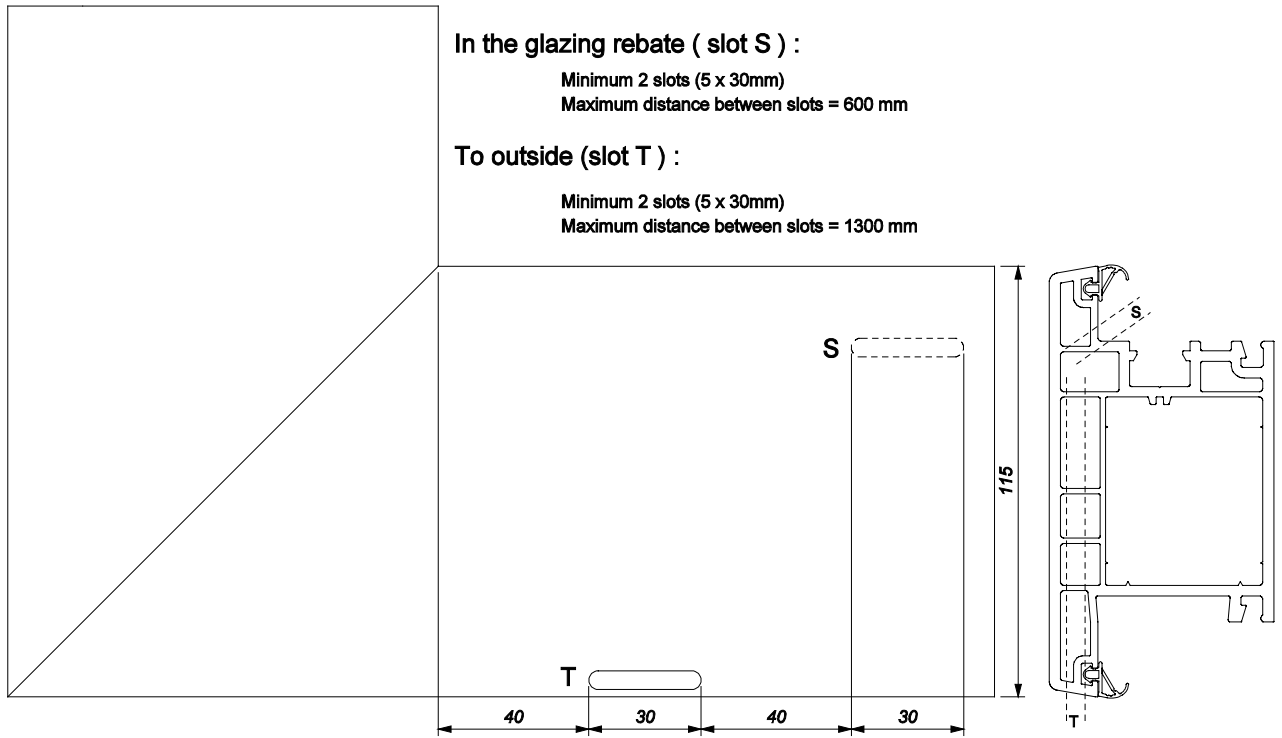
TYPE 1: Drainage to the front



TYPE 2: Drainage downwards

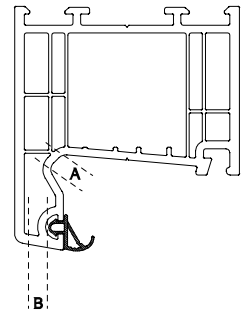
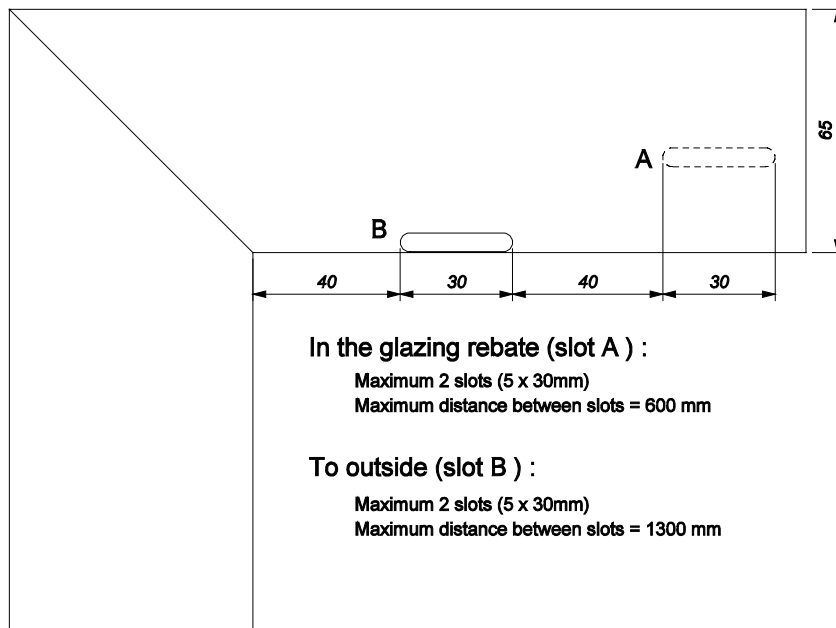


5.3.1.10. Sash profile 2217 (only in case of the highest profile of the sash)

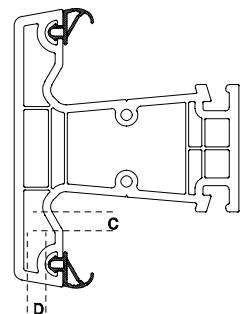
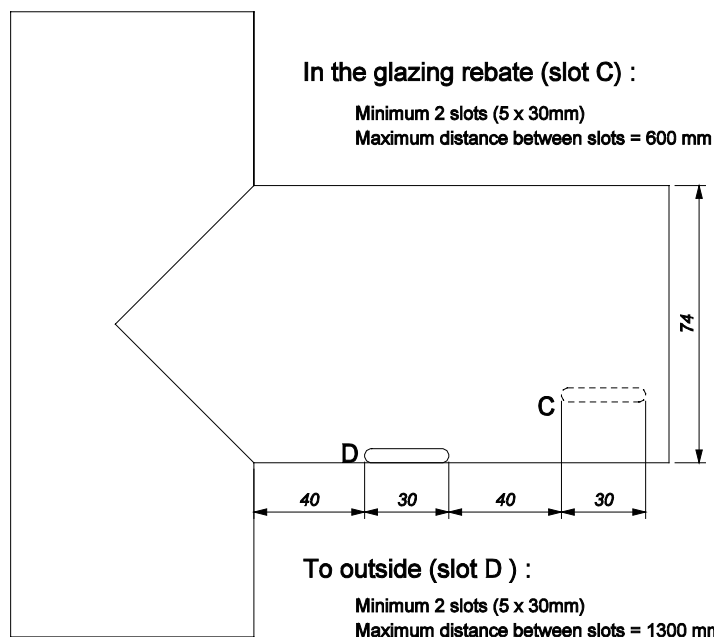


5.3.2. DECOMPRESSION

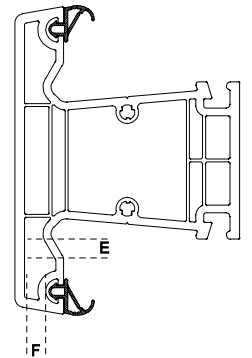
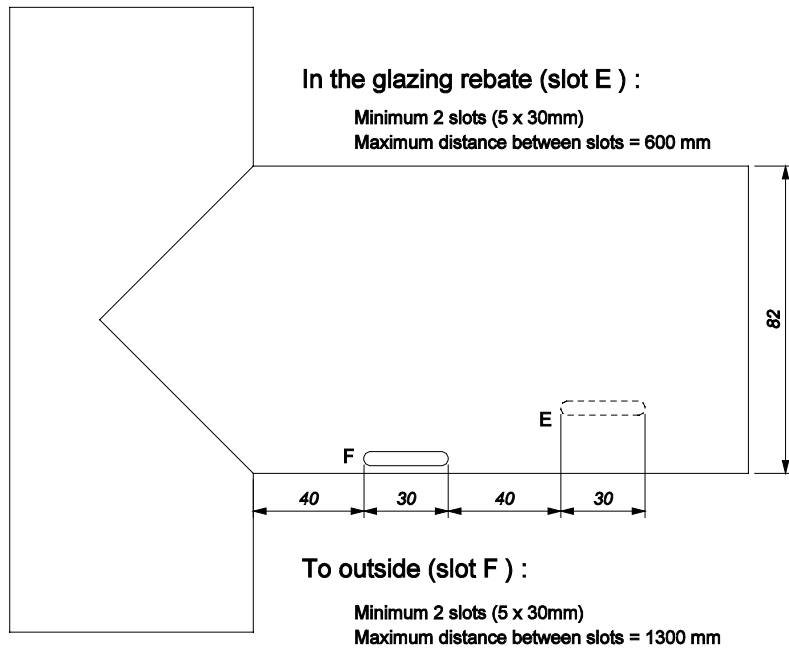
5.3.2.1. Outer frame 2500



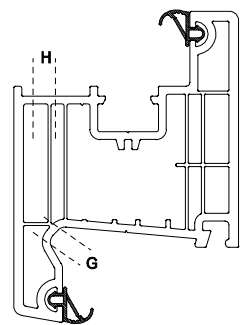
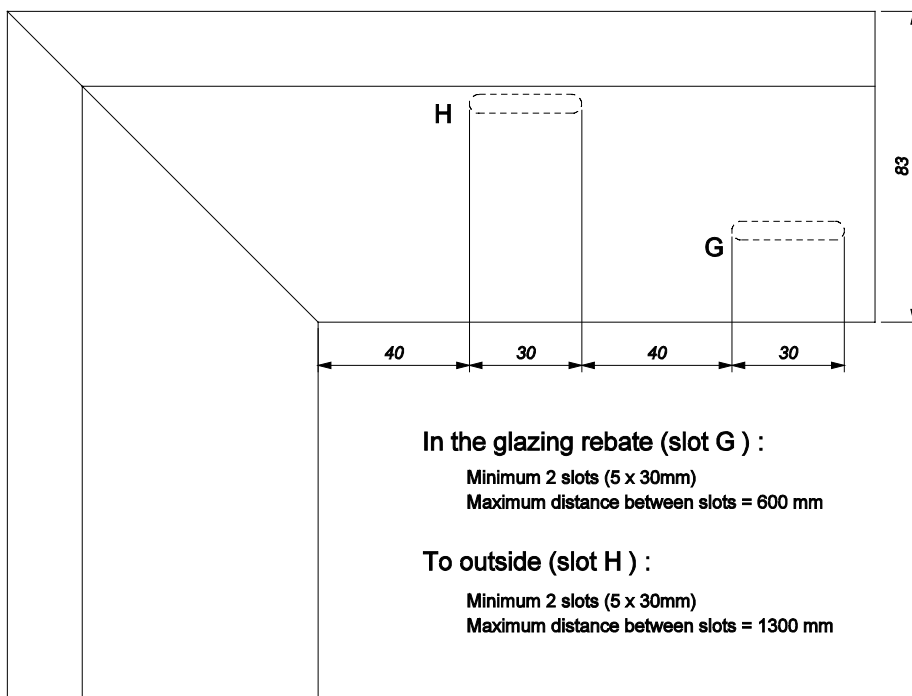
5.3.2.2. T-profile 2510



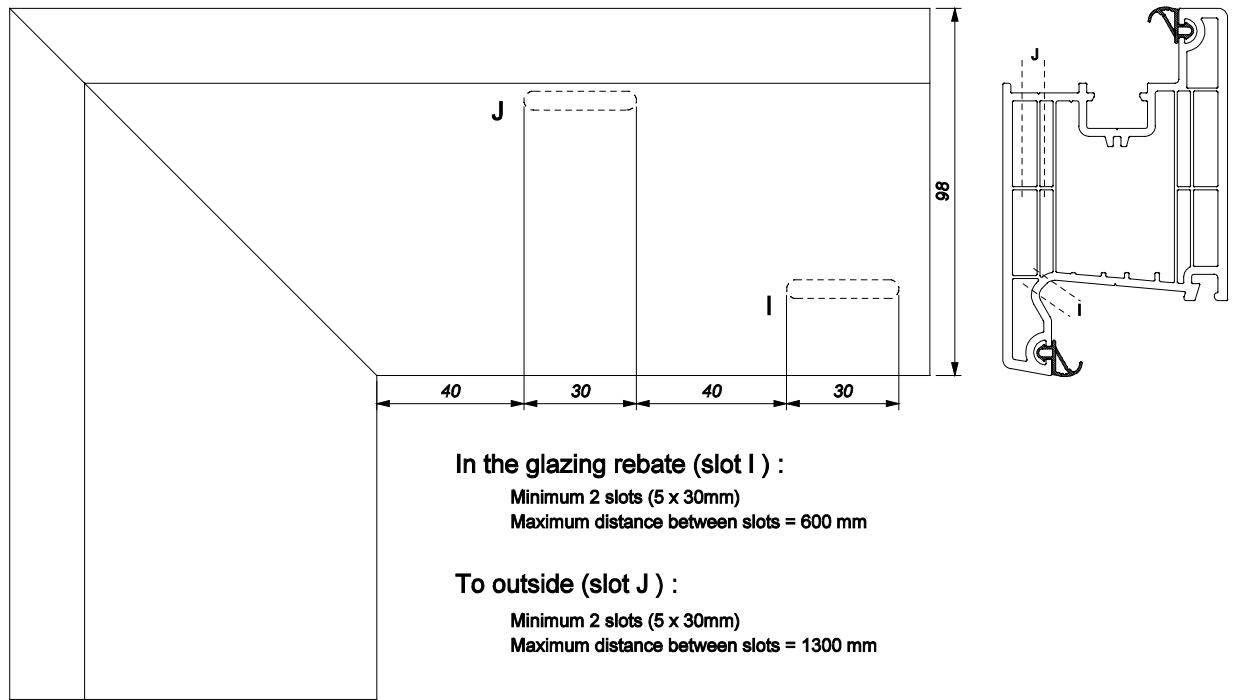
5.3.2.3. T-profile 2511



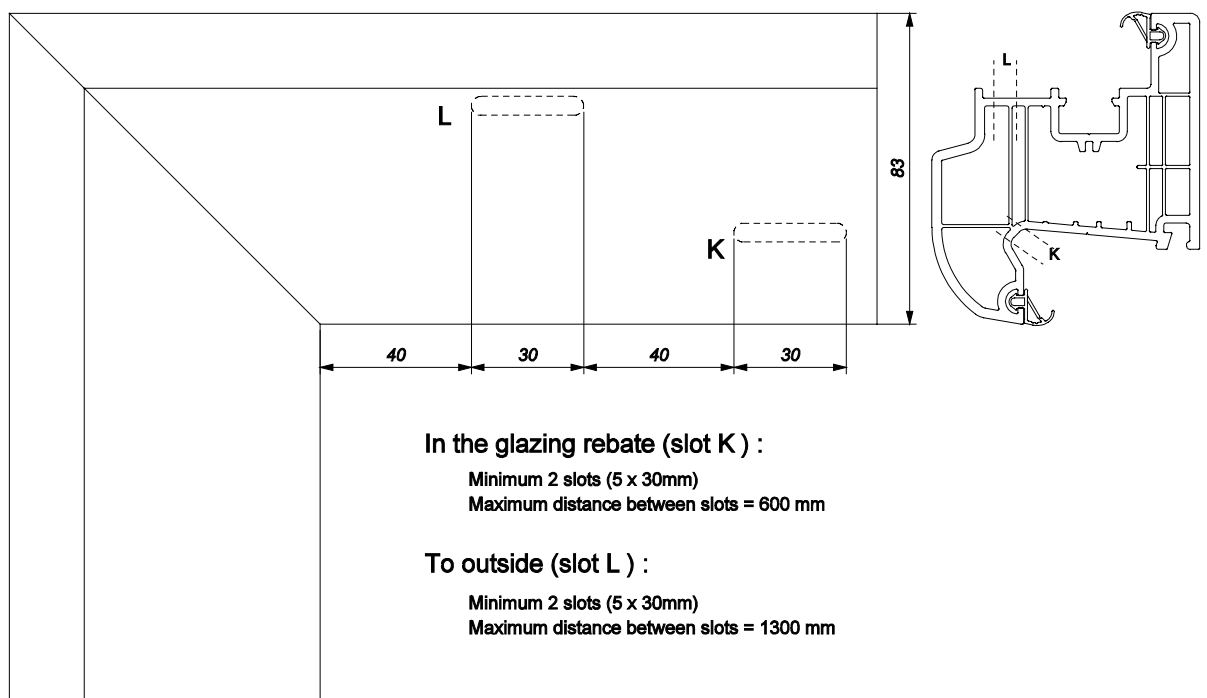
5.3.2.4. Sash profile 2520



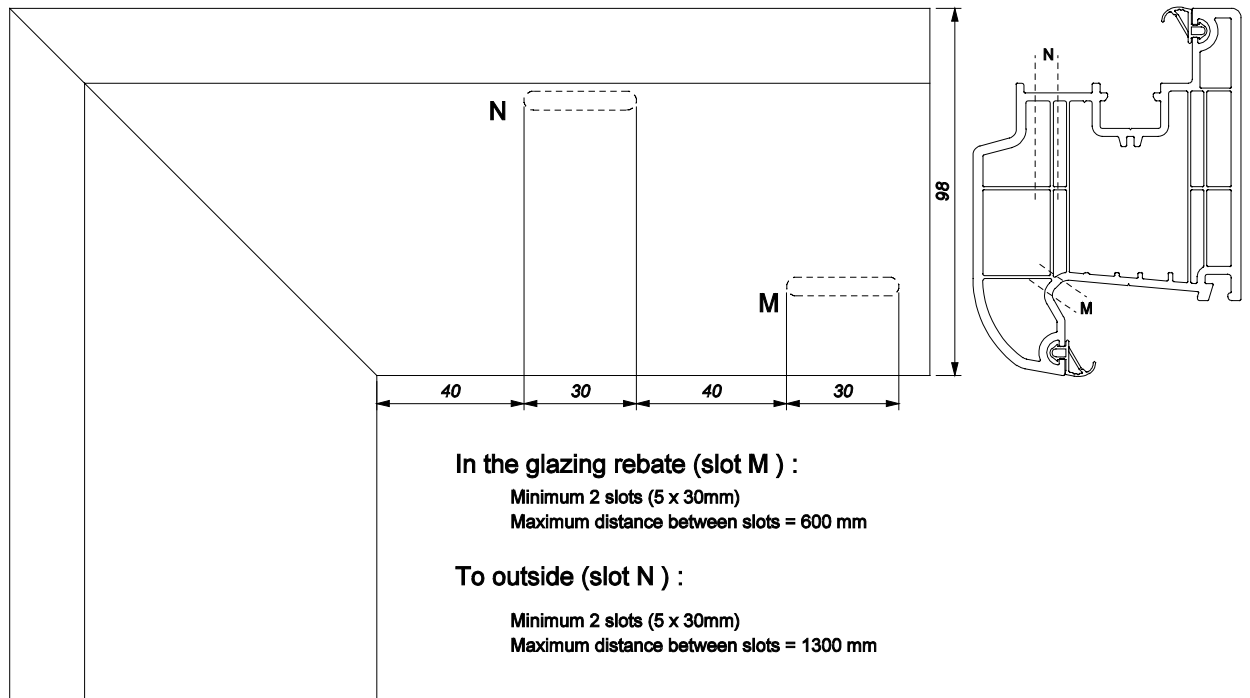
5.3.2.5. Sash profile 2521



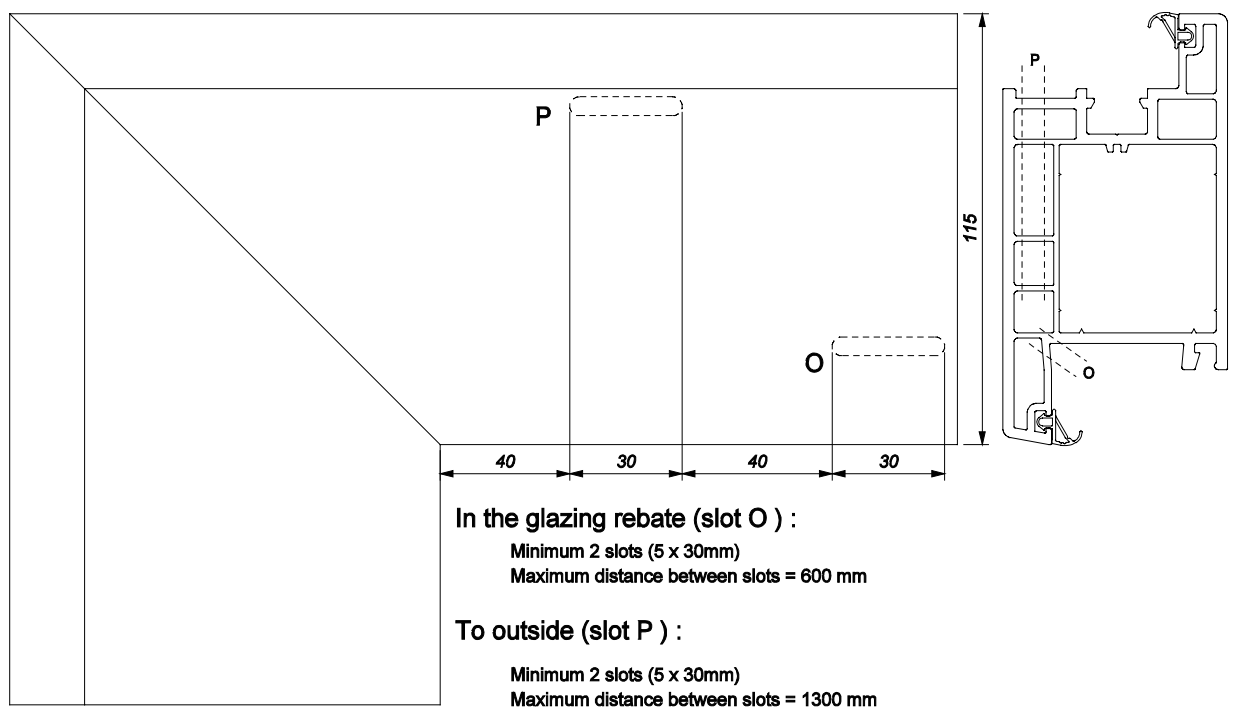
5.3.2.6. Sash profile 2522



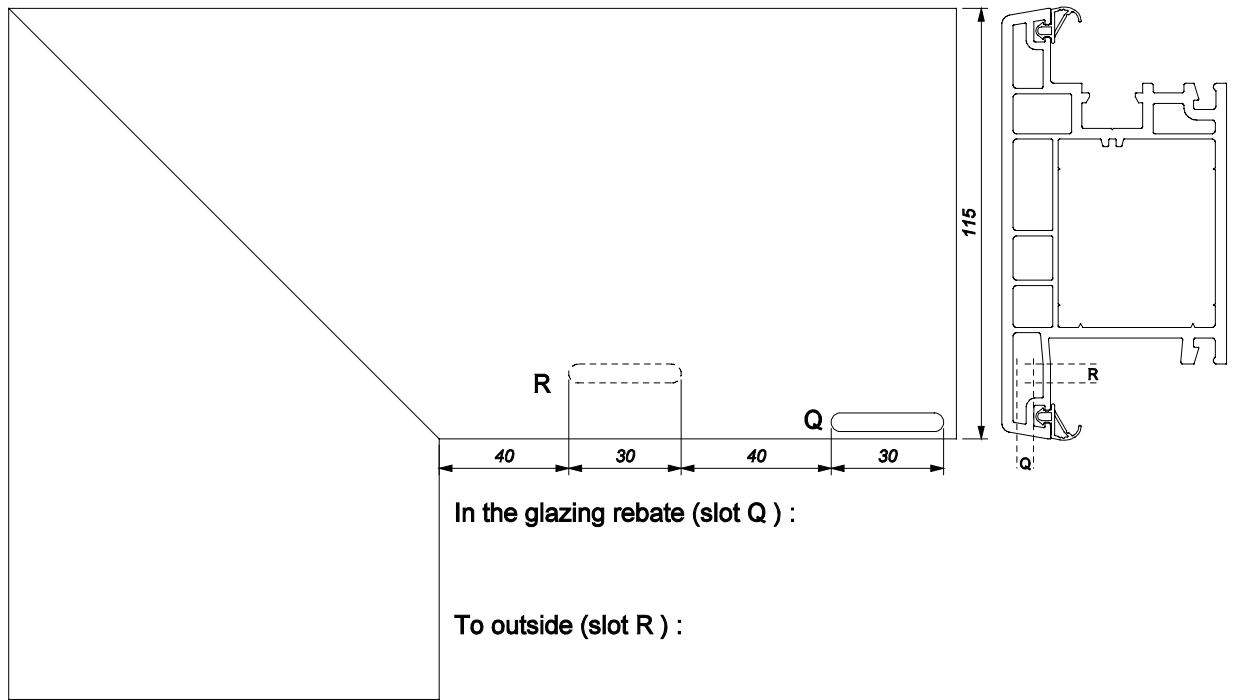
5.3.2.7. Sash profile 2523



5.3.2.8. Sash profile 2207



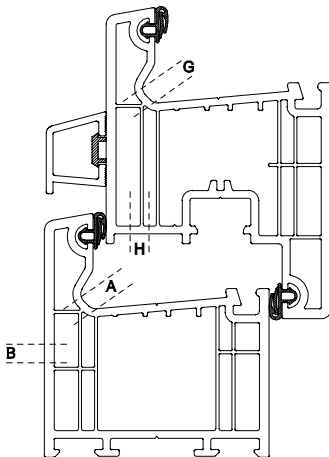
5.3.2.9. Sash profile 2217



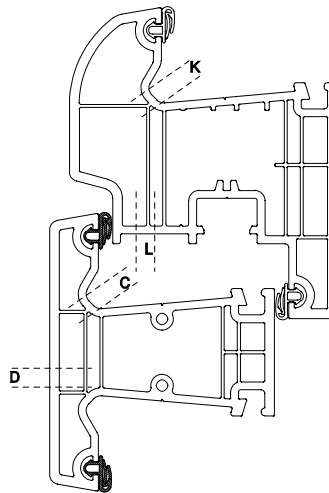
5.3.3. SUMMARY

5.3.3.1. DRAINAGE

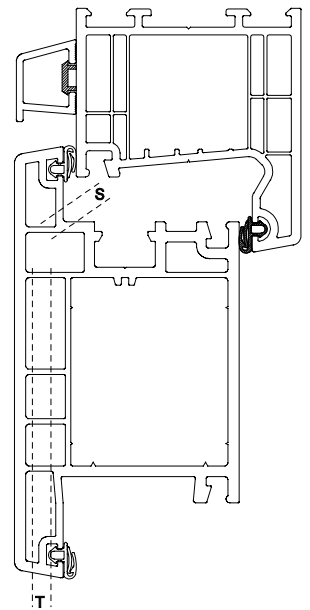
Outer frame 2500
Sash profile 2520



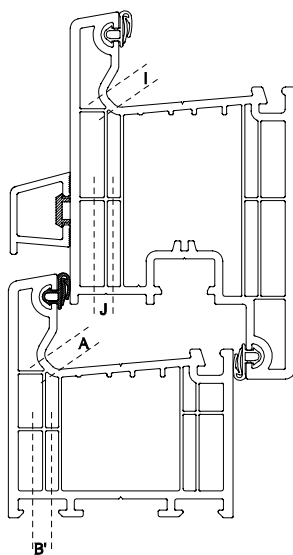
T-profile 2510
Sash profile 2522



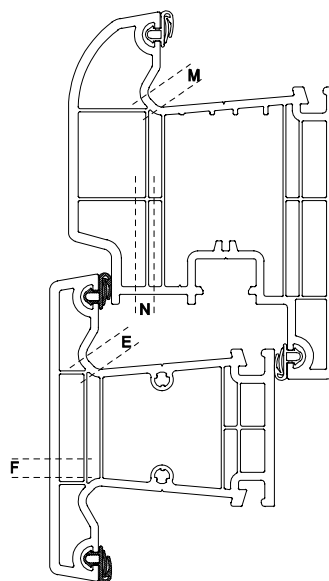
Outer frame 2510
Sash profile 2217



Outer frame 2500
Sash profile 2521

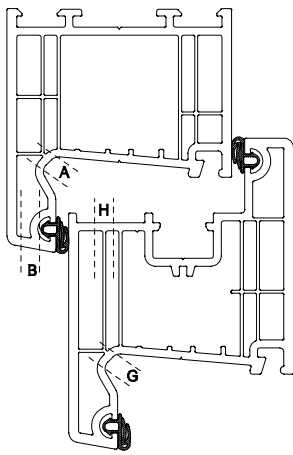


T-profile 2511
Sash profile 2523

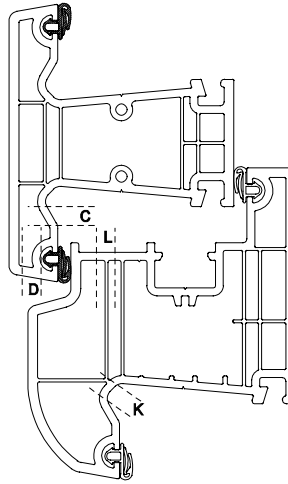


5.3.3.2. DECOMPRESSION

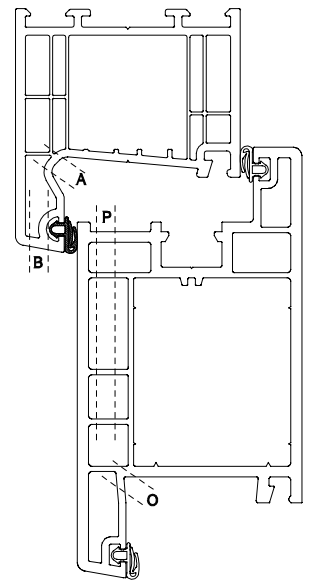
Outer frame 2500
Sash profile 2520



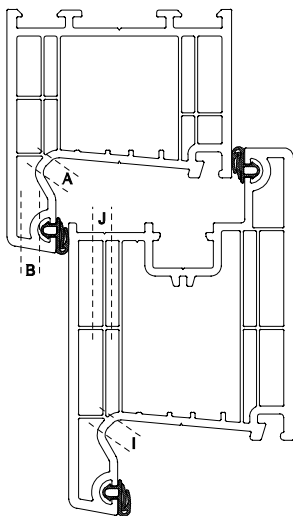
T-profile 2510
Sash profile 2522



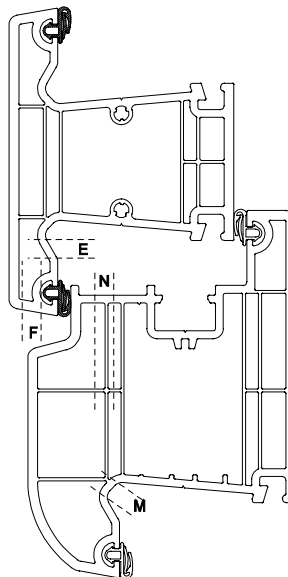
Outer frame 2500
Sash profile 2207



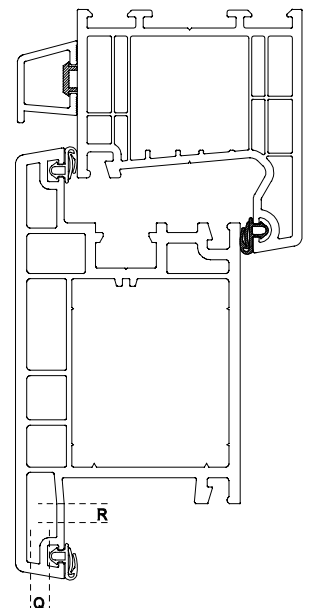
Outer frame 2500
Sash profile 2521



T-profile 2511
Sash profile 2523



Outer frame 2500
Sash profile 2217



5.4. REINFORCEMENTS

PVC window profiles for windows and doors are foreseen with some hollow chambers. This is for reason of thermal and acoustic insulation, to drainage and to make decompression, to ventilate and to insert metal reinforcements. The metal reinforcements have be galvanised (tickness zinc layer = 19 µm)

Reinforcing of PVC profiles is required for following reasons:

5.4.1. DILATATION BY HEAT

The coefficient of linear expansion of Wymer PVC profiles is 0.07 mm/m/°K. The temperature on the surface of the profiles can go far beyond the environmental temperature (e.g. on dark colored profiles). Obviously the reflection and absorption of sunlight plays a vital part in case of colored profiles. In case the reinforcement is regularly attached/screwed to the PVC-profiles the dilatation of PVC-profile will be reduced to the dilatation of the reinforcement, which is 0.012 mm/m/°K (6 times less then PVC-profiles).

Example: Length of profile: 2 m and DT = 40°C (temperature variation)
 Dilatation of PVC-profile would be $0.07 \times 2 \times 40 = 5.6$ mm
 If reinforced the dilatation is $0.012 \times 2 \times 40 = 0.96$ mm

Conclusion:

* Colored profiles: ALWAYS REINFORCED!!

* White profiles:

For Outer Frame profiles:

No reinforcement is needed for the outer frame profiles when:

- The outer frame is attached to the building on a regular way (see chapter 5.12: installation)

AND

- The length of one of the profiles is smaller then 2.4m.

For Sash profiles:

No reinforcement is needed for the sash profile when:

- The width of the window is smaller then 0.8m

AND

- The height of the window is smaller then 1.0m

AND

- The window surface is smaller then 0.65m².

For T- profiles & false mullion:

see 5.4.2 Stability/strenght of construction

5.4.2. STABILITY/STRENGHT OF THE CONSTRUCTION

A construction needs to resist to different loads (e.g. wind loads, glass loads, etc.). These loads cause deflections. It is obvious that these deflections have to be restricted. These is determined in norms established by every country.

The stability of a construction depends on 2 factors:

* The modulus of elasticity: E

For Wymer profiles is this 2200 MPa according ISO 178.

For reinforcement is this 210000 MPa.

* The moment of inertia: I

The moment of inertia indicates the influence of the shape of the profile on the stiffness of that profile.

Calculation has to be made to consider if a certain construction responds the demands.

Following items are important for the calculation:

- * The dimension of the construction
- * The modulus of elasticity E
- * The allowed deflection (depends on the location and the local norms)
- * The wind load (depends on the local norms)

The formula for the calculation is:
$$I_x = \frac{W \cdot a}{1920 \cdot E \cdot f} (5H^2 - 4a^2)$$

With: I_x = the moment of inertia
 F = the allowed deflection
 W = wind load
 E = modulus of elasticity
 H = height of construction

$$a = \frac{\text{width of construction}}{4}$$

With the help of understanding tables one can determine whether reinforcement is necessary for a certain construction.

5.4.3. FUNCTIONALITY

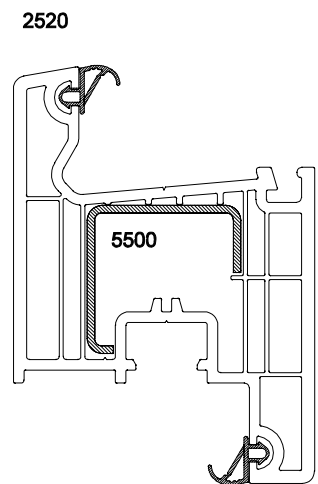
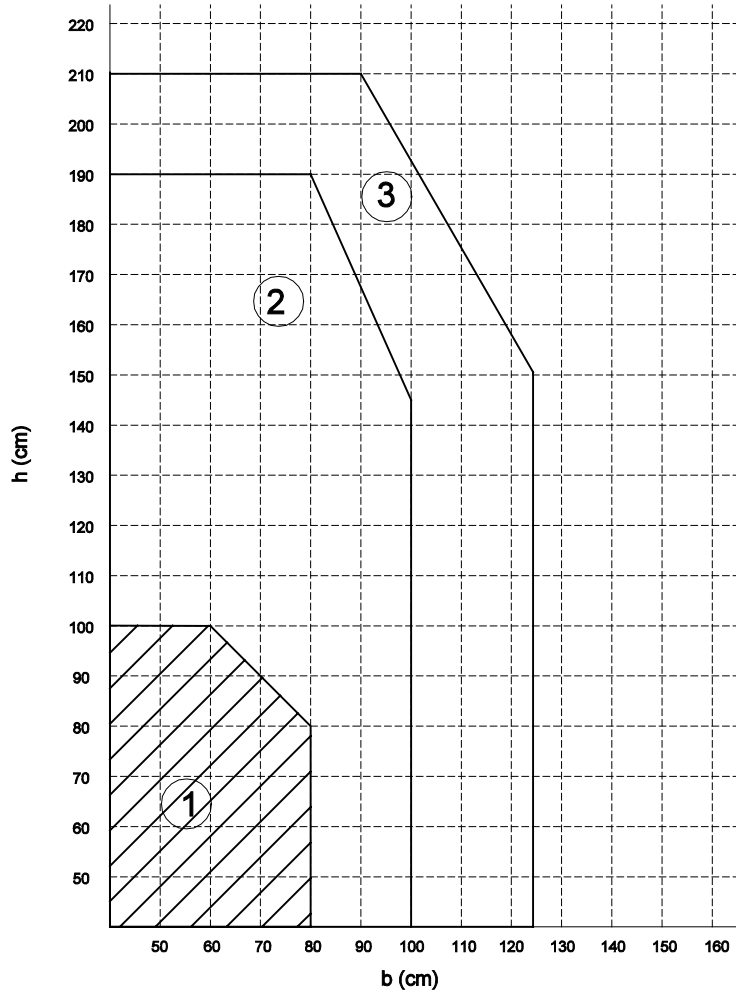
Due to the frequent use, doorsashes always have to be reinforced and weldable inserts should be placed into the tubular reinforcing of the doorsash at the corners to give maximum strength and rigidity.

The vertical outer frame, on side of the hinges, has to be reinforced. The other profiles don't have to be reinforced under condition that the outer frame is installed, by direct screwing, in the building on a regular way. For recommended fixing points, see chapter 5.13 : Installation

5.4.3.1. GENERAL REMARKS:

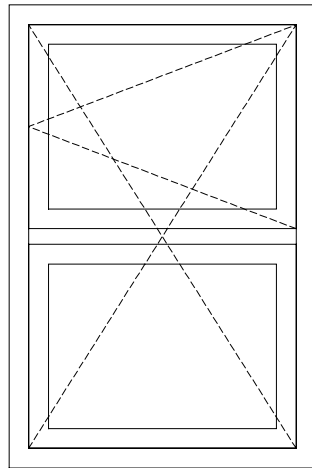
- * Reinforcements must be fixed in the correct chamber by means of self-tapping, rustproof screws at centers of 30 cm starting 50 mm from the end of the reinforcement.
- * The length of the reinforcements has to be a bit (+/- 1.5cm) smaller than the PVC-profile to allow welding of the PVC-profiles.
- * The reinforcement, coming into a PVC-profile, has to consist out of 1 piece. Dividing the reinforcement in 2 or more pieces, within one PVC-profile, reduces the effect of reinforcement to zero.
- * Because the length of the used reinforcement isn't critical, it can be considered to use standard lengths by the window production, which are pre-cutted with a maximum variation of 5 cm.
- * The installation of the metal sawing machine has to be done in such a way that the cutting of the reinforcement cannot damage the PVC-profiles (e.g. by burning parts).
- * Normally in mechanical constructions the reinforcement are fitted before welding. In case of welded T-junctions it will not be possible to fit the reinforcement where there is a V notch weld. In this case the reinforcement should be slide in the correct chamber immediately after welding whilst the spru is still soft and thereafter screwed in place as described previously.
- * In case of a construction with a mechanical junction the fixation of the mechanical connection on the complementary profile has to happen into the reinforcement.
e.g. for a mechanical connection of a T-profile onto a frame profile, the frame profile has to be reinforced with reinforcement 5501.

5.4.3.2. MAXIMUM DIMENSIONS OF THE SASH PROFILE 2520



- ① White & not reinforced
- ② Colored and reinforced
- ③ White and reinforced

5.4.3.3. MAXIMUM DIMENSIONS DOUBLE OPENING WINDOW WITH SASH PROFILE 2520



Outer frame: 2500

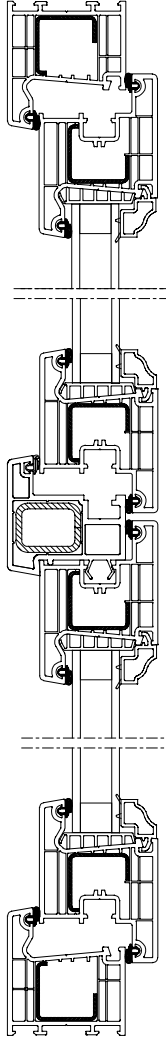
Reinforcement outer frame: 5500

Sash profile: 2520

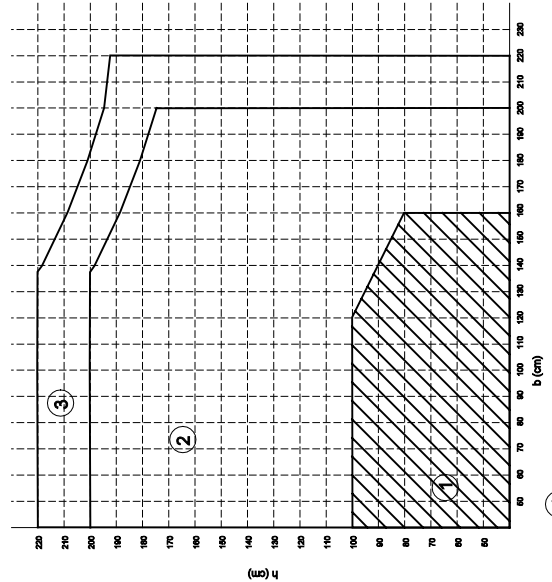
Reinforcement sash profile: 5500

False mullion: 2212

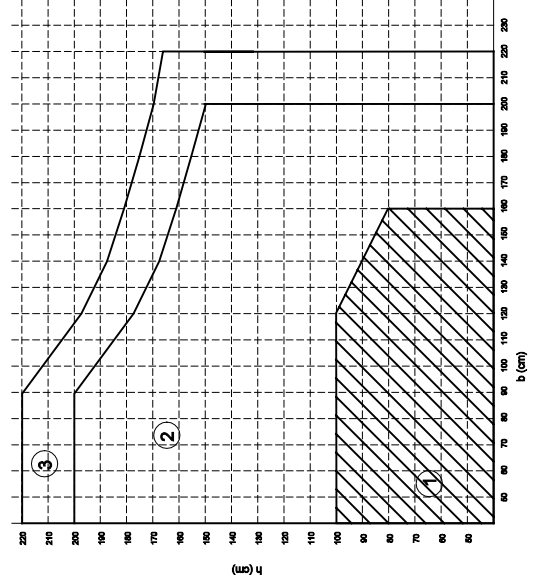
Reinforcement false mullion: 5212



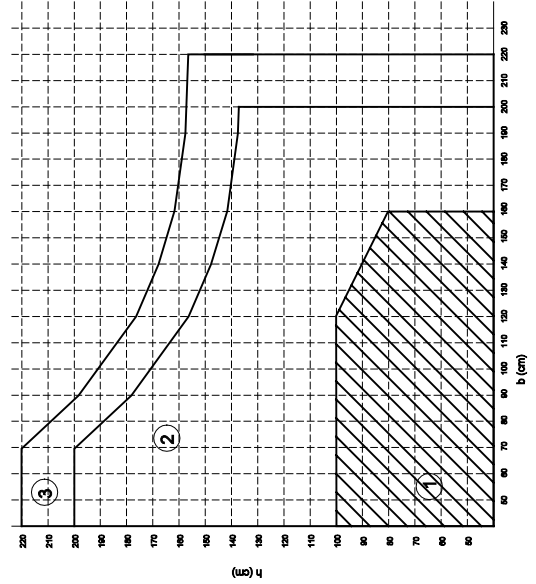
Class A : 0.65 kN/m²



Class B : 1.00 kN/m²



Class C : 1.44 kN/m²



- ① White & not reinforced
- ② Colored & reinforced
- ③ White & reinforced

5.5. WELDING

Welding of PVC-profiles is done by means of a full automated single or multi head welding machines. The welding happens by melting the saw surfaces of the PVC-profiles and afterwards by pressing these them against each other. This melting happens by bringing the cut faces of the PVC-profile into contact with the hot plate of the welder (= mirror), which is thermostatically controlled, to a given temperature (see below). To prevent the profile from sticking on the plate, the mirror is covered with a synthetic material called Teflon, which is capable of working at very high temperatures. It is imperative that the Teflon is kept clean and regularly renewed. The cleaning can happen with a soft dry cloth. Long profiles should be supported along their length. Where applicable contour blocks corresponding exactly to the profile should be used to support the profile.

Wymar profiles should be welded using the settings given below:

Welding temperature: 250 - 255 °C
Melting time: 30 seconds
Clamping time: 30 seconds
Temperature of the restricting knives: 40 - 50 °C

The placing of the welding machine has to be done so that draught during the welding proces is avoid. Too hot or too cold welding temperatures will result in defective and weak welds.

N.B. The temperature indication on the welding machine do not always indicate the real temperature of the welding plate. Therefore we suggest regular checks by Wyamar technician.

It is important to ensure that the spru is controlled and kept uniform along its' length, on modern welders this can be restricted to 0.2mm and should never exceed 1.5mm. The spru should also never be too shiny or discolored as this indicates too high weld temperature or contamination, which may have a variety of causes e.g. worn-out Teflon, unclean Teflon, etc. After welding the profile shoul cool naturally, without acceleration nor should the weld be placed on a cold surface as either or both will cause internal stresses and tensions leading to weak or broken welds. Cooling should be allowed for 30 min. before starting another operation. Hereafter the welded corners can be cleaned. Immediately after the softened weldingsurfaces are pressed against each other - during the welding proces - one has to press on the gasket. In the case of V notch welding we recommend to chamfer the point to the T-profile prior to welding.

Remark: We recommend the constant control of welding and therefore advise regular weld strength test in our laboratory. The results of our observation are to the benefit of the client.

5.6. CLEANING OF WELDING JOINTS

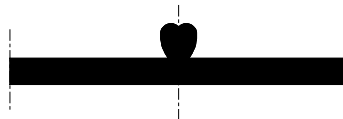
The cleaning of welded joints is a very important point, because this determines the quality of the window.

a/ The spru on the in- and outside of the corners

- * By hand using a variety of knives, chisels, or snips and dental drills. Special care should be taken not to notch the inside of the corners. This reduces the welding strength of the welded corner
- * Corner cleaning machine with profile related cutters.

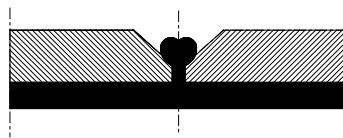
b/ Spru on visible(horizontal) surfaces.

- * Without restrictor knives



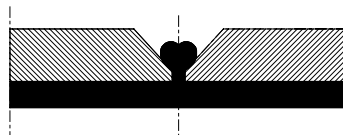
must be polished

- * With square edged restrictor knives (limited to 1.5 mm)



may be polished or grooved

- * With sharp edged restrictor knives (limited to 0.2 mm)



may be polished, grooved or knifed off.

Polishing is made in 4 stages:

1. Coarse sanding with sandpaper (180 grit)
2. Afterwards sanding with an orbital sander and medium sandpaper (250 grit)
3. Idem 2. but with finer sandpaper (500 grit)
4. Finish by polishing with a sisal brush or lambswool mop, min 2000 revs/min.

By this method a very smooth flat is achieved.

This method is hardly ever used, as it is too labor-intensive.



Grooving is achieved by a specialized corner cleaning machine. This is an automated operation. The obtained groove has a maximum depth of 0.5 mm and a width from 3 till 4 mm.



Knifing off is done while the profile is protected with a thin metal shield, this is a quick manual operation and leaves a slight up-stand just above the surface.



5.7. THE MECHANICAL CONNECTOR

The T-profiles with reference 2510 and 2511 can be connected to the adjacent profile by an aluminium mechanical connector.

- Ref. 6955 for Ref. 2510 (fig. 13 and fig. 14)
- Ref. 5956 for Ref. 2510 and 2511
- Ref. 6957 for Ref. 2511

The mechanical connector is screwed onto the outer frame, Sash profile or T-profile (screw diameter 3.9)

The seal up of the mechanical connector and the adjacent profile is guaranteed by a PE sealingmousse which is pressed together during assembly.

NOTA

- It is necessary to reinforce the whole length of the T-profile when there is a mechanical connector, as well as the adjacent outer frames, sash profiles and T-profiles.
- It is possible to provide de reinforcementchamber with an nylon cap so the transom/mullion can be connected optimal.

5.7.1. Transom

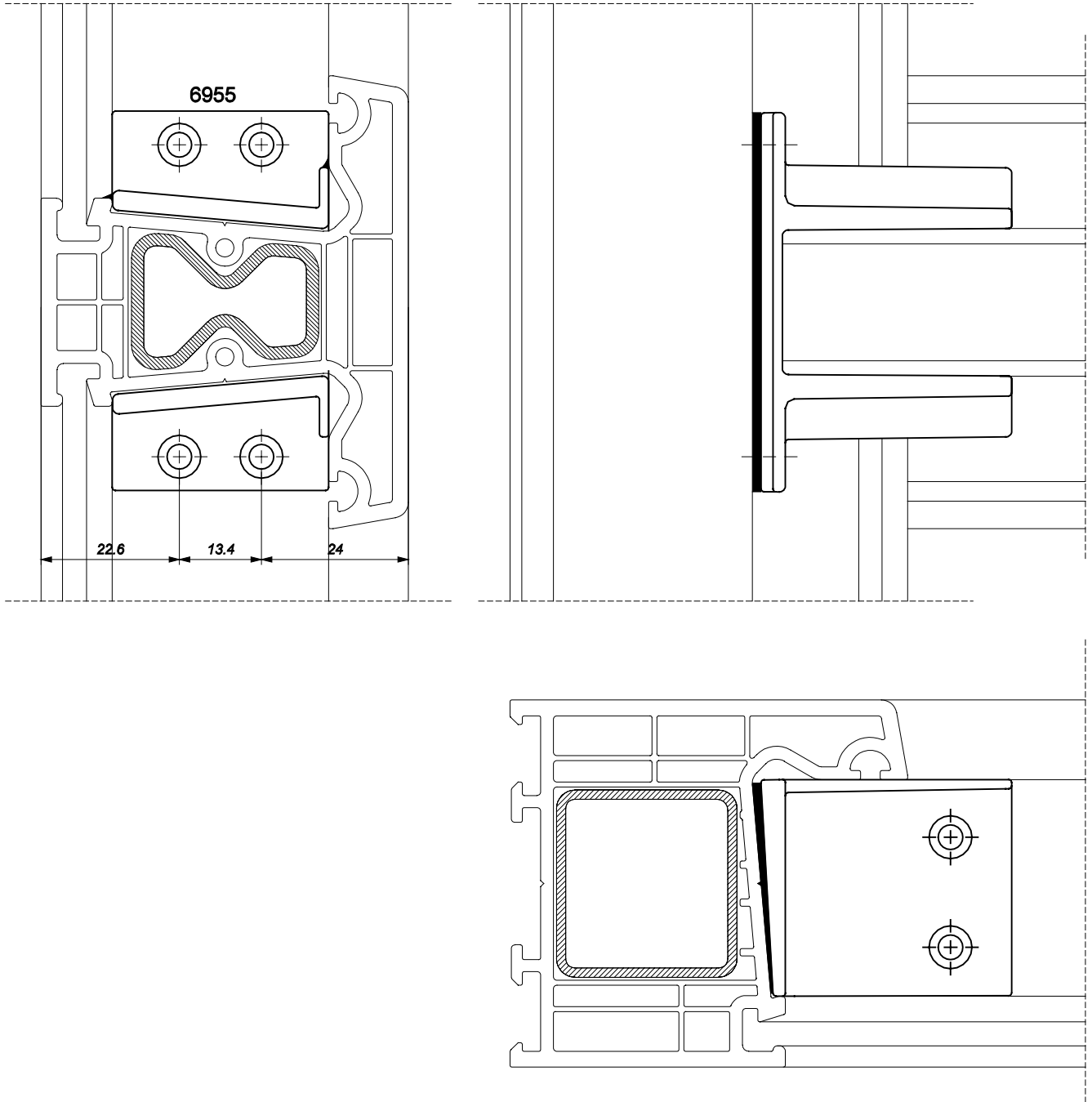


fig.13

5.7.2. Mullion

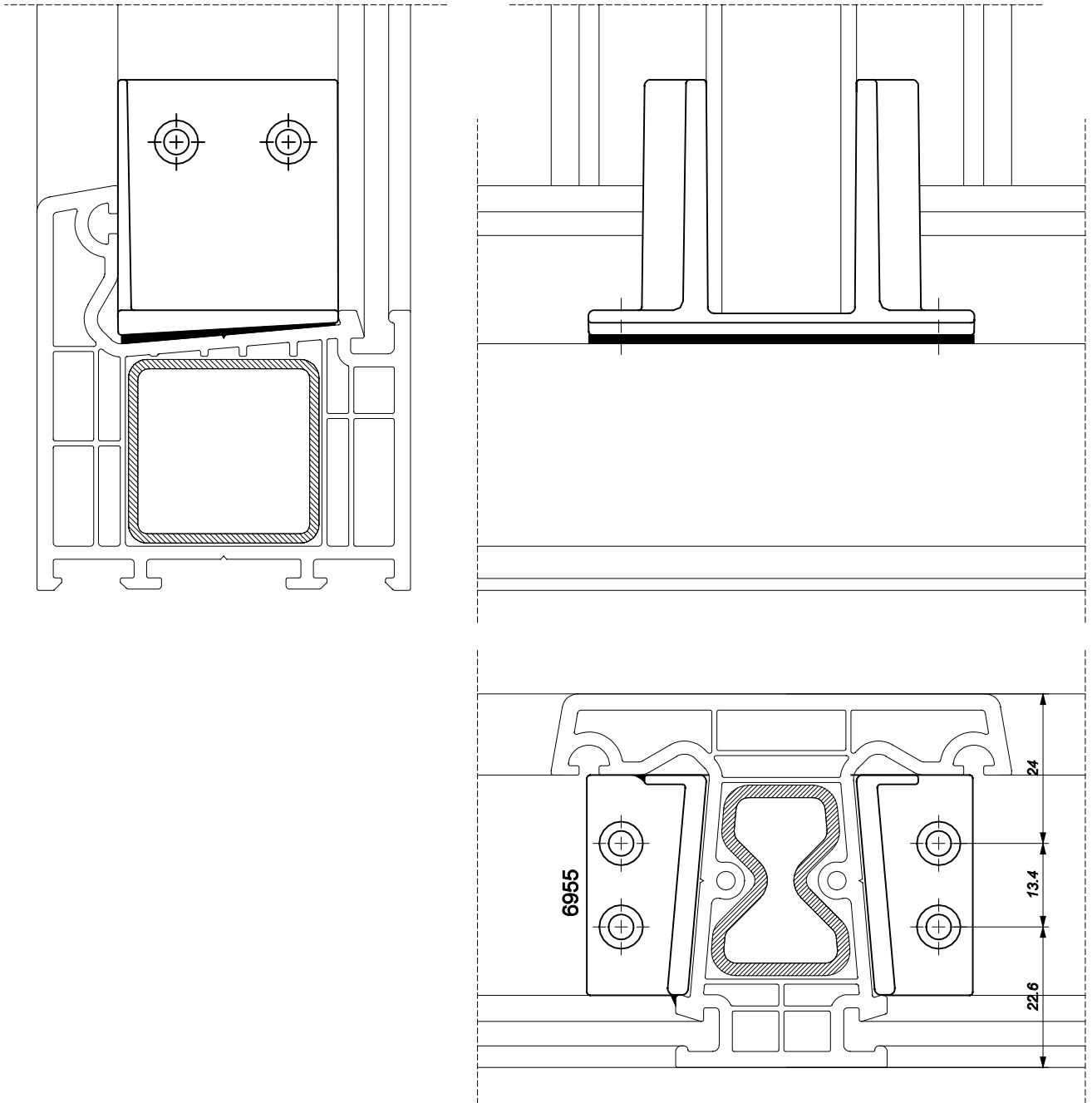


fig.14

5.8. FITTING THE IRONMONGERY

The ironmongery enables the sashes to be opened and closed and facilities ventilation. Nevertheless security and weatherproofing must remain guaranteed. The ironmongery and its fixing should be able to resist torsion, flexing, shocks and be able to support the load required. The ironmongery is installed with self-drilling rustproof screws and according to the instructions of the ironmongery supplier. Screws should, where possible, pass through a minimum of 2 PVC-walls, but even better is the screwing into the reinforcement.

Special care should be taken to ensure sufficient locking points are foreseen depending on the width and height of the opening parts. Constant care must be taken to ensure that the prescribed clearance of 12 mm between the fixed and the opening parts is foreseen to ensure a perfect working.

5.9. GASKETS

In the 2500 Series the glazing- and weather-tightness are achieved using a TPE-gasket, which is inserted into the gasket groove during the extrusion process of the main profiles. This gasket can be welded at the same temperature as the profile and is dual purpose, functioning as a weather seal, and as a glazing gasket. This TPE-gasket can be manually reinstalled. Only original gaskets prescribed by the system supplier can be used and resist against atmospheric influences and symptoms of aging. In case of light-colored profiles (white, cream, light grey, ...) they use grey gasket, in case of darker profiles and woodimitations they use black gaskets.

5.10. AUXILIARY PROFILES

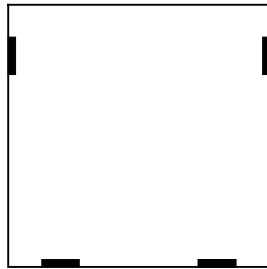
Auxiliary profiles may be clipped, screwed or glued onto or into the main profiles to achieve the desired effect.

5.11. GLAZING

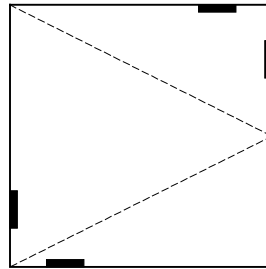
Glazing is done on site or in the workshop. The glass has to be installed from the inside of the window. The corners where the glazing beads meet can be either mitered or scribed depending on the fabricator's choice. The glazing beads clip into the main profiles and are co-extruded with a white seal (except where the profiles are woodgrained, in which case they are co-extruded with a black seal). The glazing beads are available in different sizes to allow a variety of glass unit thickness. The minimum glazing is 6 mm, the maximum is 35 mm. An overall gap of 8 to 10 mm, 4 to 5 mm either side, is allowed between the glass and the frame. It is supported and centralized within the frames by means of glass supporting blocks. These should have a minimum length of 100 mm and not impede the evacuation of water. The width of the glass supporting block = width glass + 2 mm. The purpose of the support blocks is to allow ventilation around the glass unit and to transfer the weight of the glass to the best reinforced supporting places. The thickness of the glazing has to be adapted to the dimensions of the window.

5.11.1. POSITION OF THE GLASS SUPPORTING BLOCKS

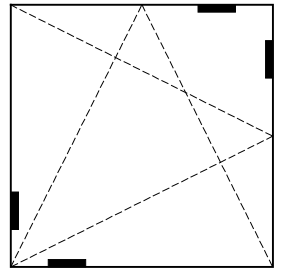
Fixed frame



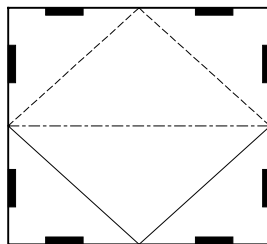
Single opening window



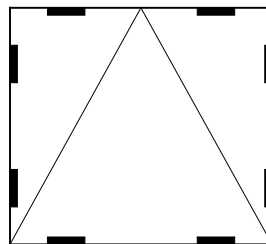
Tilt / Turn



Pivot Window



T / Hung Casement



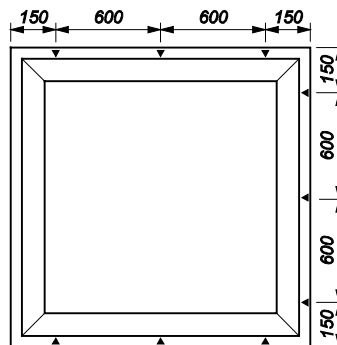
5.12. FINAL INSPECTION AND CONTROL

Before the windows leave the workshop they must be carefully inspected to ensure the correct level of quality. The windows should be controlled on their requirements concerning dimensions, drainage, decompression, fitting of ironmongery, corner cleaning, gaskets, glazing beads etc. For a high quality window a fine adjust of the welding parameters is of high importance.

5.13. INSTALLATION

Rigid PVC is sensitive to sharp shocks which often results in fractured welds, therefore during transportation, storage and installation special care should be taken to ensure that frames are not subjected to these. During transportation and storage the frames should be stacked of the ground and separated by suitable pieces of non-abrasive packaging material. The finished windows should also be stored dry until ready for installation.

Frames should be fixed by means of screws, frame anchors, expanding foam or fixing lugs. Any metallic fixings should be suitable rustproof and where fixing through the frame a suitable plastic packer should be placed to ensure that the frame is kept square and not distorted. Fixing lugs should be suitably spaced (see below) around the sides and top of the outer frame and fixed to it with self-drilling screws. Fixing should not take place through the bottom of the outer frame, as it will cause water infiltration. It should also be kept level and suitably supported at such points where glass is to be supported, locking points are located or anchorage takes place. If the tops or bottoms of frames are not to be fixed then they must be reinforced. When fitting frames with PVC cills onto stone cills a gap of min 3 mm must be kept between the nose of the PVC cill and the stonework to allow expansion and contraction. This gap is then filled with silicone mastic and is especially important with wood grain profiles. Frames must be positioned vertical, square, level and not in twist. For the recommended number and positioning of the fixing points see drawing below.



Fixing must not be placed too near to the welded corners and should be placed to support hinges and permit positive locking. A gap of 10 mm should be allowed for around the perimeter of the frame to allow expansion and contraction. This gap is then filled with low modulus silicone mastic backed by a suitable foam strip if required.

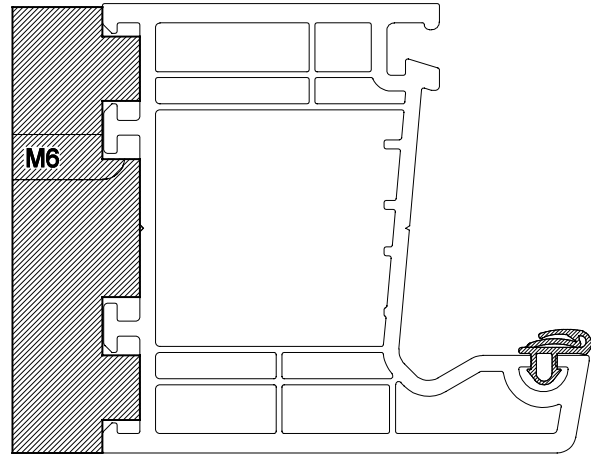
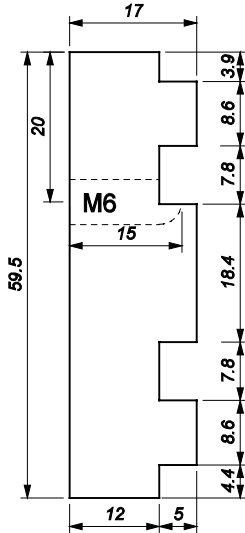
6. TOOLS AND MACHINERY

6. TOOLS AND MACHINERY

6.1. SUPPORTING BLOCKS FOR WELDING MACHINE

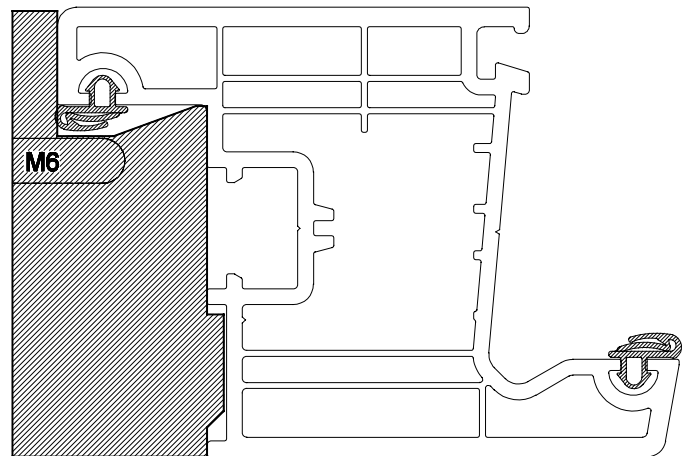
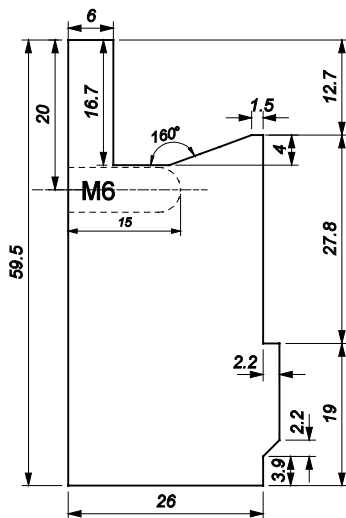
6.1.1. PROFILE 2500

SCALE 1/1



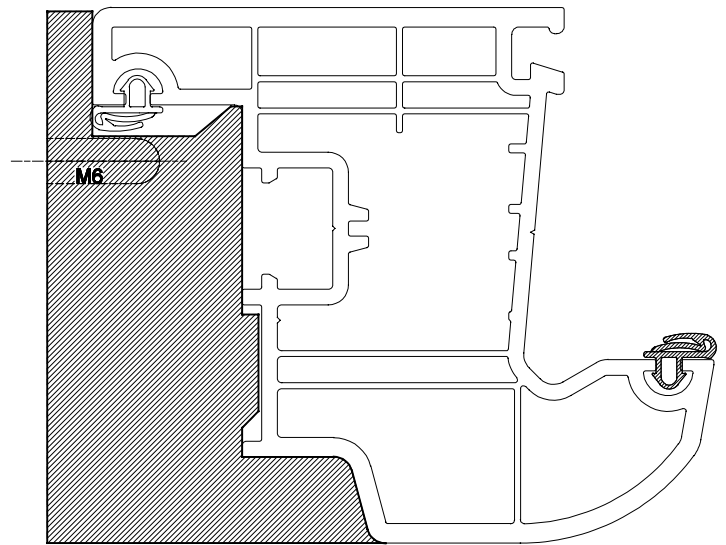
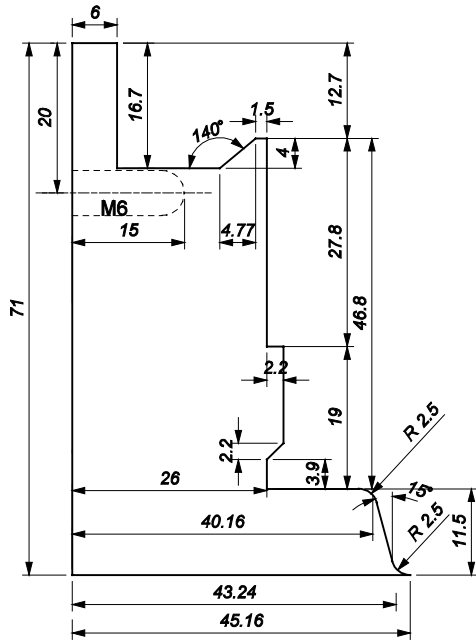
6.1.2. PROFILE 2520 - 2521

SCALE 1/1



6.1.3. PROFILE 2522 - 2523

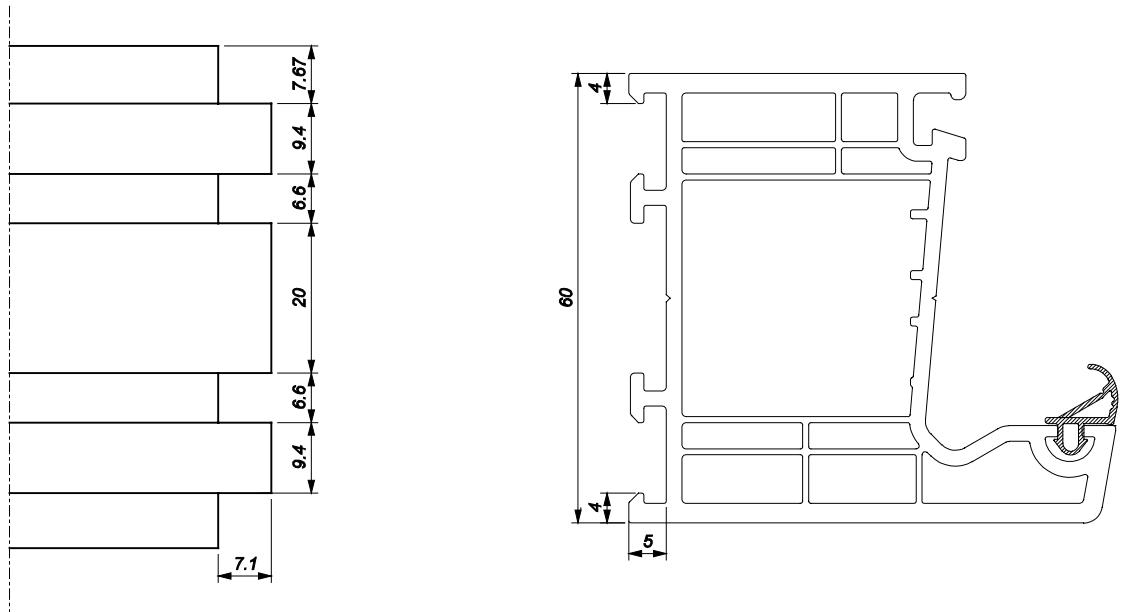
SCALE 1/1



6.2. CORNER CLEANER CUTTER

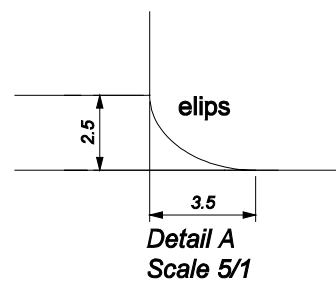
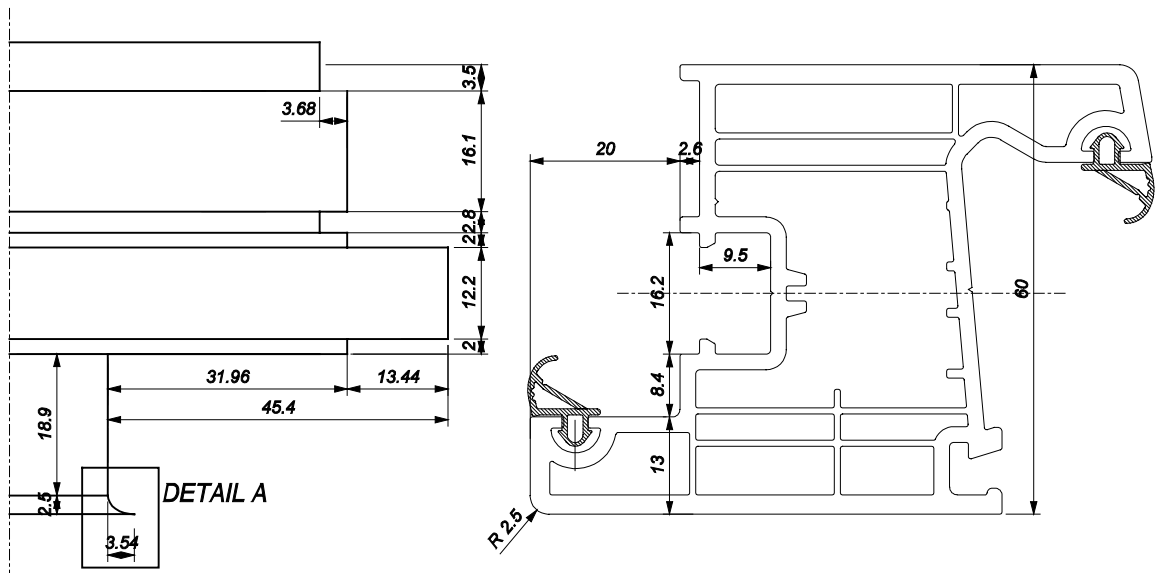
6.2.1. PROFILE 2500

SCALE 1/1



6.2.2. PROFILE 2520 - 2521 - 2522 - 2523

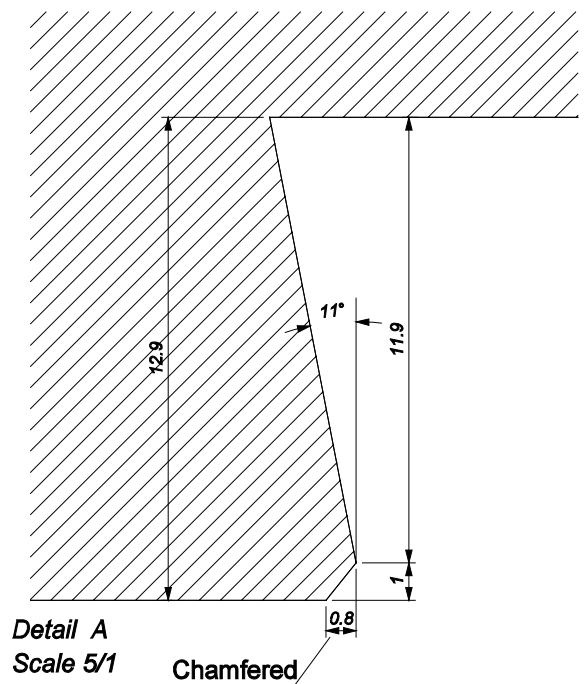
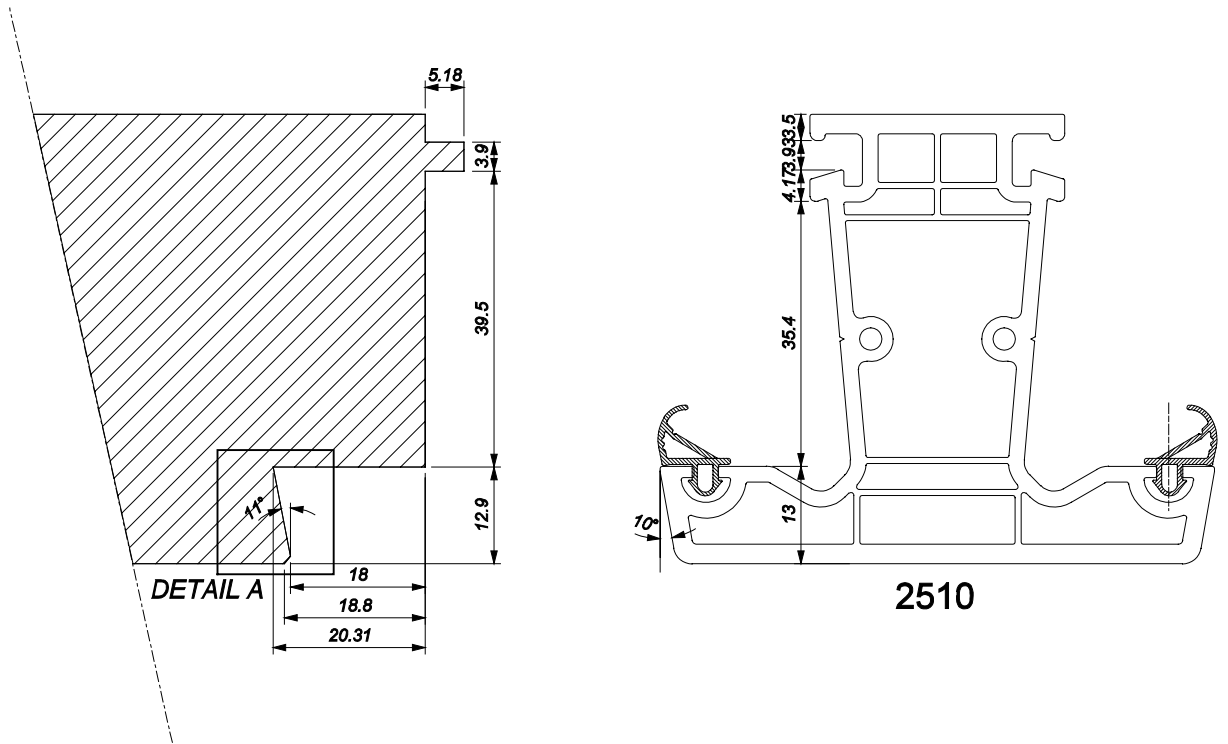
SCALE 1/1



6.3. END MILL CUTTER FOR A MECHANICAL JOINT

6.3.1. PROFILE 2510 WITH MECHANICAL CONNENTOR 6955

SCALE 1/1



6.3.2. PROFILE 2510 (2511) WITH MECHANICAL CONNECTOR 6956 (6957) SCALE 1/1

