

E16000

E440

# TECHNICAL CATALOGUE

OPENING WINDOW AND DOOR SYSTEM

E70

E45

E1000

Q60

E75

E85

E2300

E52

E19

Q72

E8000

**ETEM**







# E1000

OPENING WINDOW AND DOOR SYSTEM

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# ETEM HISTORY

ETEM is a leading aluminium extrusion company. It was founded in 1971 as a part of the largest metal manufacturing holding in the Balkans. With over 40 years of experience ETEM is a fully integrated designer and producer of architectural systems and aluminium profiles for industrial applications.

Our mission is to listen and promptly respond to our customers' requests and design and manufacture aluminium products and systems, taking into consideration technical and aesthetic requirements.

ETEM focuses on sustainable development and has proven its concern about the protection of the natural environment by making considerable investments in anti-pollution measures and by optimizing production processes following the applicable standards of the European Union.

## SERVICES WE PROVIDE

ETEM supports you with the following:

- ▷ design of conventional and bespoke architectural system solutions
- ▷ innovative engineering in the field of curtain walls, ventilated facades, doors, windows
- ▷ professional consultation and adequate technical advices ensured by our engineering team with wide experience in the field of profile extrusion as well as architectural systems' engineering

- ▷ reliable customer care constant support trainings, technical support and audits on site
- ▷ high quality engineering which guarantees offering the best solution according to the specific features of every single project
- ▷ managing the process of certification in accordance with the applicable European standards in Notified Bodies
- ▷ production of non-standard length profiles and non-standard processing high quality powder coating

# ETEM PRODUCTS AND SUSTAINABLE DEVELOPMENT

SUSTAINABLE DEVELOPMENT IS DEVELOPMENT THAT MEETS THE NEEDS OF THE PRESENT WITHOUT COMPROMISING THE ABILITY OF FUTURE GENERATIONS TO MEET THEIR OWN NEEDS.\*

For many, sustainable development is about environmental conservation. This is true but it also includes two other aspects: a social aspect and an economic aspect.

Sustainable development means striking the right balance between economic development, social equity and environmental protection.

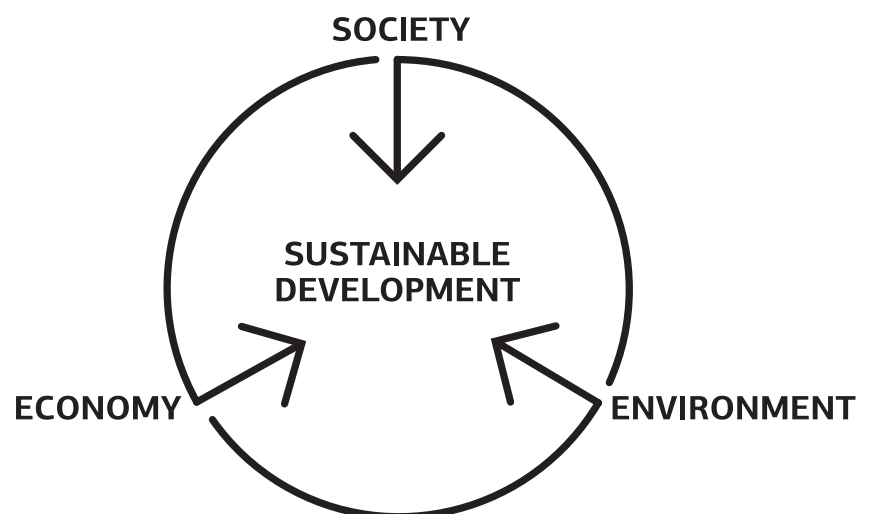
For us meeting this objective translates into the challenge of satisfying market demands at the lowest economic, social and environmental cost possible.

ETEM has always designed architectural systems which are in compliance with all requirements for achieving high energy efficiency.

In order to assure the comfort of the building inhabitants, ETEM systems adapt their functions to the changing environment.

As a moderator between outside and inside our systems provide:

- › ENERGY EFFICIENCY
- › DAYLIGHT
- › SUN-SHADING
- › VENTILATION AND GOOD AIR QUALITY
- › SAFETY AND SECURITY



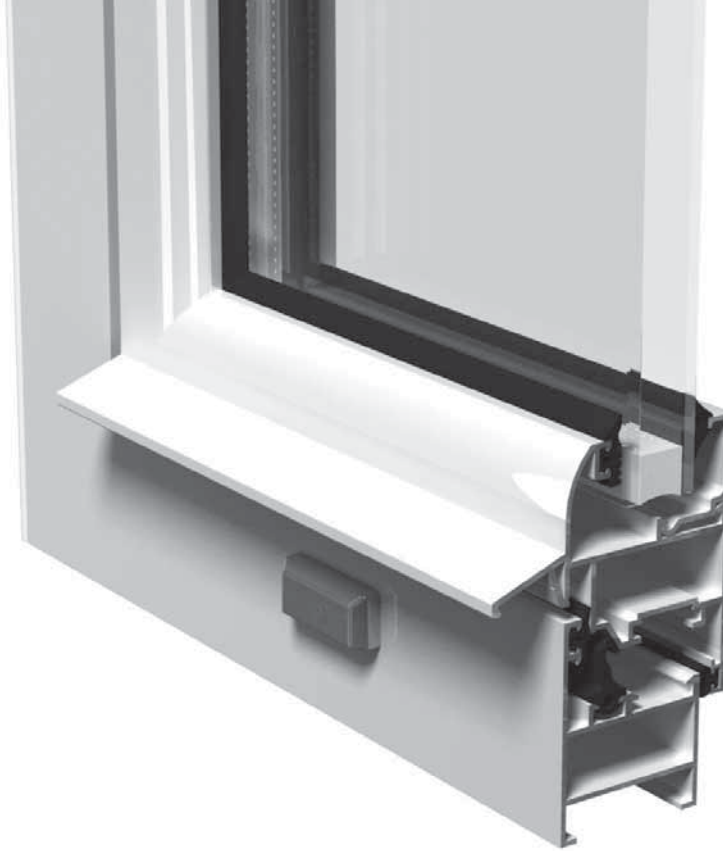




# GENERAL INFORMATION

CONCEPT / ADVANTAGES / CERTIFICATES





# E1000 CONCEPT

**E1000** IS DESIGNED TO MEET ALL MODERN REQUIREMENTS IN A BUILDING AS FAR AS CONSTRUCTION, TECHNOLOGY AND AESTHETICS IS CONCERNED, WHILE NOT EXCEEDING BUDGETED COSTS.

- Functional and complete regarding available typologies, wide variety of profiles for the construction of both curved and straight-line profiles.
- Compact 40 mm and 48 mm sash system (for straight and round profiles accordingly)
- Wide range of accessories designed by ETEM that guarantee long lasting functionality and durability
- High aesthetics and functionality
- Economically attractive solutions
- Safe constructions
- Multiple solutions, especially for main entrances
- Adequate sealing
- A capability of powder painting in any RAL colour, special woodgrain patterns and other surface processing methods – anodizing

# COMPLIANCE WITH APPLICABLE REGULATIONS

## Production management

Quality Management system is certified in accordance with EN ISO 9001:2008.

Environmental management system is certified in accordance with EN ISO 14001.

Factory production control system is certified according to the requirements of EN 15088. All ETEM profiles are CE marked and in compliance with applicable European Standards.

ETEM is authorized to use the QUALICOAT quality sign for paint, lacquer and powder coating on aluminium for architectural applications.

Occupational Health & Safety Management System is certified in accordance with OHSAS 18001.

### PERFORMANCE CHARACTERISTICS OF E1000

Characteristic	Classification / value	Standard
Air permeability	Up to class 4	EN 1026 / EN 12207
Watertightness	Up to class 9A	EN 1027 / EN 12208
Resistance to wind load	Up to class C4	EN 12211 / EN 12210
Acoustic performance	Up to 38 dB	EN ISO 717-1

# CLASSIFICATION OF CHARACTERISTICS

for windows without resistance to fire and/or smoke leakage characteristics according to EN 14351-1

Characteristic / value / dimension	Classification / Value										
<b>Resistance to wind load</b> Test pressure P1 (Pa)	npd	1 (400)	2 (800)	3 (1200)	4 (1600)	5 (2000)	Exxxx (>2000)				
<b>Resistance to wind load</b> Frame deflection	npd	A ( $\leq 1/150$ )		B ( $\leq 1/200$ )		C ( $\leq 1/300$ )					
<b>Resistance to snow and permanent load</b>	npd	Declared information on the infill (e.g. type and thickness of glass)									
<b>Reaction to fire</b>	npd	F	E	D	C	B	A2	A1			
<b>External fire performance</b>	npd	According to EN 13501-5									
<b>Watertightness</b> Non-shielded (A) Test pressure (Pa)		1A (0)	2A (50)	3A (100)	4A (150)	5A (200)	6A (250)	7A (300)	8A (450)	9A (600)	Exxxx (>600)
<b>Watertightness</b> Shielded (B) Test pressure (Pa)	npd	1B (0)	2B (50)	3B (100)	4B (150)	5B (200)	6B (250)	7B (300)			
<b>Dangerous substances</b>	npd	As required by regulations									
<b>Impact resistance</b> Drop height (mm)	npd	200	300	450	700	950					
<b>Load-bearing capacity of safety devices</b>	npd <sup>a</sup>	Threshold value									
<b>Acoustic performance</b> Sound insulation $R_w$ ( $C; C_{tr}$ ) (dB)	npd	Declared values									
<b>Thermal transmittance</b> $U_w$ ( $W/(m^2.K)$ )	npd	Declared values									
<b>Radiation properties</b> Solar factor (g)	npd	Declared values									
<b>Radiation properties</b> Light transmittance ( $\tau_v$ )	npd	Declared values									
<b>Air permeability</b> Max. test pressure (Pa) Reference air permeability at 100 Pa ( $m^3/(h \cdot m^2)$ or $m^3/(h \cdot m)$ )	npd	1 (150) (50 or 12.50)	2 (300) (27 or 6.75)	3 (600) (9 or 2.25)	4 (600) (3 or 0.75)						
<b>Operating forces<sup>b</sup></b>	npd	1				2					
<b>Mechanical strength</b>	npd	1		2		3		4			
<b>Ventilation</b> Air flow exponent n Air flow characteristic K Air flow rates	npd	Declared values									
<b>Bullet resistance</b>	npd	FB1	FB2	FB3	FB4	FB5	FB6	FB7	FSG		
<b>Explosion resistance</b> Shock tube	npd	EPR1		EPR2		EPR3		EPR4			
<b>Explosion resistance</b> Range test	npd	EXR1		EXR2		EXR3		EXR4		EXR5	
<b>Resistance to repeated opening and closing</b> Number of cycles	npd	5000			10 000			20 000			
<b>Behaviour between different climates</b>	npd	Under development									
<b>Burglar resistance</b>	npd	1	2	3	4	5	6				

NOTE 1: npd: no performance determined

NOTE 2: The figures in brackets are for information

<sup>a</sup> Only if safety device(s) is(are) not provided

<sup>b</sup> Manually operated windows only



# BUILDING PHYSICS

DIMENSIONING / FORMULAS / EXAMPLES





# ALUMINIUM AS MATERIAL

ALUMINIUM IS A VERY YOUNG METAL, EXTRACTED FOR THE FIRST TIME IN 1854. COMMERCIALY PRODUCED AS A PRECIOUS METAL FROM 1886, ITS INDUSTRIAL PRODUCTION FOR CIVIL APPLICATIONS ONLY ACHIEVED WIDE USE IN THE 1950'S.

NOW ALUMINIUM PLAYS A KEY ROLE FOR THE SUSTAINABILITY OF NEW BUILDINGS AND THE RENOVATION OF EXISTING ONES. THANKS TO ITS PERFORMANCE PROPERTIES ALUMINIUM CONTRIBUTES TO THE ENERGY PERFORMANCE, SAFETY AND COMFORT OF NEW BUILDINGS.

## ADVANTAGES

### DESIGN FLEXIBILITY

The extrusion process offers an almost infinite range of forms and sections, allowing designers to integrate numerous functions into one profile

### LONG SERVICE LIFE

Aluminium building products are made from alloys that are weatherproof, corrosion-resistant and immune to the harmful effects of UV rays, ensuring optimal performance over a very long period of time

### HIGH STRENGTH-TO-WEIGHT RATIO

Thanks to the metal's inherent strength and stiffness, aluminium window and curtain wall frames can be very narrow. Material's light weight makes it easier to transport and handle on-site, reducing the risk of work-related injury

### HIGH-REFLECTIVITY

This characteristic feature makes aluminium a very efficient material for light management. Aluminium shading devices can be used to reduce the need for air conditioning in summer

### FIRE SAFETY

Aluminium does not burn and therefore is classified as a non-combustible construction material (European Fire Class A1). Aluminium alloys will nevertheless melt at around 6500 C, but without releasing harmful gases

### NO RELEASE OF DANGEROUS SUBSTANCES

Several studies have proved that aluminium building products do not present a hazard to occupants or the surrounding environment. Aluminium building products have no negative impact, either on indoor air quality or on soil, surface and groundwater

### OPTIMAL SECURITY

Where high security is required, specially designed, strengthened aluminium frames can be used. While the glass for such applications may well be heavy, the overall weight of the structure remains manageable thanks to the light weight of the aluminium frames.

## ALLOYS

Aluminium in its pure form is a very soft metal. Thanks to the addition of alloying elements such as copper, manganese, magnesium, zinc, etc. and thanks to suitable production processes, the physical and mechanical properties can be varied in a wide range to satisfy the requirements of a large number of different applications.

ETEM profiles are extruded from the following alloys:

**EN AW-1050 [Al 99.5]**

**EN AW-6060 [Al Mg Si]**

**EN AW-6063 [Al Mg0,7 Si]**

**EN AW-6061 [Al Mg1 Si Cu]**

**EN AW-6005 [Al Si Mg]**

**EN AW-6082 [Al Si1 Mg Mn]**

The most common aluminium alloy which is used by ETEM is EN AW 6063. Here are the properties of this alloy:

### MATERIAL PROPERTIES

<b>Aluminium alloy</b>	EN AW 6063 F22
<b>Ultimate tensile strength</b>	Rm = 210 N/mm <sup>2</sup>
<b>Yield strength</b>	R <sub>p0.2</sub> = 160 N/mm <sup>2</sup>
<b>Modulus of elasticity</b>	Eal=70 000 N/mm <sup>2</sup> = 7.10 <sup>9</sup> kg/m <sup>2</sup>
<b>Coefficient of thermal expansion</b>	α=0.023 mm/m .K (up to 1.2 mm/m for difference up to 50°C)

## EXTRUSION PROCESS

ETEM profiles are obtained through extrusion process, which consists of pushing a hot cylindrical bullet of aluminium through a shaped die. The extrusion process offers almost infinite range of forms and sections, allowing our designers to integrate numerous functions into one single profile.

aluminium surface, increasing hardness, corrosion and abrasion resistance. Anodizing gives a very decorative silver matt surface finish, and colored can also be obtained by sealing metallic dyes into the anodized layer.

## FINISHING

### POWDER COATING

It is a type of paint that is applied as a dry powder. Coating is applied on ETEM profiles electrostatically and then is cured under heat to allow it to flow and form a "skin".

ETEM is authorized to use the quality sign QUALICOAT for powder coatings on aluminium for architectural applications. A wide range of colors and gloss levels can be achieved.

ETEM also offers timber imitations painting, in addition to all RAL colors. The technology EZY provides the following colors: Golden Oak, Acero, Betulla, Mogano, Verde Scuro, Wenge, Noce Fiammato, Noce Chiaro, Ciliegio Rosso, Acacia Scuro, Ciliegio Antico, Noce Reale, Ciliegio Reale.

### ANODIZING

It is an electrochemical process whereby to reinforce the natural oxide film on the

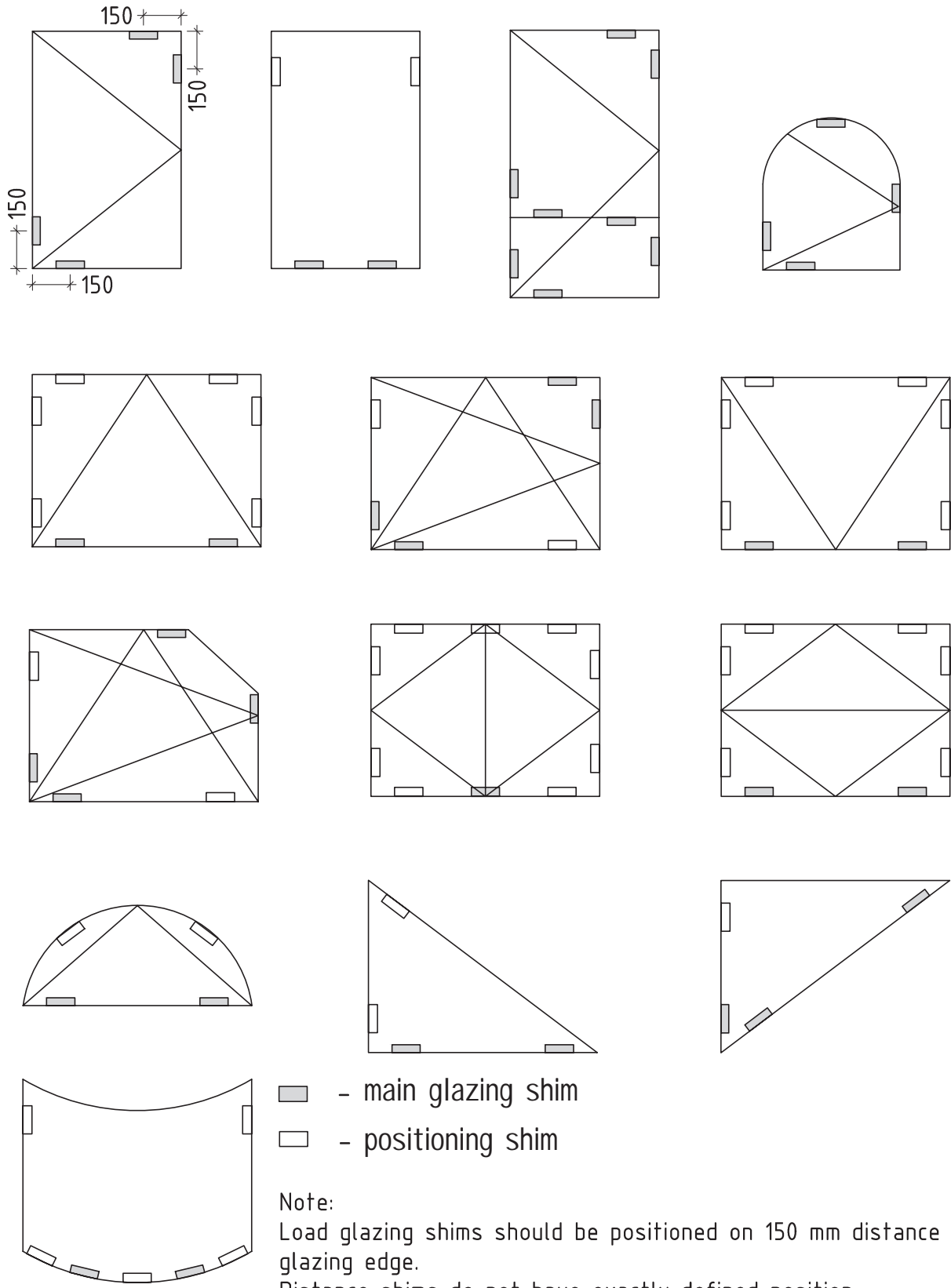
## MAINTENANCE

Apart from routine cleaning for aesthetic reasons, ETEM aluminium profiles do not require any maintenance which translates into a major cost and ecological advantage over lifetime of the product.

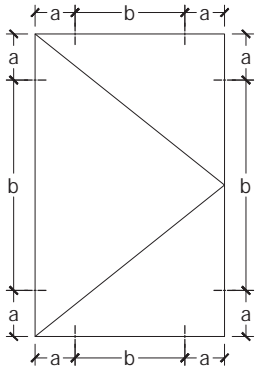
## RECYCLING

Aluminium scrap can be repeatedly recycled without any loss of value or properties. In many instances, aluminium is combined with other materials such as steel or plastics, which are most frequently mechanically separated from aluminium before being molten.

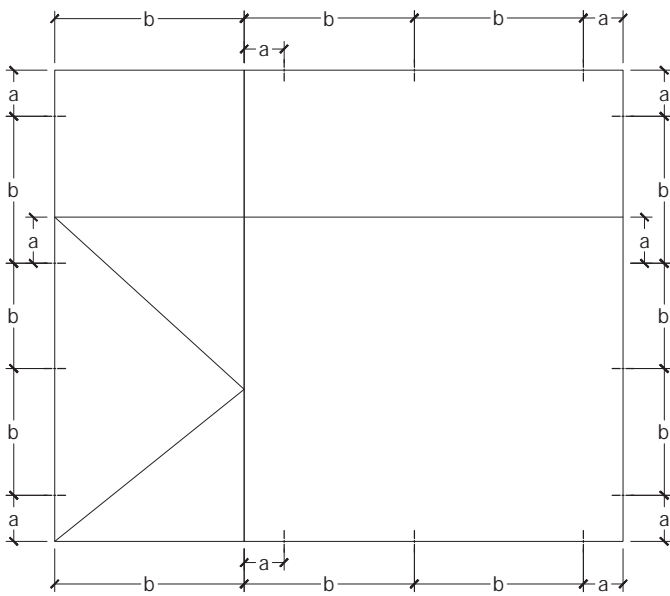
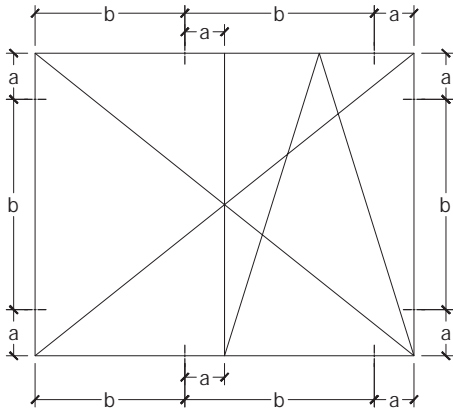
# GLAZING SHIMS



# POSITION OF ANCHORS



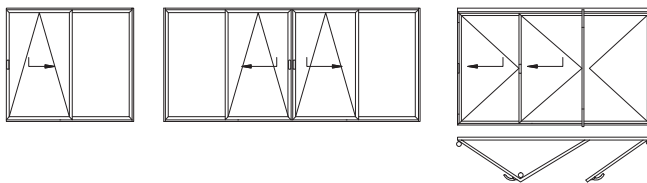
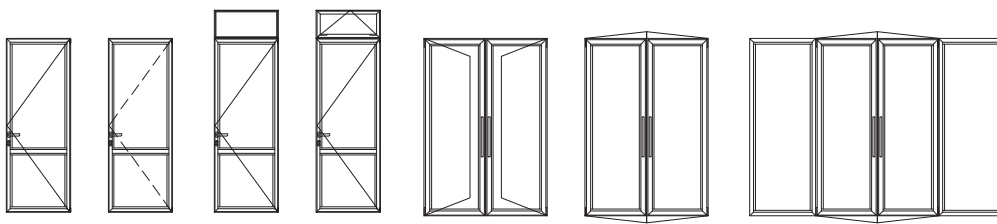
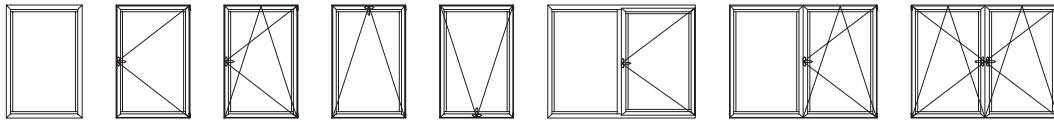
$a = 150 \div 200 \text{ mm}$   
 $b \leq 800 \text{ mm}$



# TABLES

TYPES / LIST OF PROFILES / CHARACTERISTICS


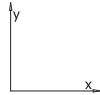
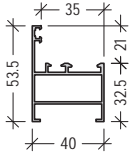
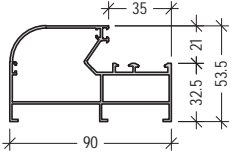
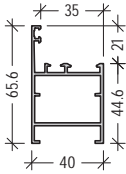
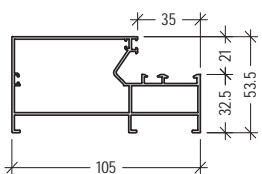
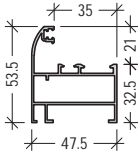
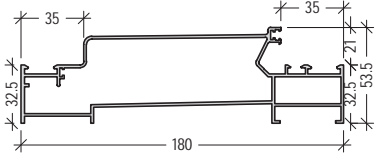
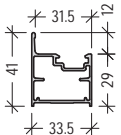
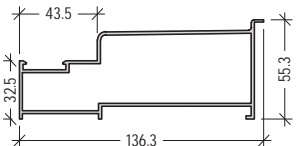
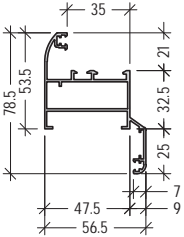
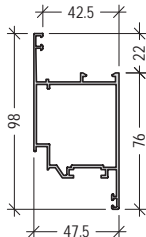
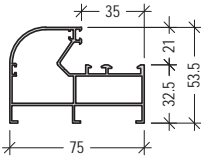
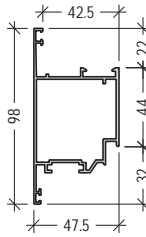




opening schemes:  
321:330:431:541:550:  
532:651:633:761:770:743

# opening system without thermal break

# E1000

code		profile	weight length moment of inertia	code		profile	weight length moment of inertia
E1100			678 g/m L=6.01 m  Ix=4.49 cm <sup>4</sup> Iy=5.82 cm <sup>4</sup>	E1132			1239 g/m L=6.01 m  Ix=12 cm <sup>4</sup> Iy=38.25 cm <sup>4</sup>
E1140			925 g/m L=6.01 m  Ix=9.95 cm <sup>4</sup> Iy=8.52 cm <sup>4</sup>	E1155			1472 g/m  Ix=15.86 cm <sup>4</sup> Iy=64.83 cm <sup>4</sup>
E1101			813 g/m L=6.01 m  Ix=6.06 cm <sup>4</sup> Iy=8.72 cm <sup>4</sup>	E1120			2284 g/m L=6.01 m  Ix=21.77 cm <sup>4</sup> Iy=294.98 cm <sup>4</sup>
E1190 light line			562.3 g/m L=6.01 m  Ix=2.55 cm <sup>4</sup> Iy=3.38 cm <sup>4</sup>	E5352			1750 g/m L=6.01 m  Ix=20.64 cm <sup>4</sup> Iy=130.74 cm <sup>4</sup>
E1102			956 g/m L=6.01 m  Ix=12.46 cm <sup>4</sup> Iy=14.56 cm <sup>4</sup>	E1187 straight line			1112 g/m L=6.01 m  Ix=26.2 cm <sup>4</sup> Iy=14.83 cm <sup>4</sup>
E1121			1134 g/m L=6.01 m  Ix=10.08 cm <sup>4</sup> Iy=24.21 cm <sup>4</sup>	E1188 straight line			1113 g/m L=6.01 m  Ix=26.17 cm <sup>4</sup> Iy=14.1 cm <sup>4</sup>

L1000-01



# opening system without thermal break


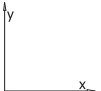
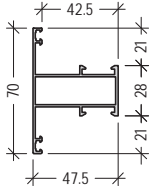
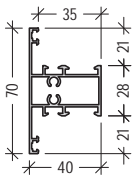
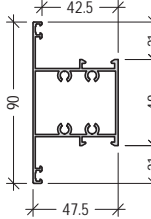
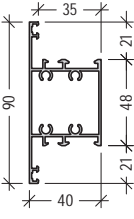
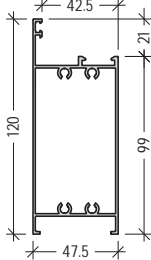
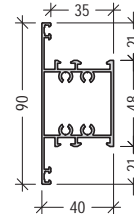
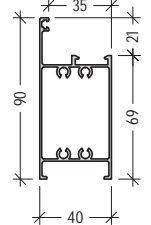
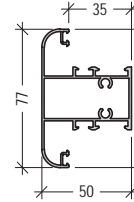
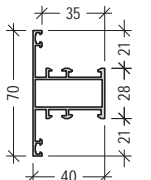
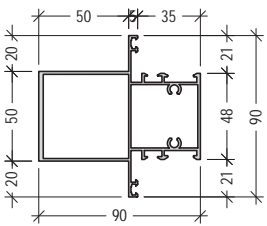
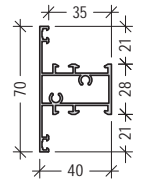
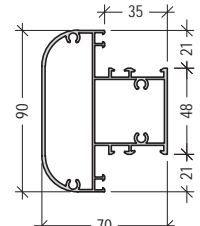
# E1000

code		profile	weight length moment of inertia	code		profile	weight length moment of inertia
E1191 light line			980.1 g/m L=6.01 m  Ix=20.46 cm <sup>4</sup> Iy=9.9 cm <sup>4</sup>	E1107			1247 g/m L=6.01 m  Ix=29.34 cm <sup>4</sup> Iy=14.28 cm <sup>4</sup>
E1192 light line			980.1 g/m L=6.01 m  Ix=20.46 cm <sup>4</sup> Iy=9.44 cm <sup>4</sup>	E1108			1118 g/m L=6.01 m  Ix=28.37 cm <sup>4</sup> Iy=13.48 cm <sup>4</sup>
E1106			851 g/m L=6.01 m  Ix=7.81 cm <sup>4</sup> Iy=9.33 cm <sup>4</sup>	E1116			842 g/m L=6.01 m  Ix=7.24 cm <sup>4</sup> Iy=9.28 cm <sup>4</sup>
E1125			969 g/m L=6.01 m  Ix=11.64 cm <sup>4</sup> Iy=12.89 cm <sup>4</sup>	E1117			899 g/m L=6.01 m  Ix=8.56 cm <sup>4</sup> Iy=9 cm <sup>4</sup>
E1150			1026 g/m  Ix=11.54 cm <sup>4</sup> Iy=17.82 cm <sup>4</sup>	E1118			963 g/m L=6.01 m  Ix=9.87 cm <sup>4</sup> Iy=11.52 cm <sup>4</sup>
E1147			1147 g/m L=6.01 m  Ix=29.05 cm <sup>4</sup> Iy=14.22 cm <sup>4</sup>	E1126			1031 g/m L=6.01 m  Ix=14.76 cm <sup>4</sup> Iy=12.58 cm <sup>4</sup>

L1000-02

# opening system without thermal break

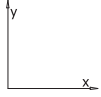

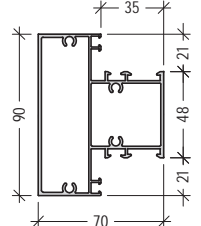
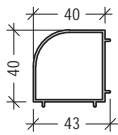
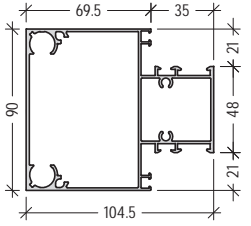
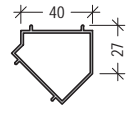
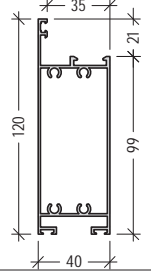
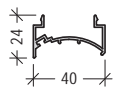
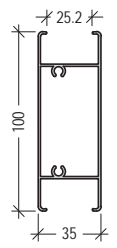
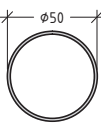
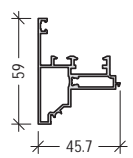
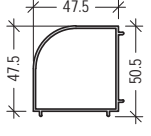
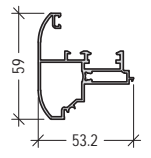
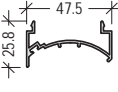
# E1000

code		profile	weight length moment of inertia	code		profile	weight length moment of inertia
E1183 straight line			808 g/m L=6.01 m  Ix=7.49 cm <sup>4</sup> Iy=9.65 cm <sup>4</sup>	E1141			902 g/m  Ix=7.81 cm <sup>4</sup> Iy=6.51 cm <sup>4</sup>
E1184 straight line			1162 g/m L=6.01 m  Ix=20.33 cm <sup>4</sup> Iy=13.27 cm <sup>4</sup>	E1104			1131 g/m  Ix=20.5 cm <sup>4</sup> Iy=9.03 cm <sup>4</sup>
E1185 straight line			1484 g/m L=6.01 m  Ix=75.32 cm <sup>4</sup> Iy=19.97 cm <sup>4</sup>	E1181			1169 g/m L=6.01 m  Ix=20.76 cm <sup>4</sup> Iy=8.96 cm <sup>4</sup>
E1193 light line			1104.4 g/m L=6.01 m  Ix=27.88 cm <sup>4</sup> Iy=9.59 cm <sup>4</sup>	E1122			1104 g/m L=6.01 m  Ix=15.05 cm <sup>4</sup> Iy=12.44 cm <sup>4</sup>
E1128			815 g/m L=6.01m  Ix=7.71 cm <sup>4</sup> Iy=6.48 cm <sup>4</sup>	E1134			1771 g/m L=6.01 m  Ix=130.78 cm <sup>4</sup> Iy=58.81 cm <sup>4</sup>
E1103			902 g/m L=6.01 m  Ix=7.81 cm <sup>4</sup> Iy=6.73 cm <sup>4</sup>	E1133			1760 g/m L=6.01 m  Ix=46.71 cm <sup>4</sup> Iy=34.42 cm <sup>4</sup>

L1000-03

# opening system without thermal break


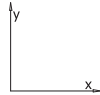
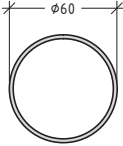
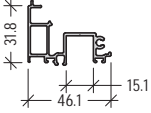
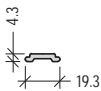
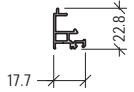
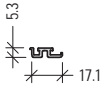
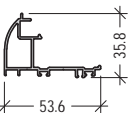
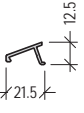
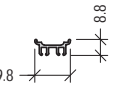

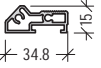
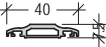
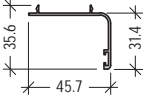
# E1000

code		profile	weight length moment of inertia	code		profile	weight length moment of inertia
E1156			1877 g/m L=6.01 m $I_x=54.4 \text{ cm}^4$ $I_y=36.44 \text{ cm}^4$	E1110			554 g/m L=6.01 m $I_x=4.92 \text{ cm}^4$ $I_y=4.92 \text{ cm}^4$
E1157			2319 g/m L=6.01 m $I_x=82.13 \text{ cm}^4$ $I_y=109.73 \text{ cm}^4$	E1111			524 g/m L=6.01 m $I_x=3.61 \text{ cm}^4$ $I_y=4.2 \text{ cm}^4$
E1105			1474 g/m L=6.01 m $I_x=77.96 \text{ cm}^4$ $I_y=14.27 \text{ cm}^4$	E1112 for 7233			381 g/m L=6.01 m $I_x=0.37 \text{ cm}^4$ $I_y=3.22 \text{ cm}^4$
E1119			1072 g/m L=6.01 m $I_x=36.4 \text{ cm}^4$ $I_y=8.54 \text{ cm}^4$	7233			615 g/m L=5.01 m $I_x=6.72 \text{ cm}^4$ $I_y=6.72 \text{ cm}^4$
E1135			829 g/m L=6.01 m $I_x=5.52 \text{ cm}^4$ $I_y=6.22 \text{ cm}^4$	E1131			654 g/m L=6.01 m $I_x=8.29 \text{ cm}^4$ $I_y=8.29 \text{ cm}^4$
E1136			891 g/m L=6.01 m $I_x=6.52 \text{ cm}^4$ $I_y=8.59 \text{ cm}^4$	E1143 for 7316			413 g/m L=6.01 m $I_x=0.41 \text{ cm}^4$ $I_y=5.02 \text{ cm}^4$

L1000-04

# opening system without thermal break

# E1000

code		profile	weight length moment of inertia	code		profile	weight length moment of inertia
7316			984 g/m L=5.01 m  Ix=15.34 cm <sup>4</sup> Iy=15.34 cm <sup>4</sup>	E1149			605 g/m  Ix=1.61 cm <sup>4</sup> Iy=4.74 cm <sup>4</sup>
E2308			159 g/m L=4.4 m	E1137			213 g/m L=6.01 m
E23900			116 g/m	E1139			516 g/m L=6.01 m  Ix=1.96 cm <sup>4</sup> Iy=4.69 cm <sup>4</sup>
E2357			144 g/m L=6.01 m	E40812			138 g/m L=6.01 m
E40820			143 g/m L=6.01 m	E1138			432 g/m L=6.01 m
E40650			338 g/m L=6.01 m	E1127			288 g/m L=6.01 m  Ix=1.23 cm <sup>4</sup> Iy=2.39 cm <sup>4</sup>

L1000-05

# opening system without thermal break

# E1000

code		profile	weight length moment of inertia	code		profile	weight length moment of inertia
E1115			408 g/m L=6.01 m $I_x=4.77 \text{ cm}^4$ $I_y=3.37 \text{ cm}^4$	E1166			321 g/m $I_x=0.27 \text{ cm}^4$ $I_y=1.56 \text{ cm}^4$
E62001			67.5 g/m	E5364			402 g/m L=6.01 m
E1182			277 g/m L=6.01 m	E40604			113 g/m L=6.01 m
E1189			310 g/m L=6.01 m	E1123			335 g/m
E1148			203 g/m				

L1000-06



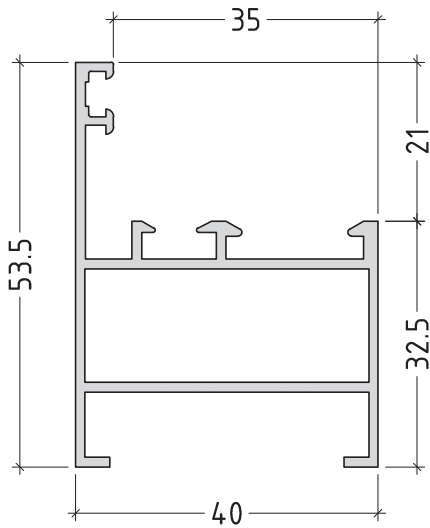
# PROFILES

DRAWINGS / SCALE 1:1

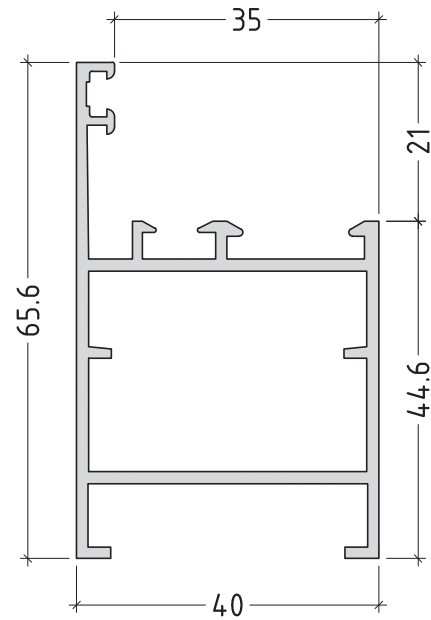




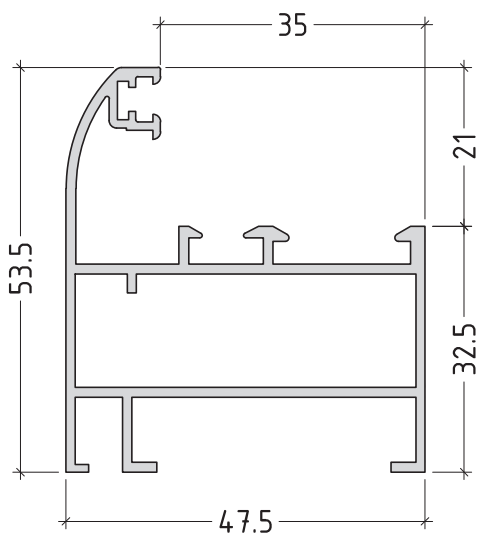
E1100  
678 g/m



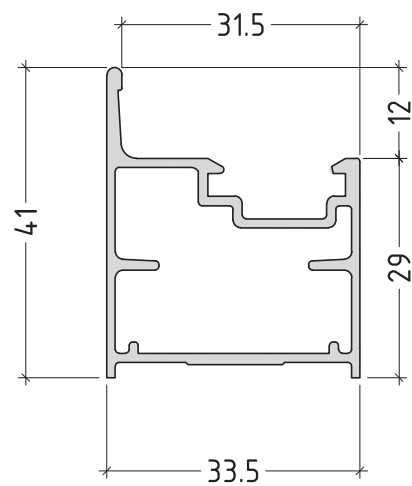
E1140  
925 g/m



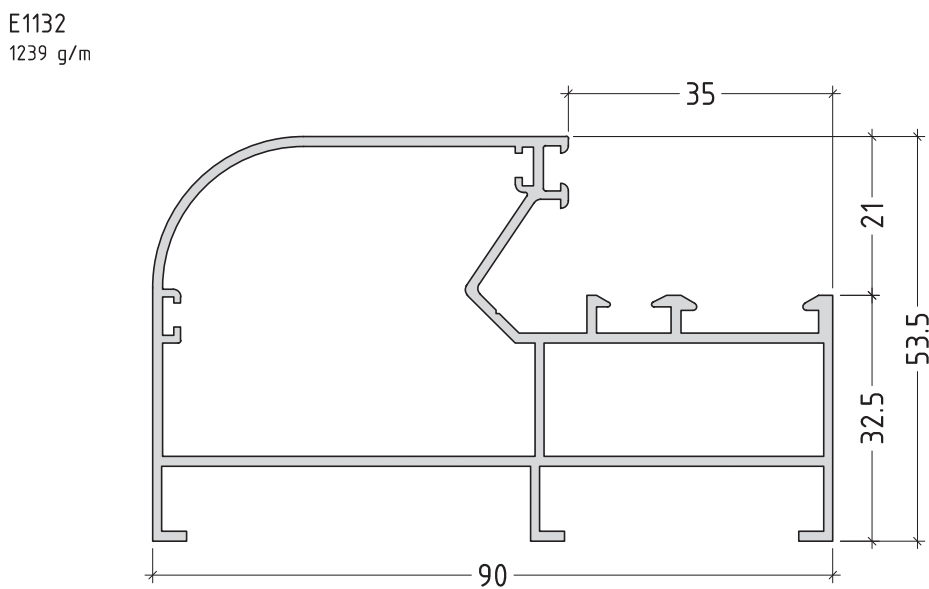
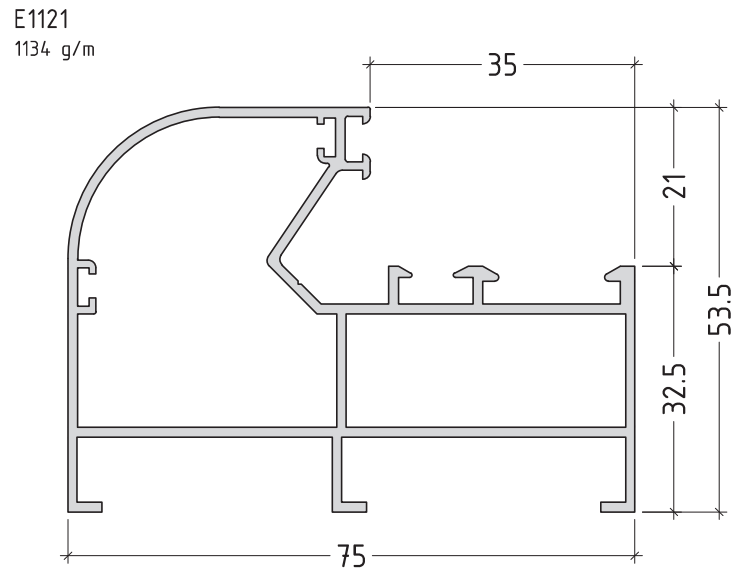
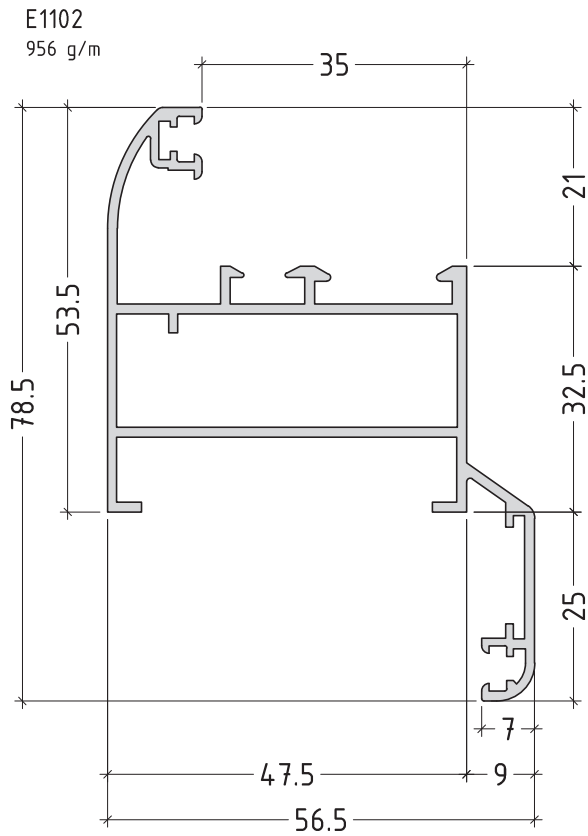
E1101  
813 g/m



E1190 light line  
562.3 g/m



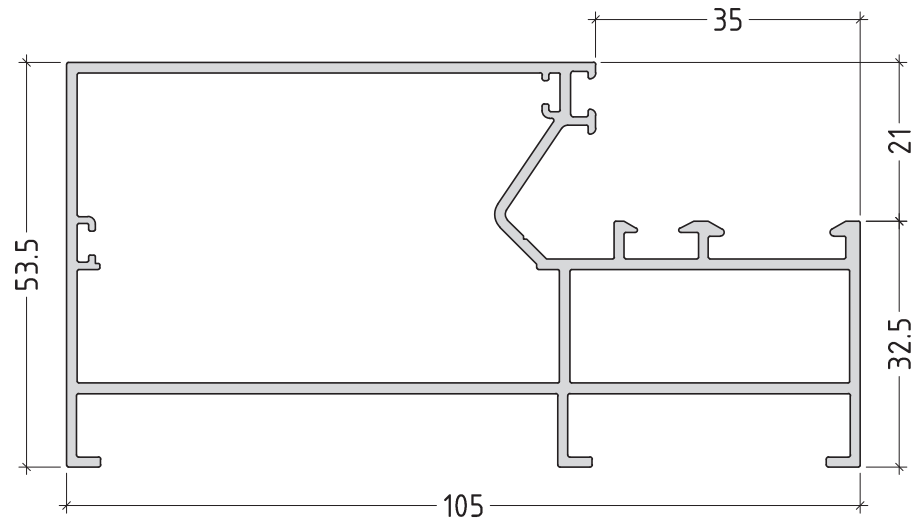
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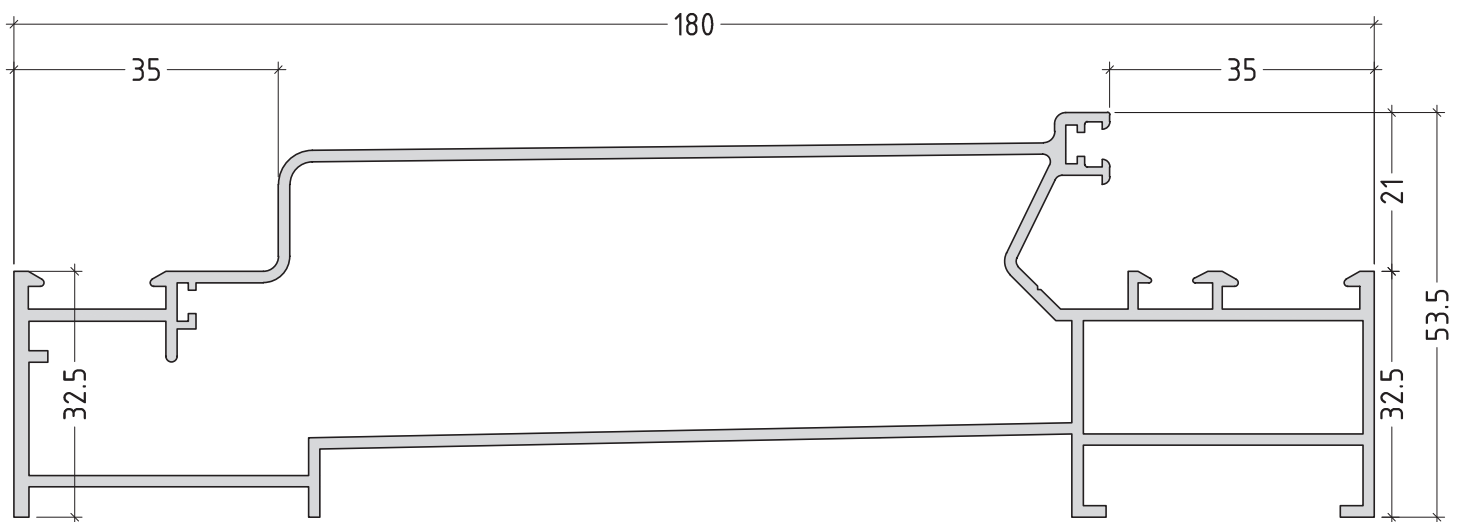
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P1000-02

E1155  
1472 g/m



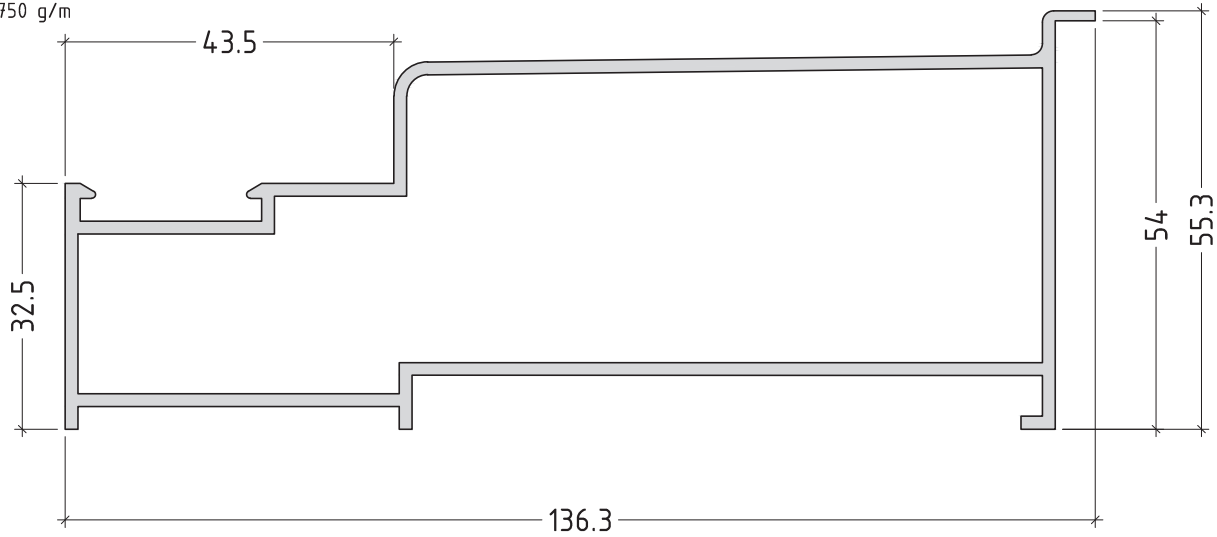
E1120  
2284 g/m



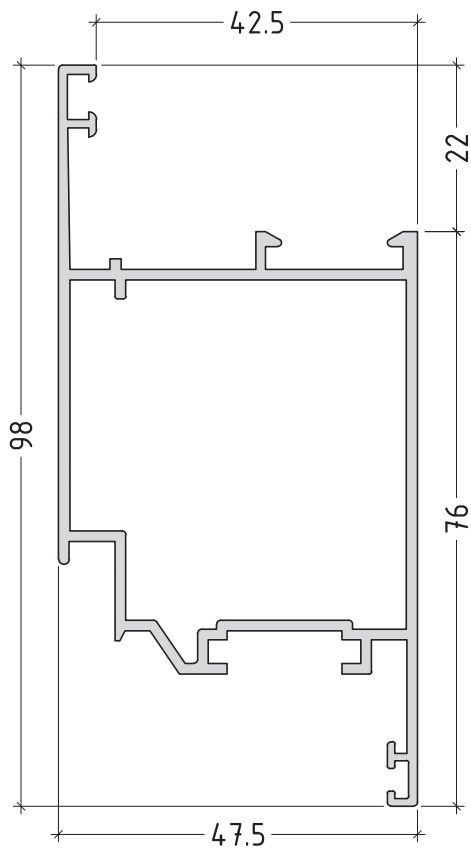
scale: 1:1

P1000-03

E5352  
1750 g/m

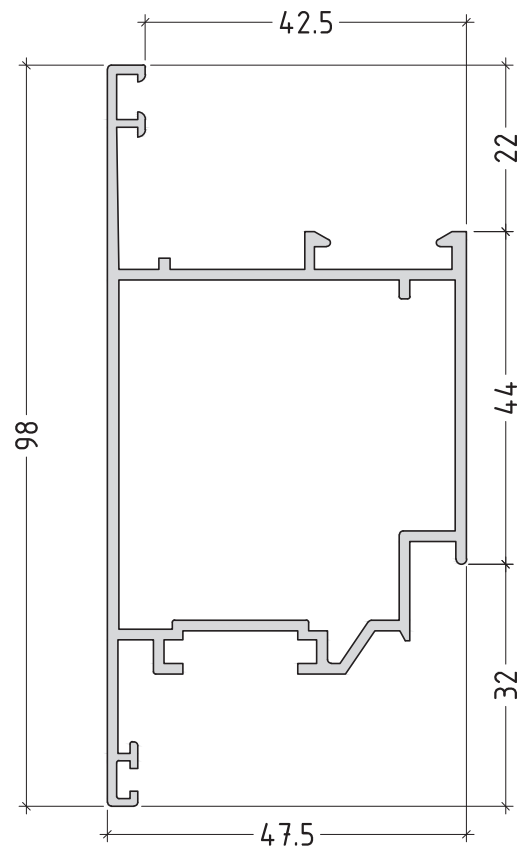


E1187 straight line  
1112 g/m



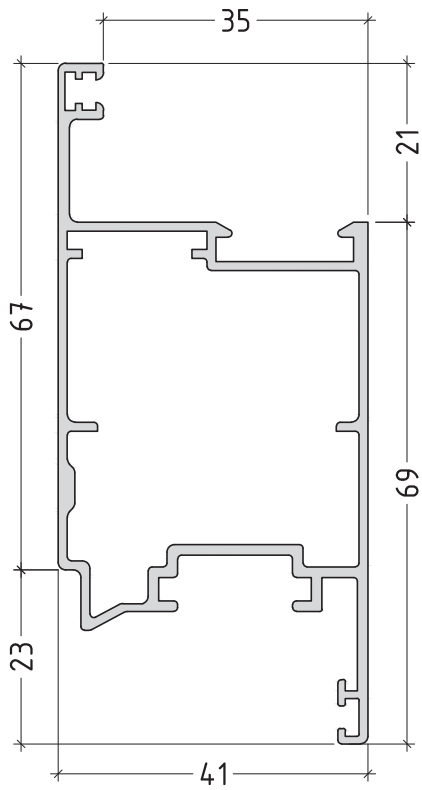
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E1188 straight line  
1113 g/m

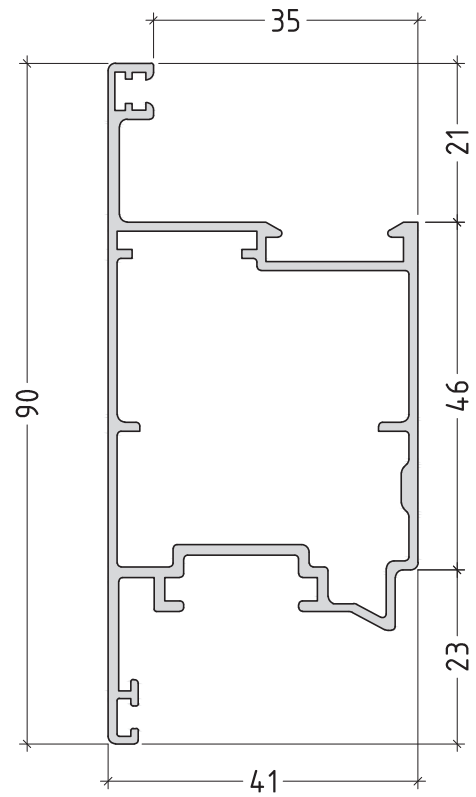


P1000-04

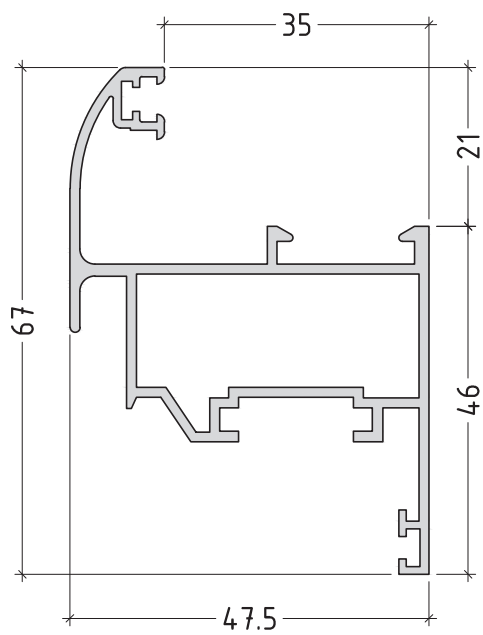
E1191 light line  
980.1 g/m



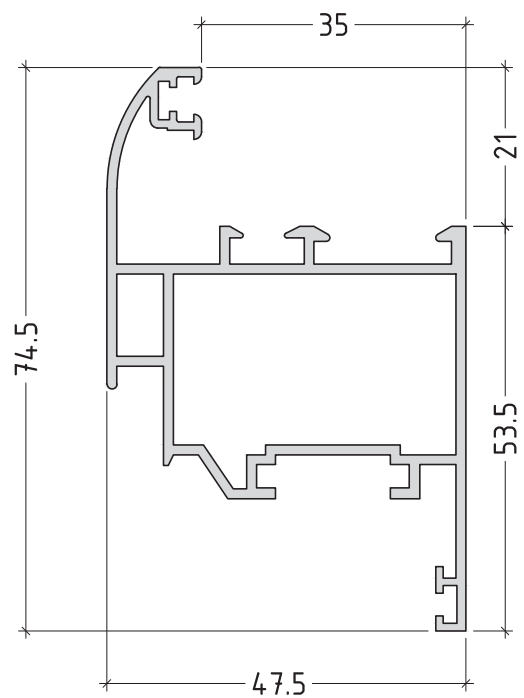
E1192 light line  
980.1 g/m



E1106  
851 g/m



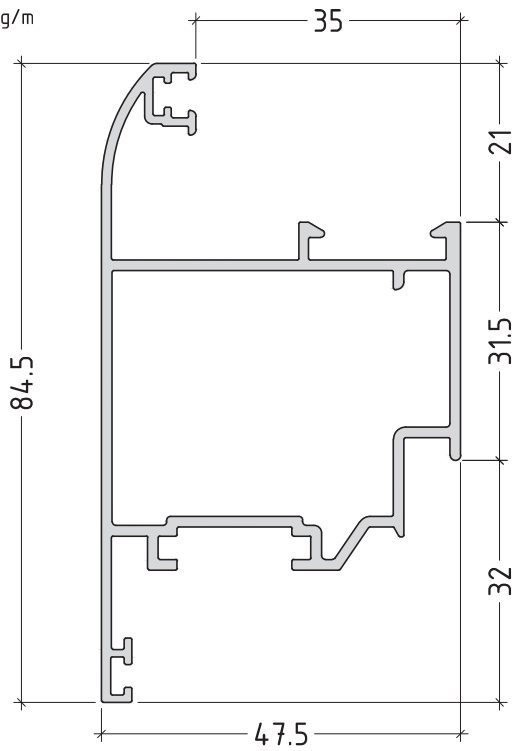
E1125  
969 g/m



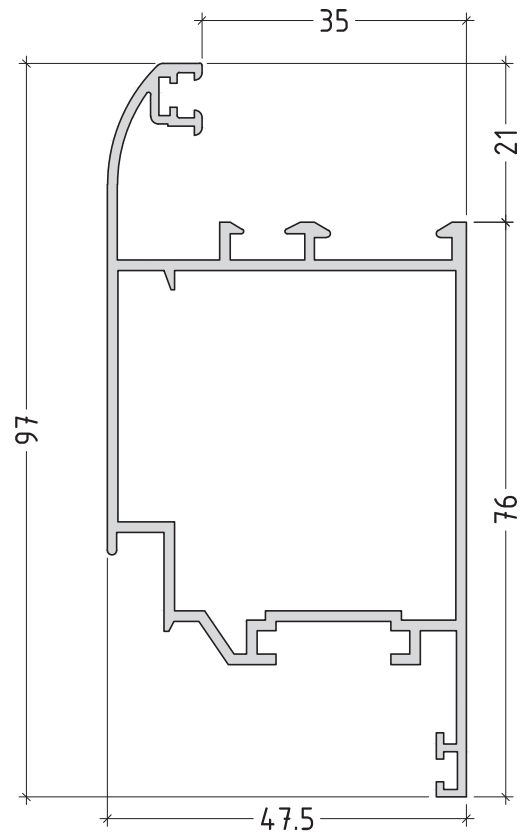
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P1000-05

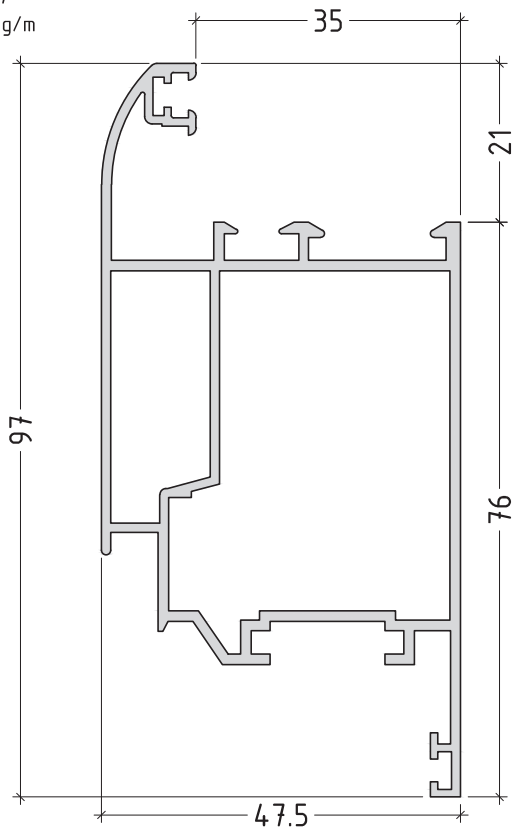
E1150  
1026 g/m



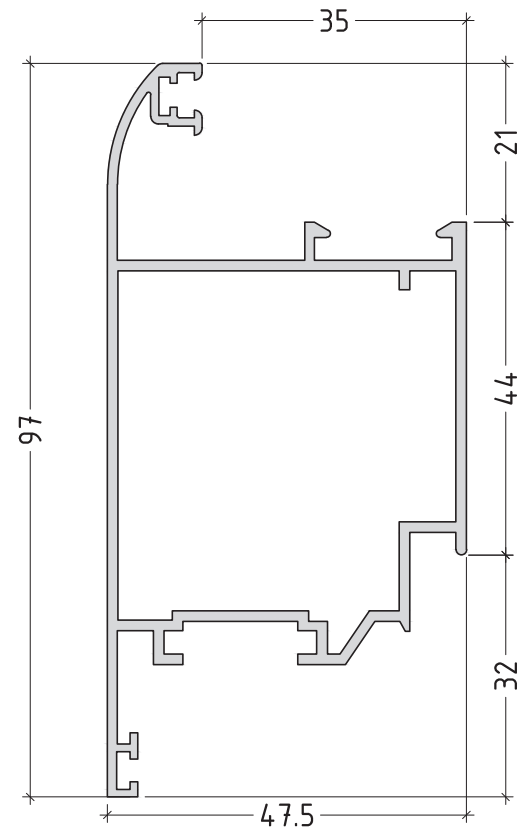
E1147  
1147 g/m



E1107  
1247 g/m



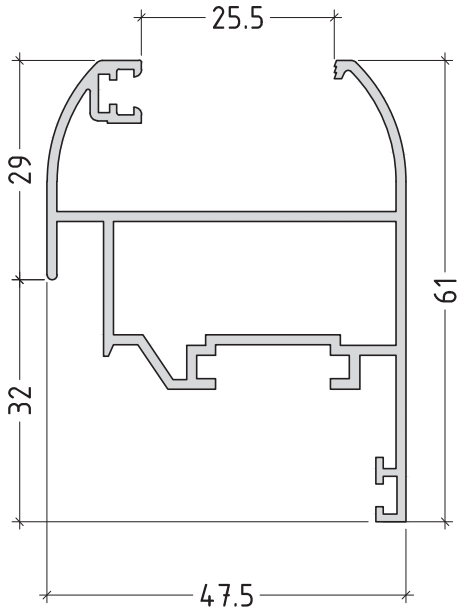
E1108  
1118 g/m



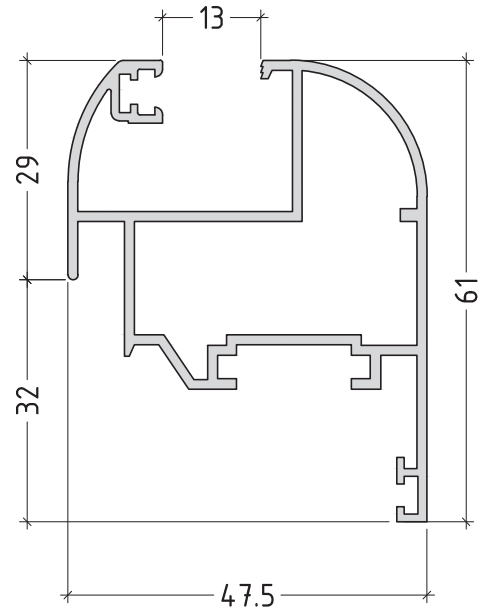
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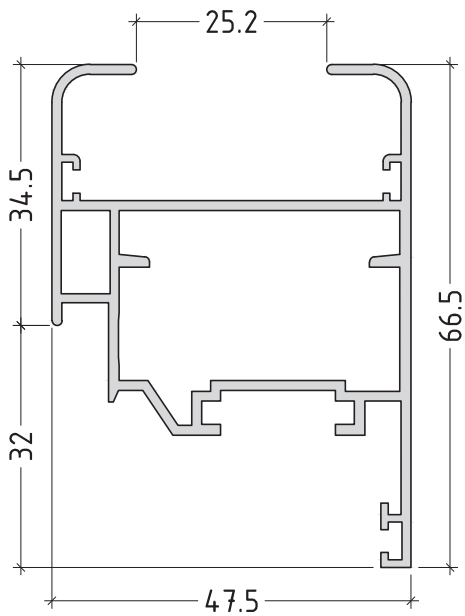
E1116  
842 g/m



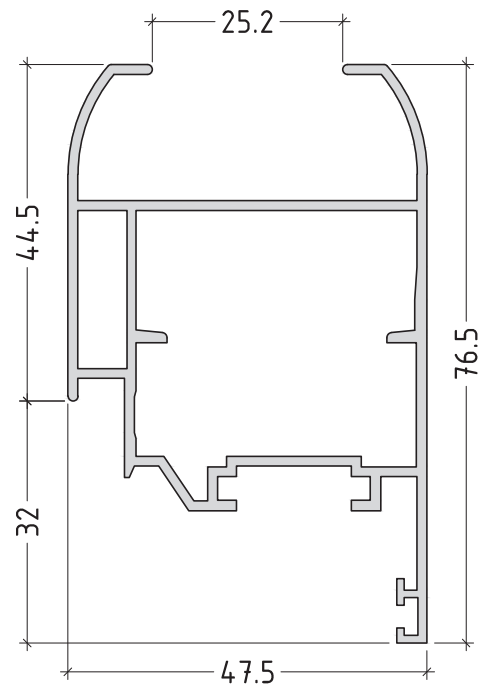
E1117  
899 g/m



E1118  
963 g/m



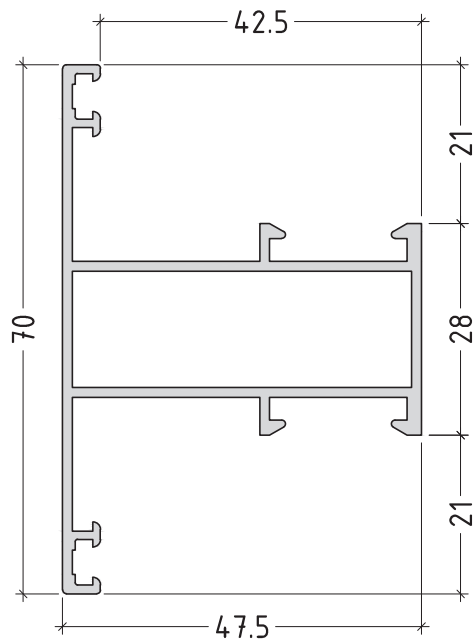
E1126  
1031 g/m



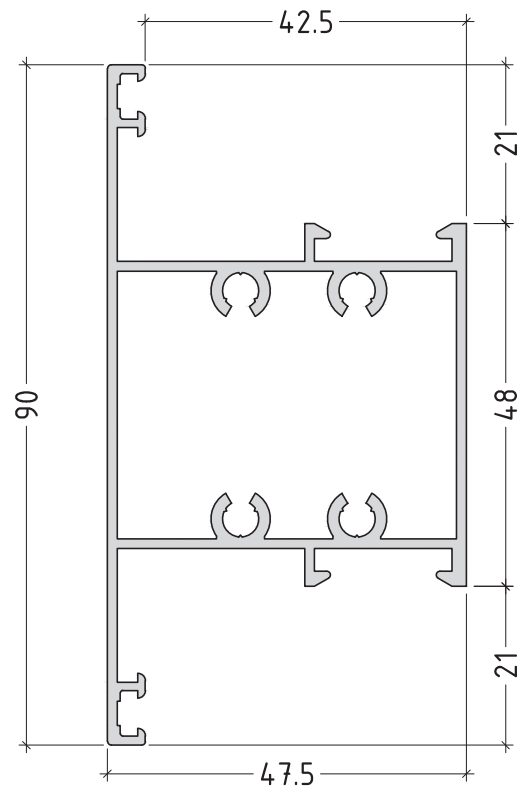
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P1000-07

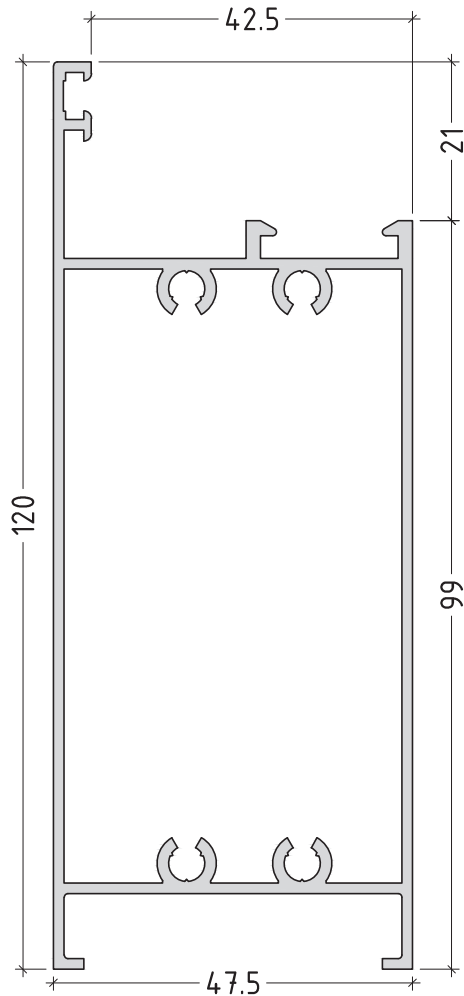
E1183 straight line  
808 g/m



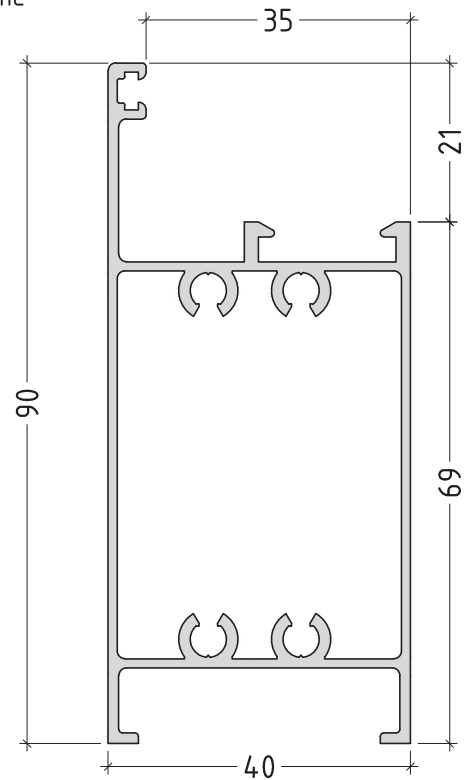
E1184 straight line  
1162 g/m



E1185 straight line  
1484 g/m



E1193 light line  
1104.4 g/m

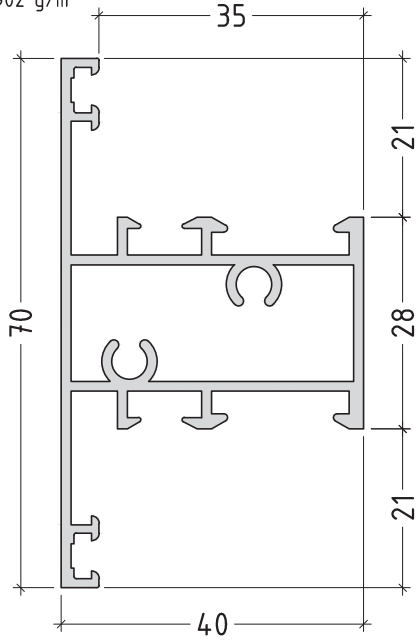


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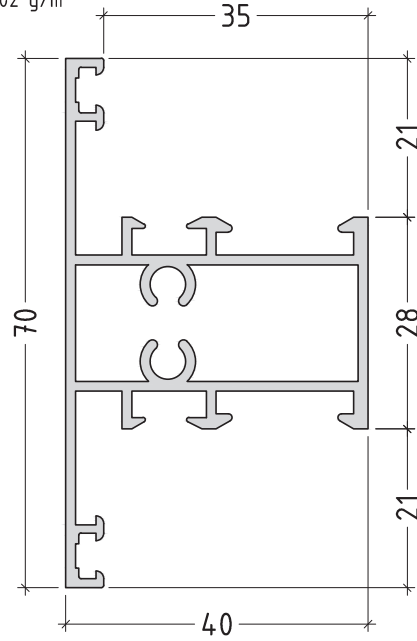
P1000-08



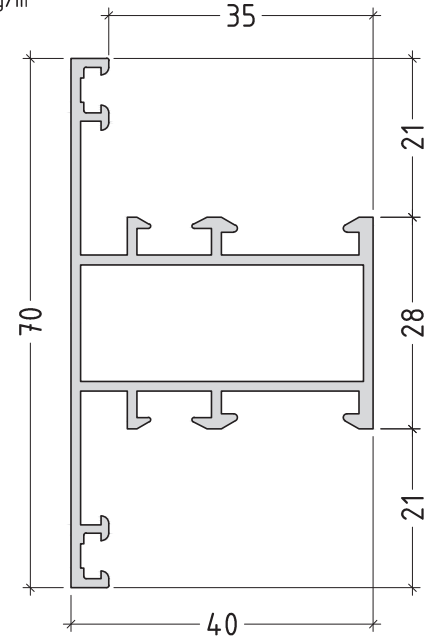
E1103  
902 g/m



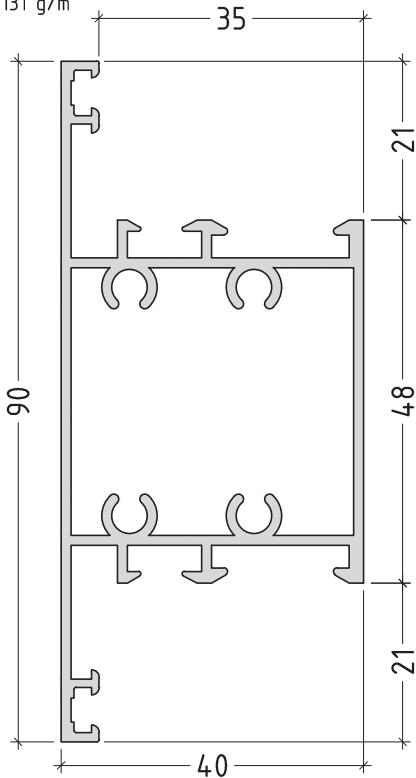
E1141  
902 g/m



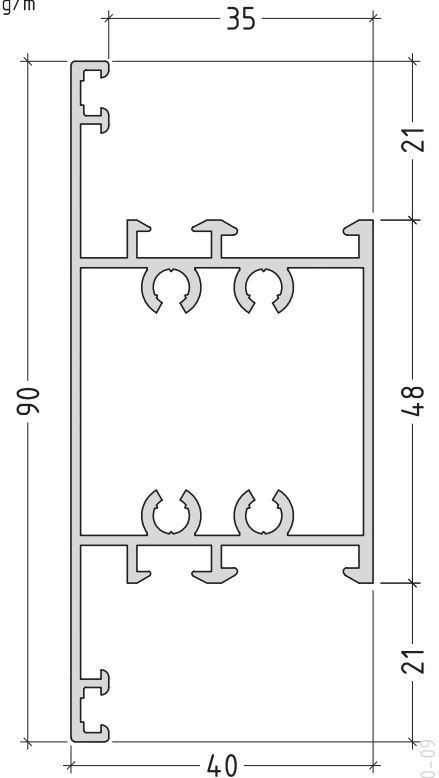
E1128  
815 g/m



E1104  
1131 g/m



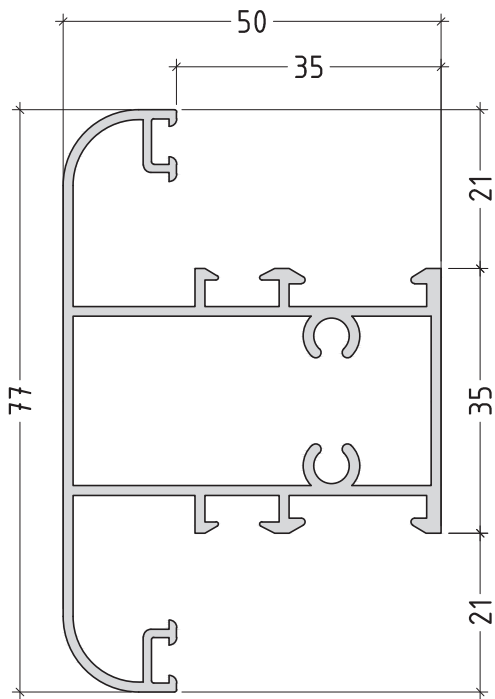
E1181  
1169 g/m



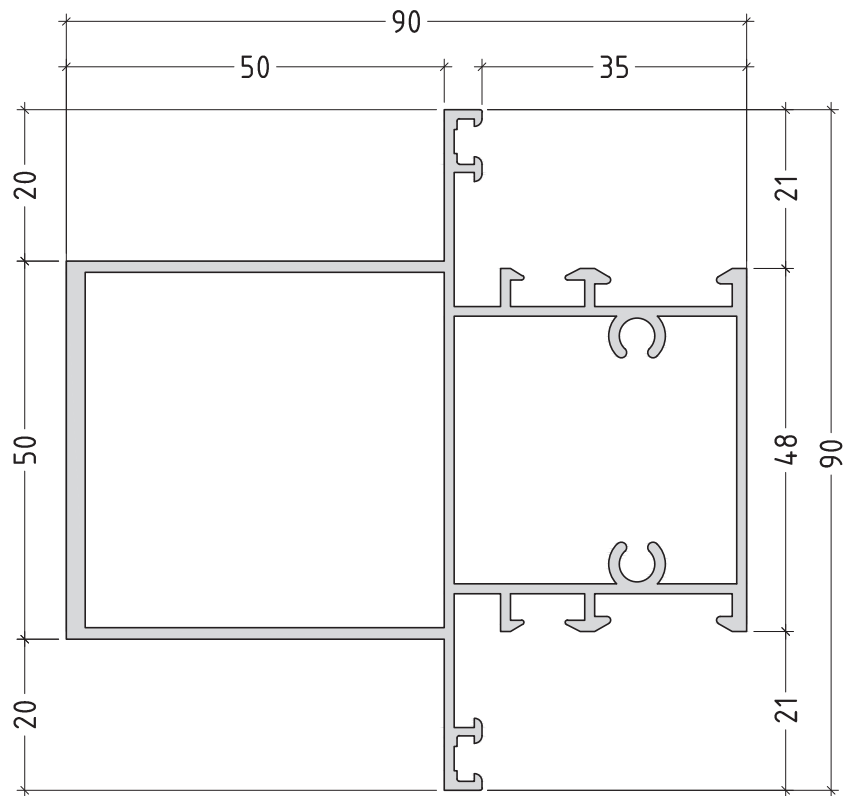
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P1000-09

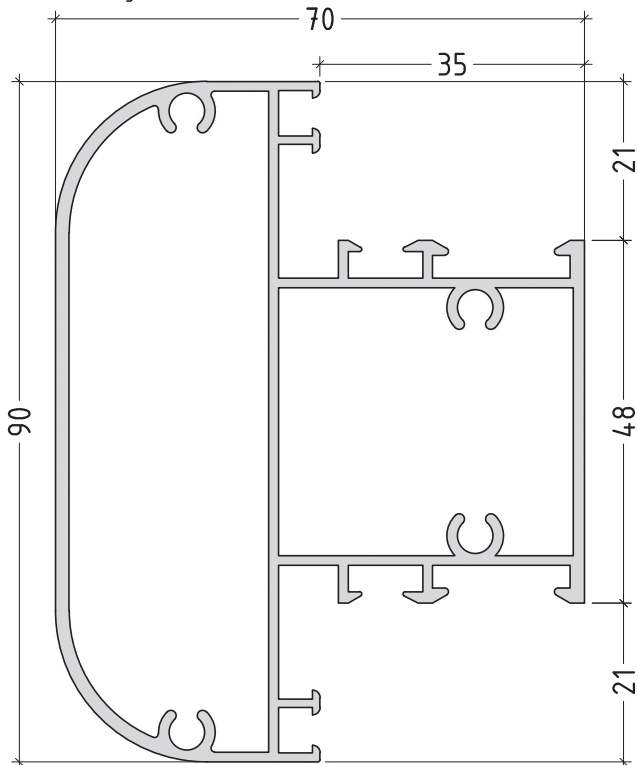
E1122  
1104 g/m



E1134  
1771 g/m

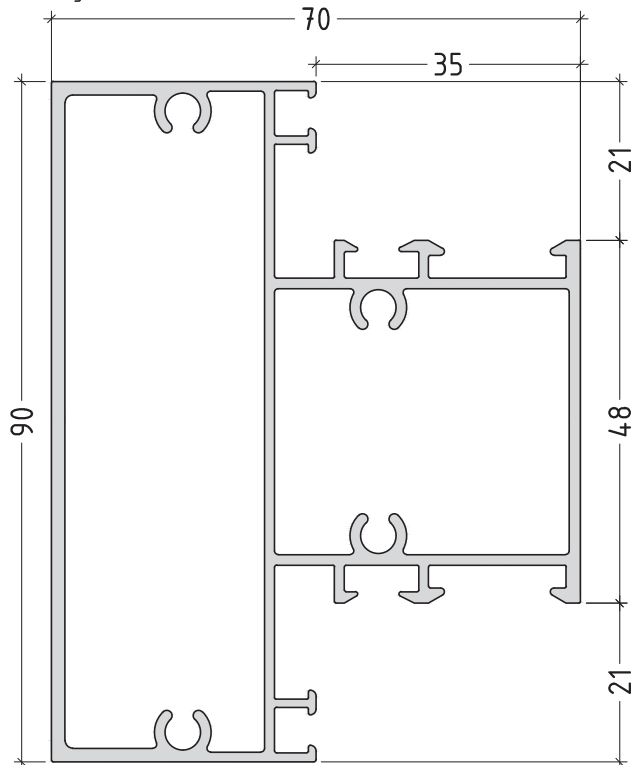


E1133  
1760 g/m



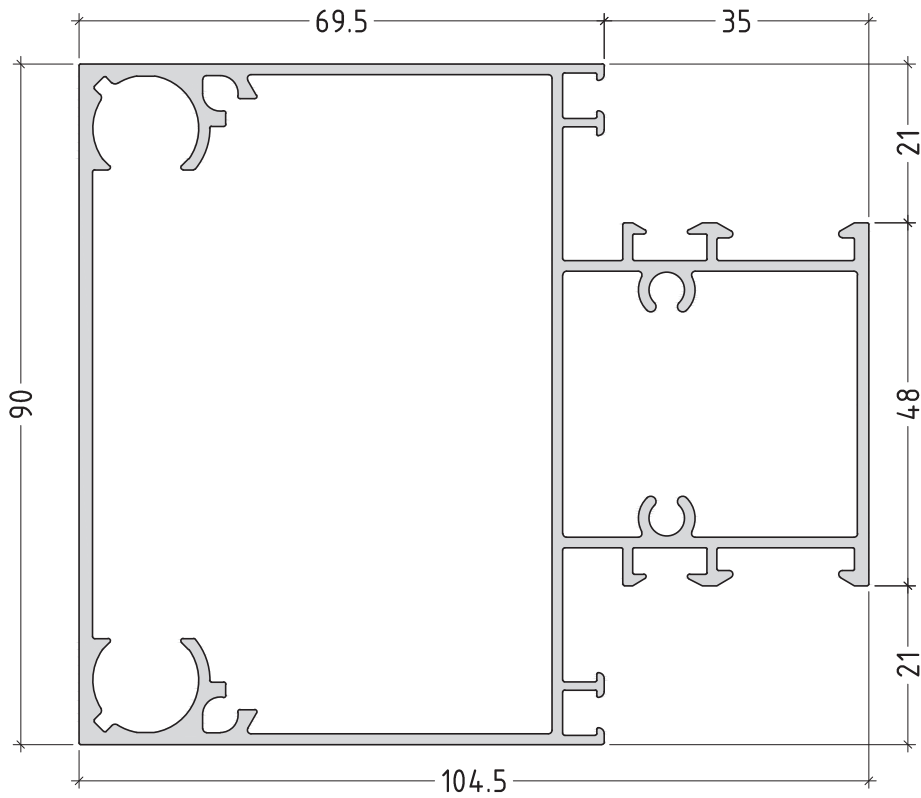
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E1156  
1877 g/m

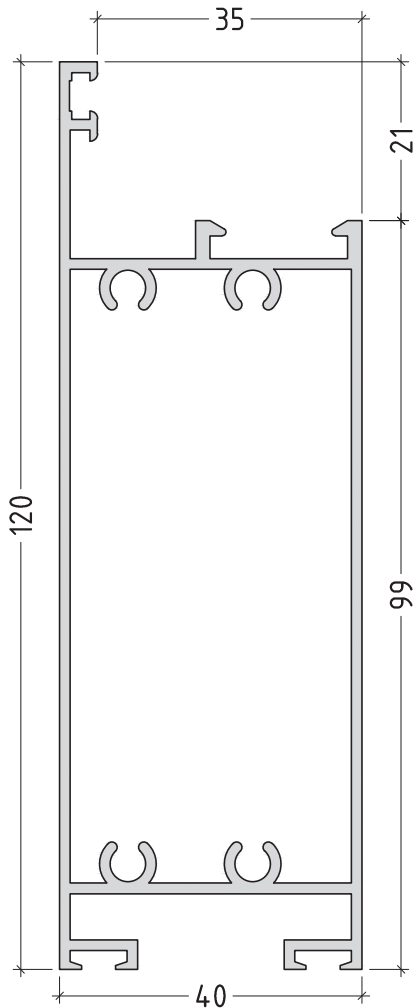


P1000-10

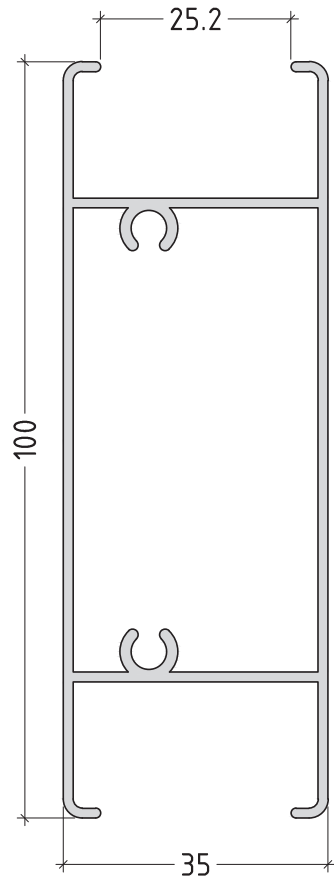
E1157  
2319 g/m



E1105  
1474 g/m

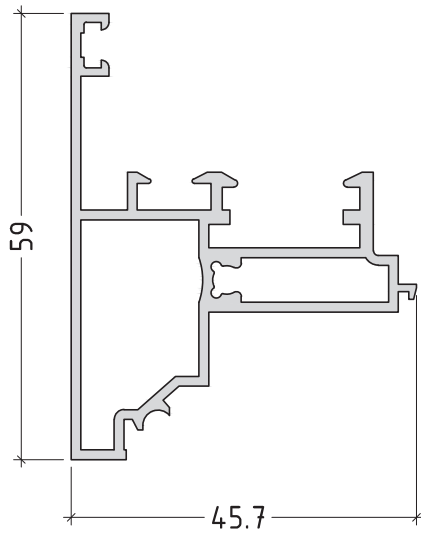


E1119  
1072 g/m

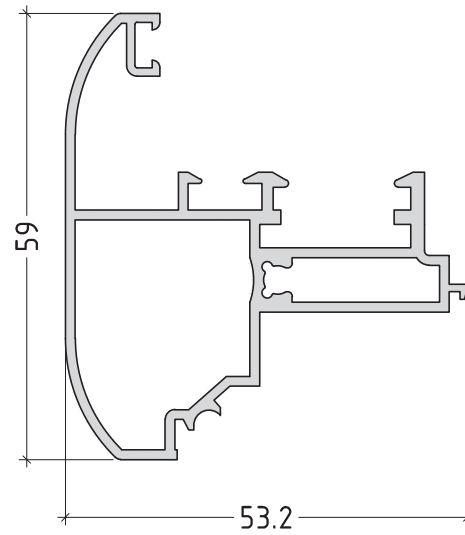


scale: 1:1

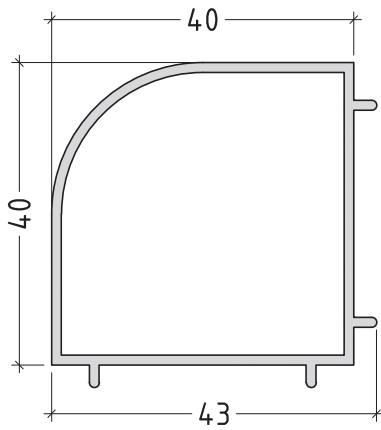
E1135  
829 g/m



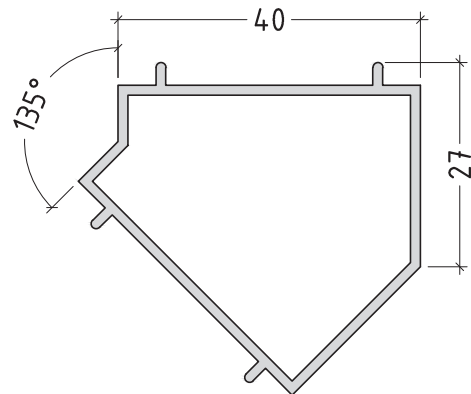
E1136  
891 g/m



E1110  
554 g/m



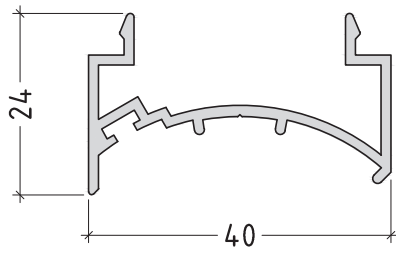
E1111  
524 g/m



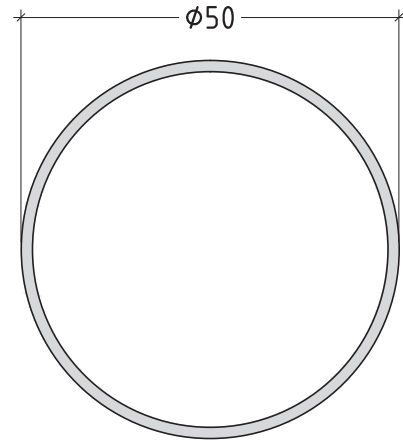
scale: 1:1

P1000-12

E1112  
381 g/m

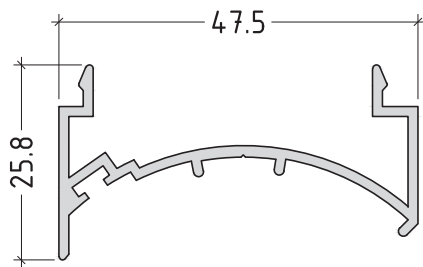


7233  
615 g/m

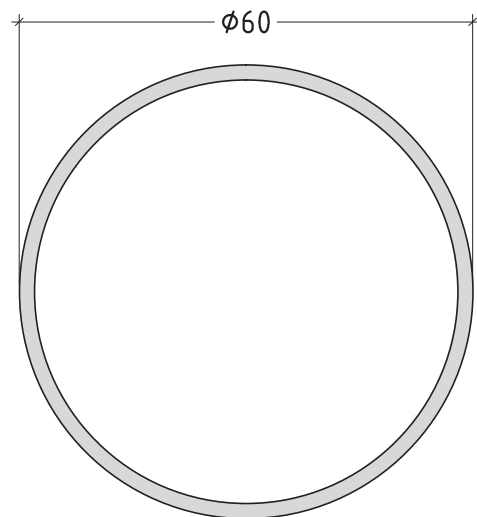


Note: use profile E1112 always with 7233

E1143  
413 g/m



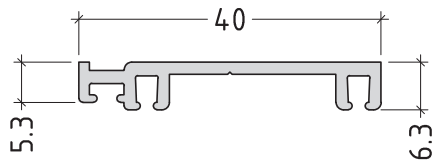
7316  
984 g/m



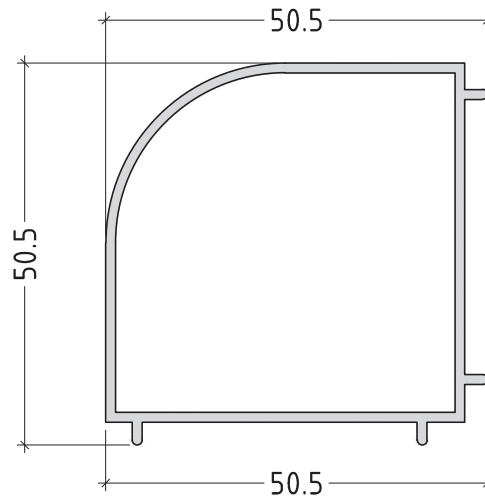
Note: use profile E1143 always with 7316

scale: 1:1

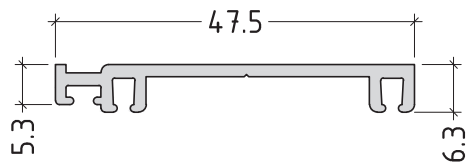
E1182  
277 g/m



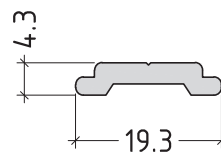
E1131  
654 g/m



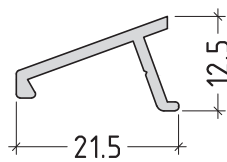
E1189  
310 g/m



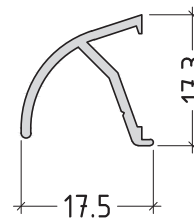
E2308  
159 g/m



E2357  
144 g/m

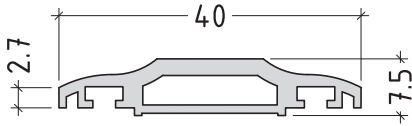


E40820  
143 g/m

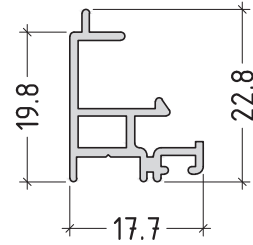


scale: 1:1

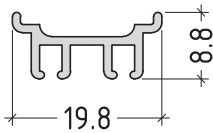
E40650  
338 g/m



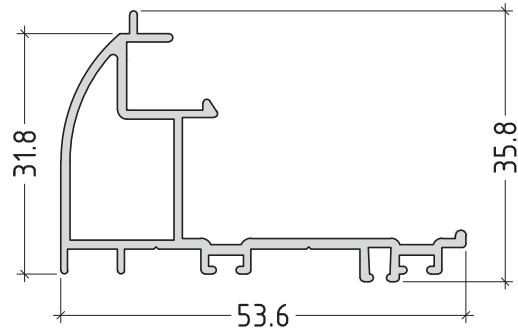
E1137  
213 g/m



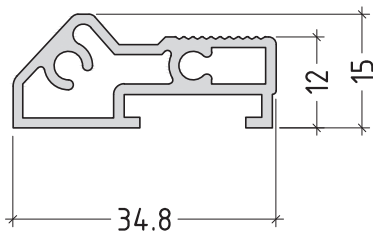
E40812  
138 g/m



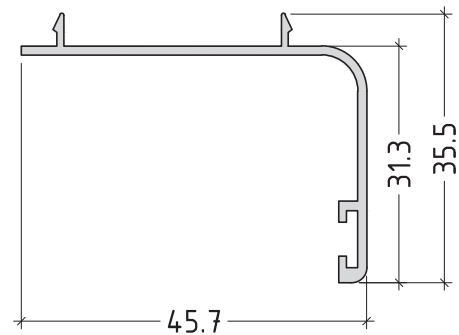
E1139  
516 g/m



E1138  
432 g/m

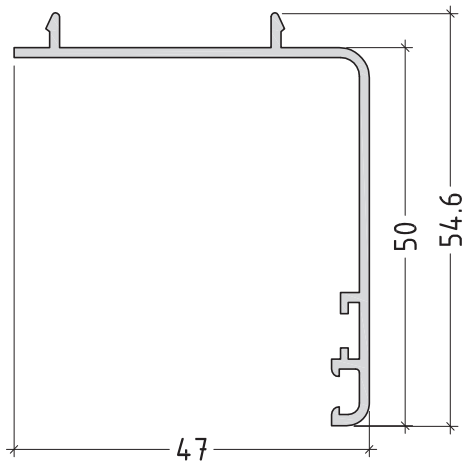


E1127  
288 g/m

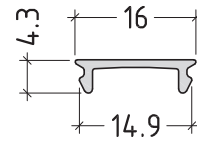


scale: 1:1

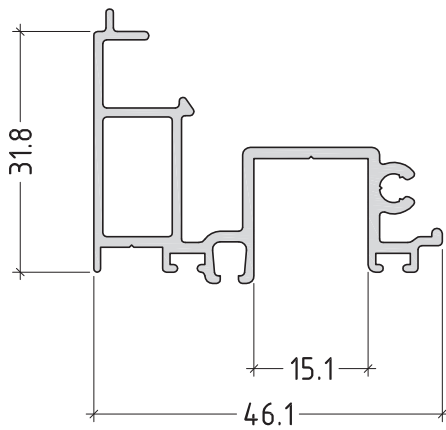
E1115  
408 g/m



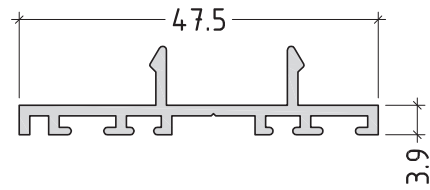
E62001  
67.5 g/m



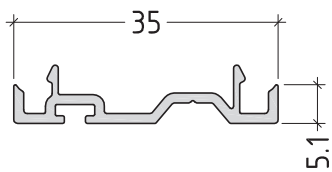
E1149  
605 g/m



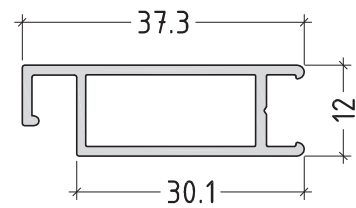
E1123  
335 g/m



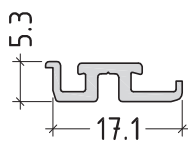
E1148  
203 g/m



E1166  
321 g/m



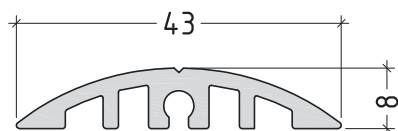
E23900  
116 g/m



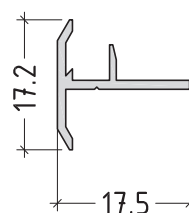
scale: 1:1



E5364  
402 g/m



E40604  
113 g/m



scale: 1:1

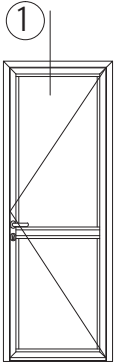


# SECTIONS

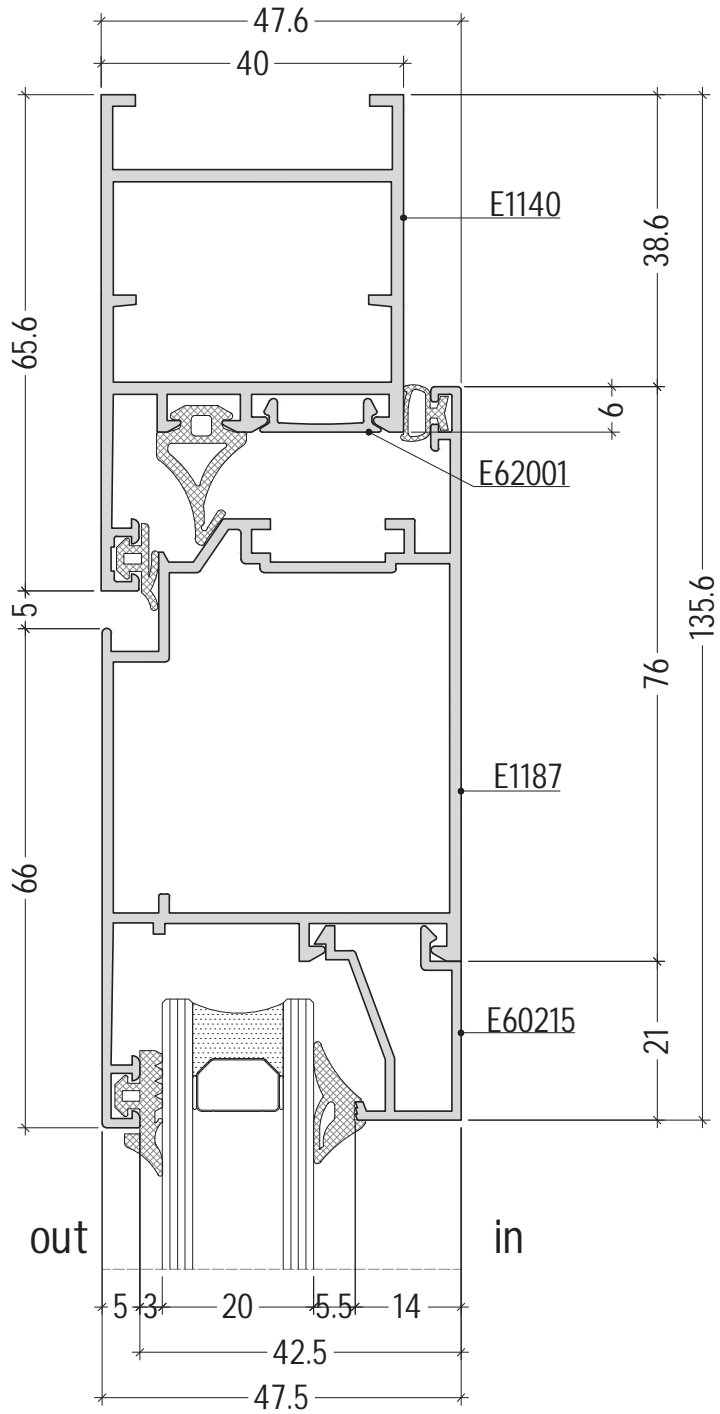
SECTIONS / DETAILS



inward opening

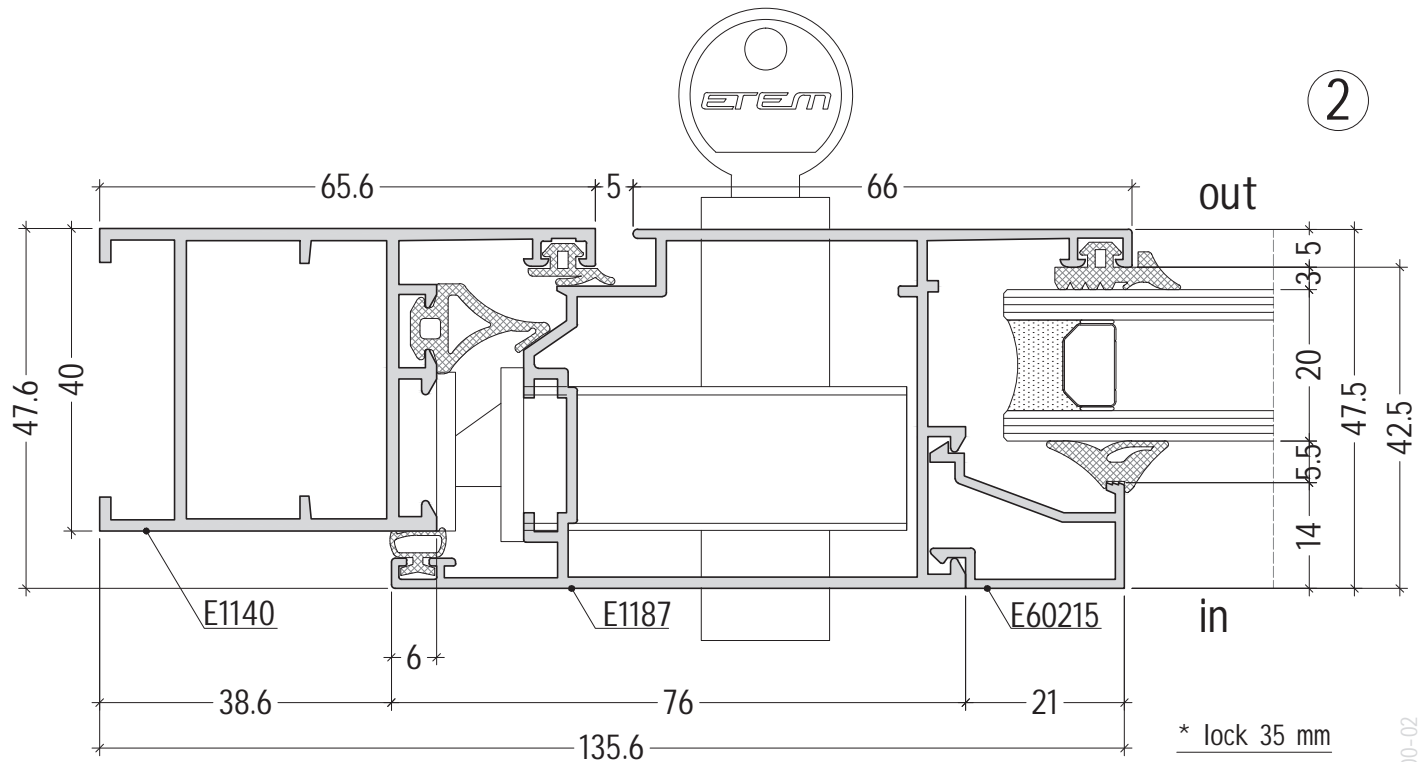
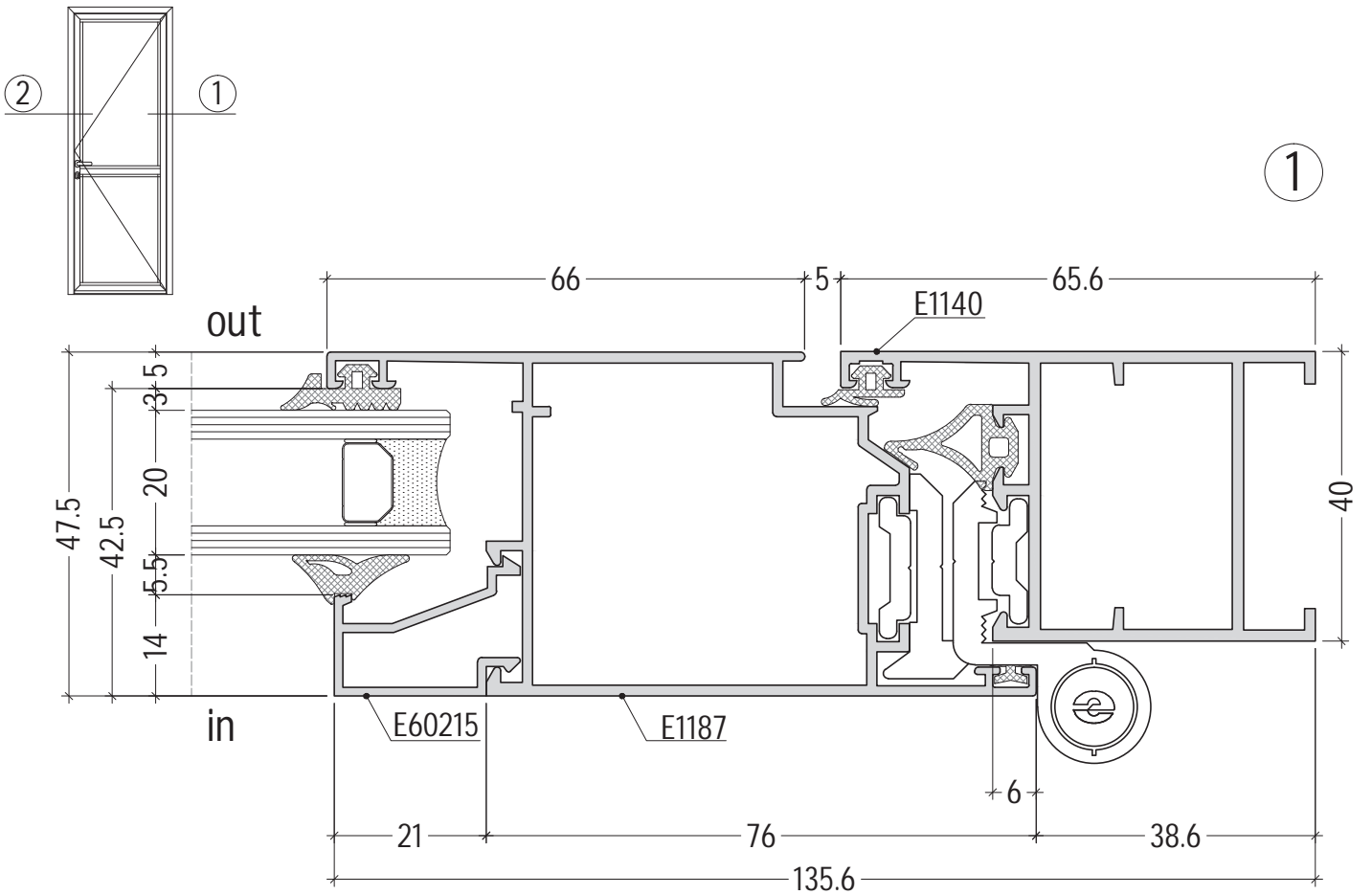


1



scale: 1:1

inward opening

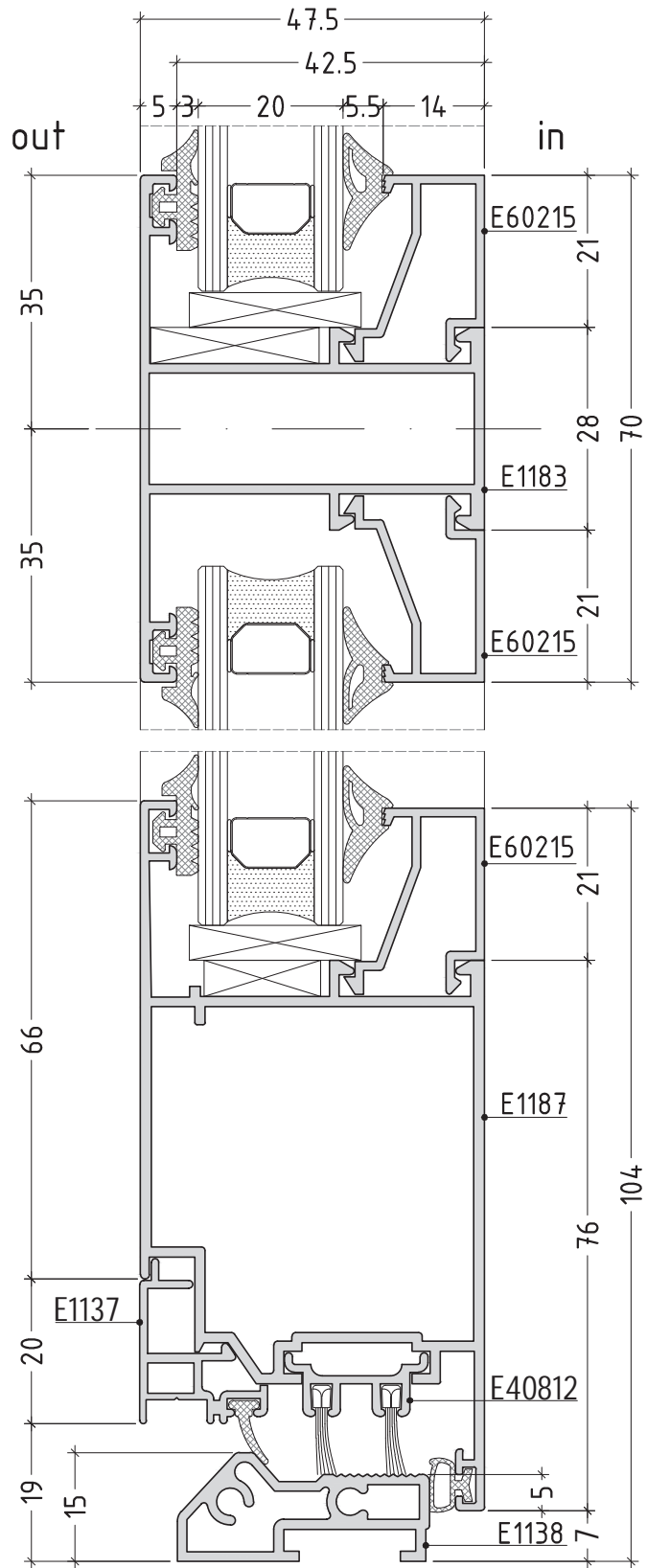
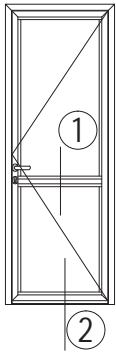


scale: 1:1

\* lock 35 mm

D1000-02

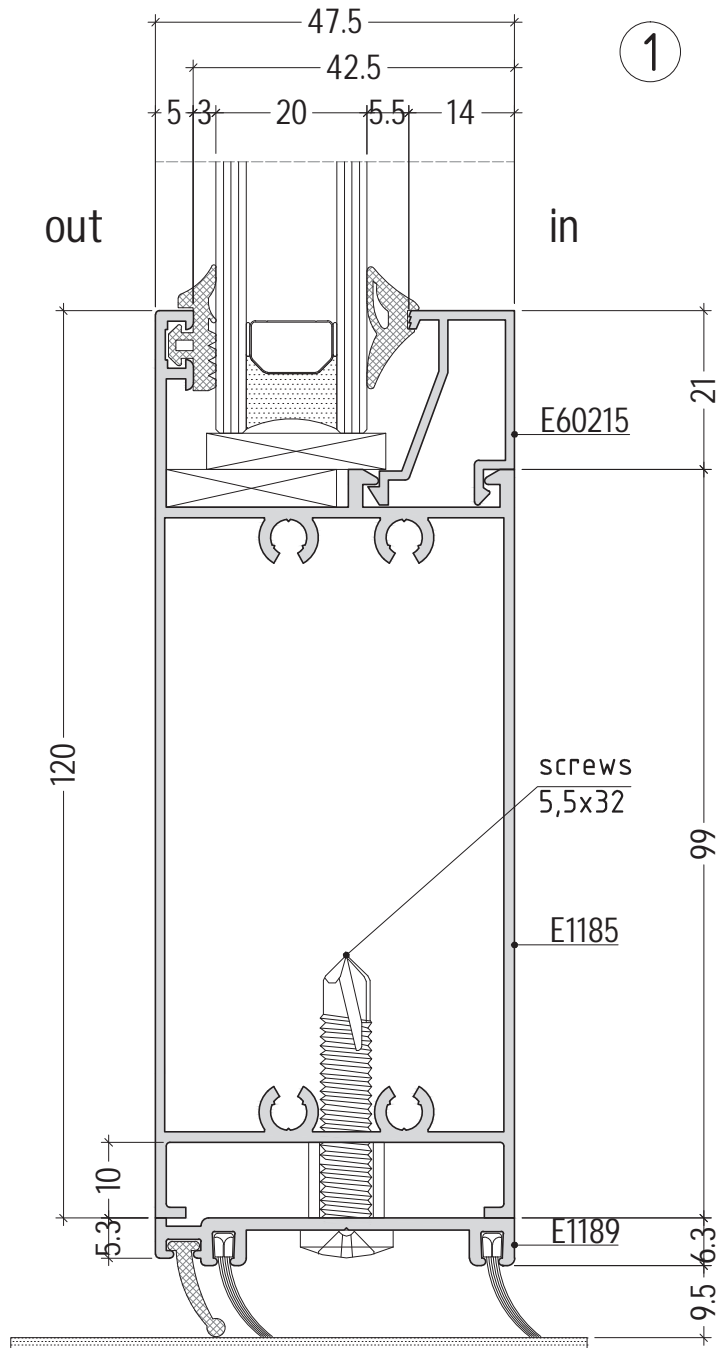
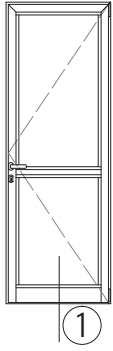
inward opening



scale: 1:1

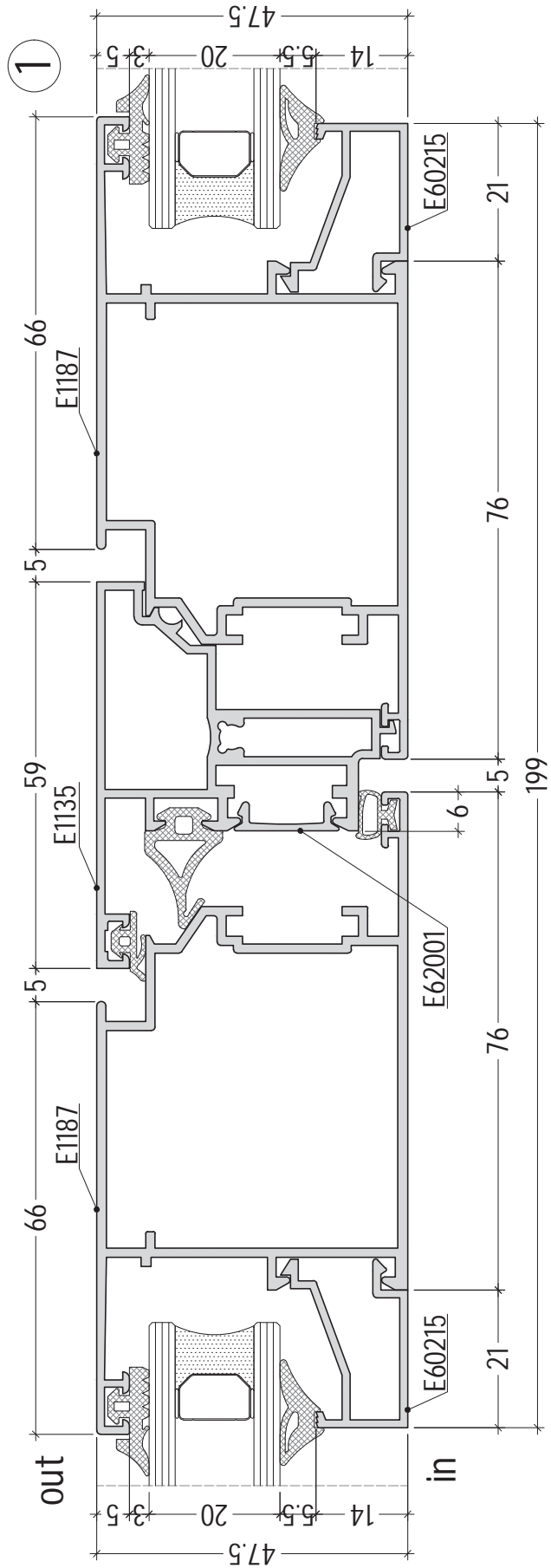
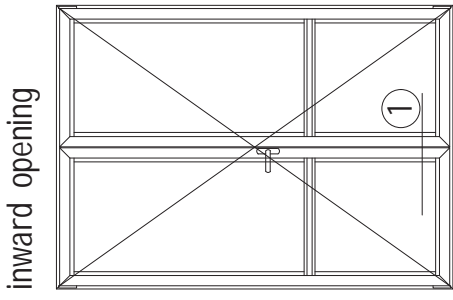
D1000-03

outward opening



scale: 1:1

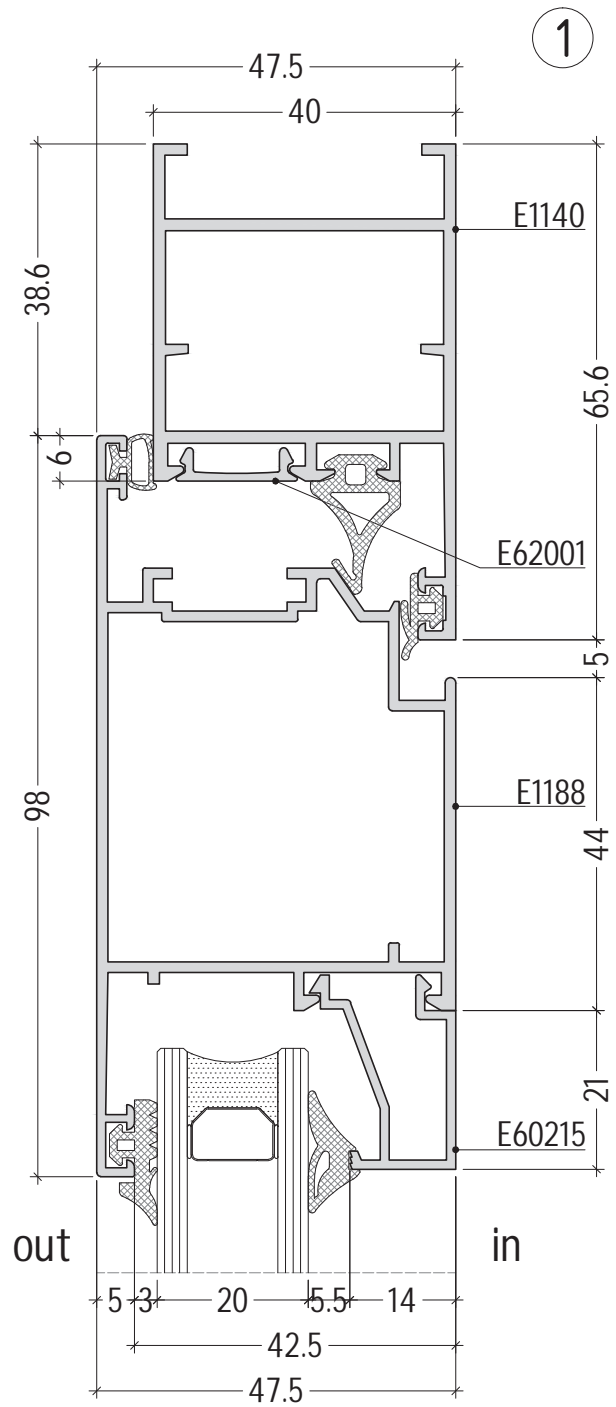
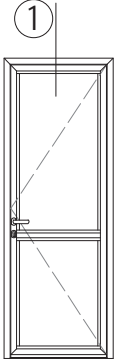




scale: 1:1

D1000-05

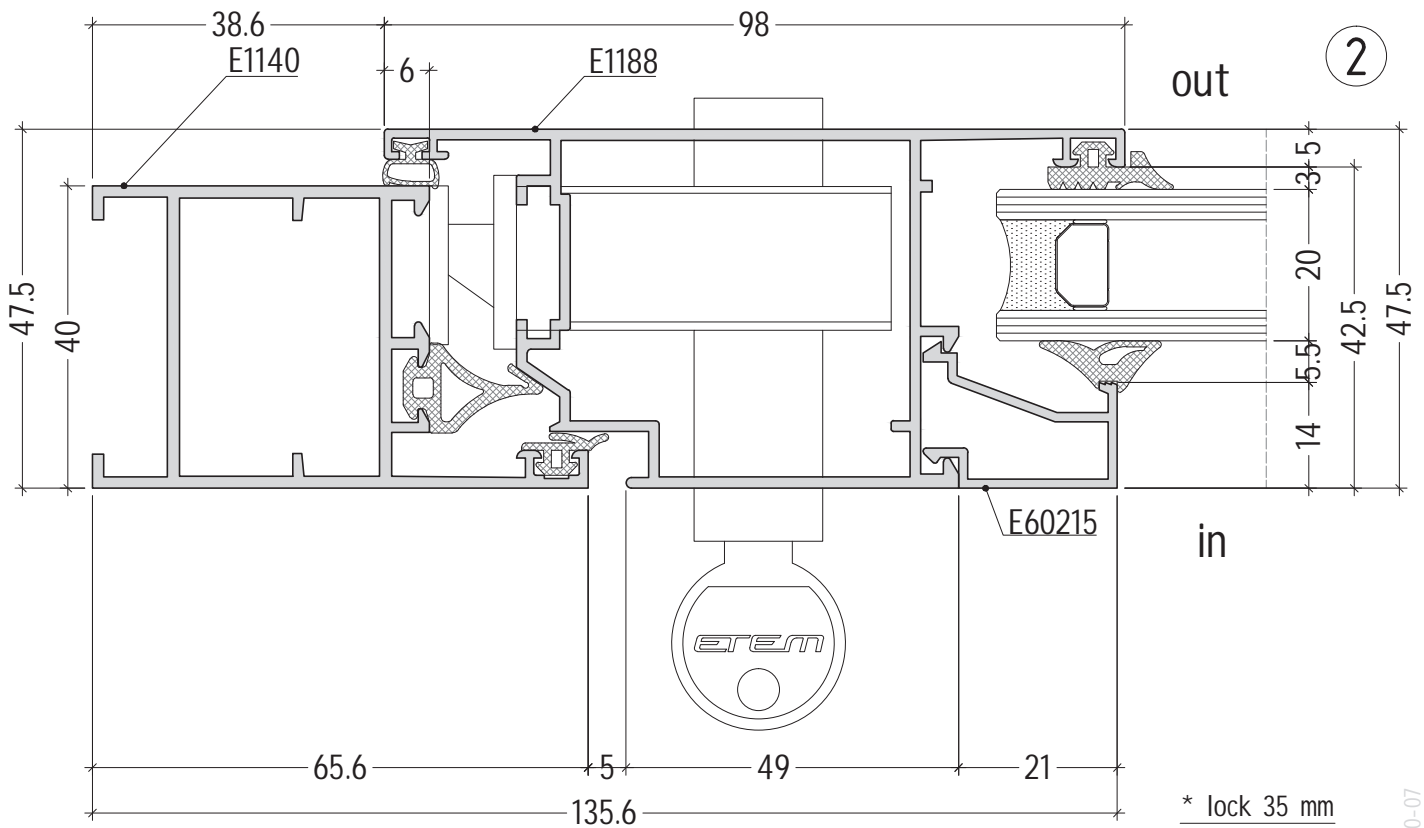
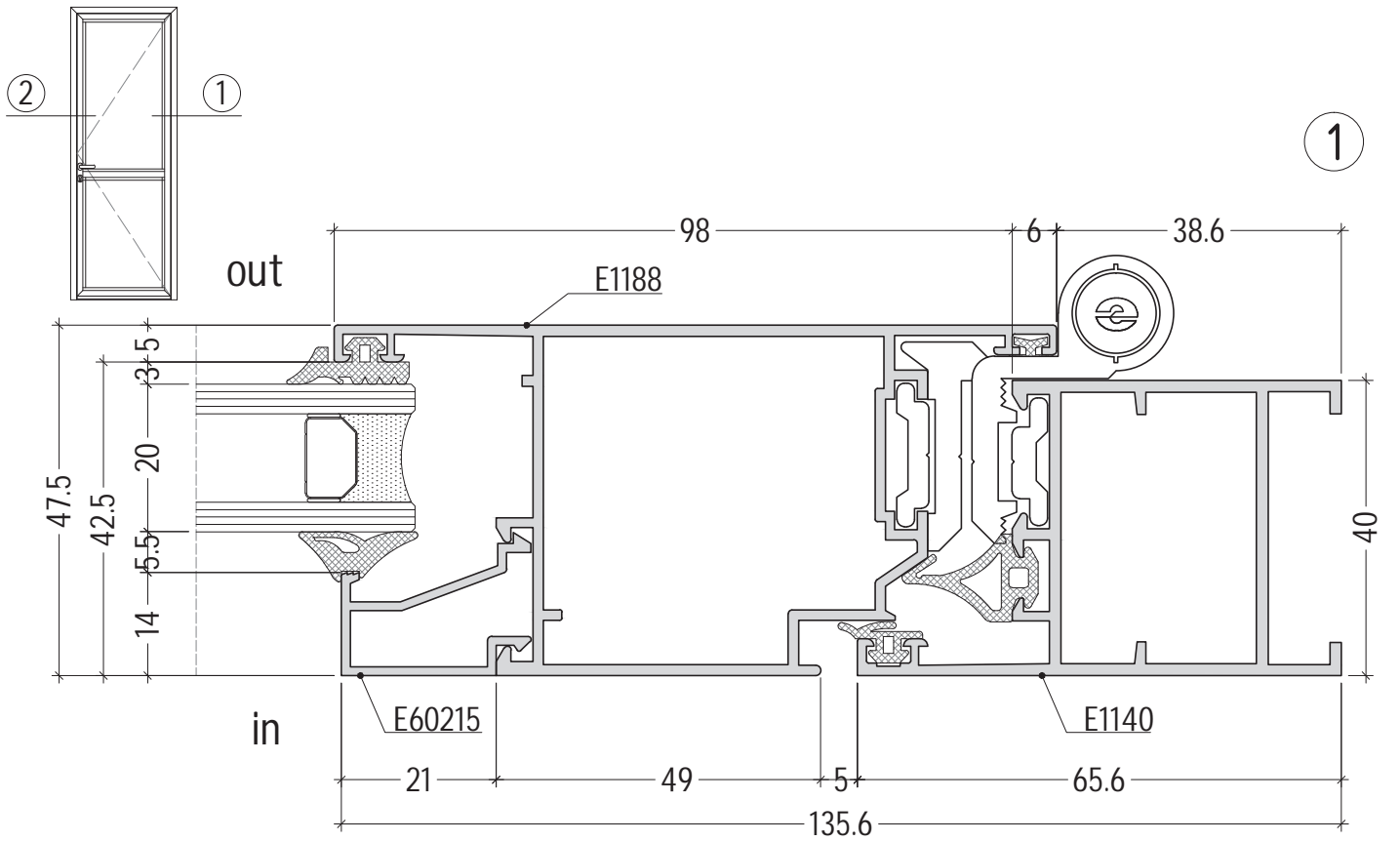
outward opening



scale: 1:1

D1000-06

outward opening

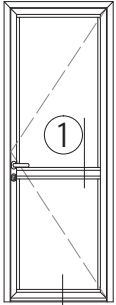


scale: 1:1

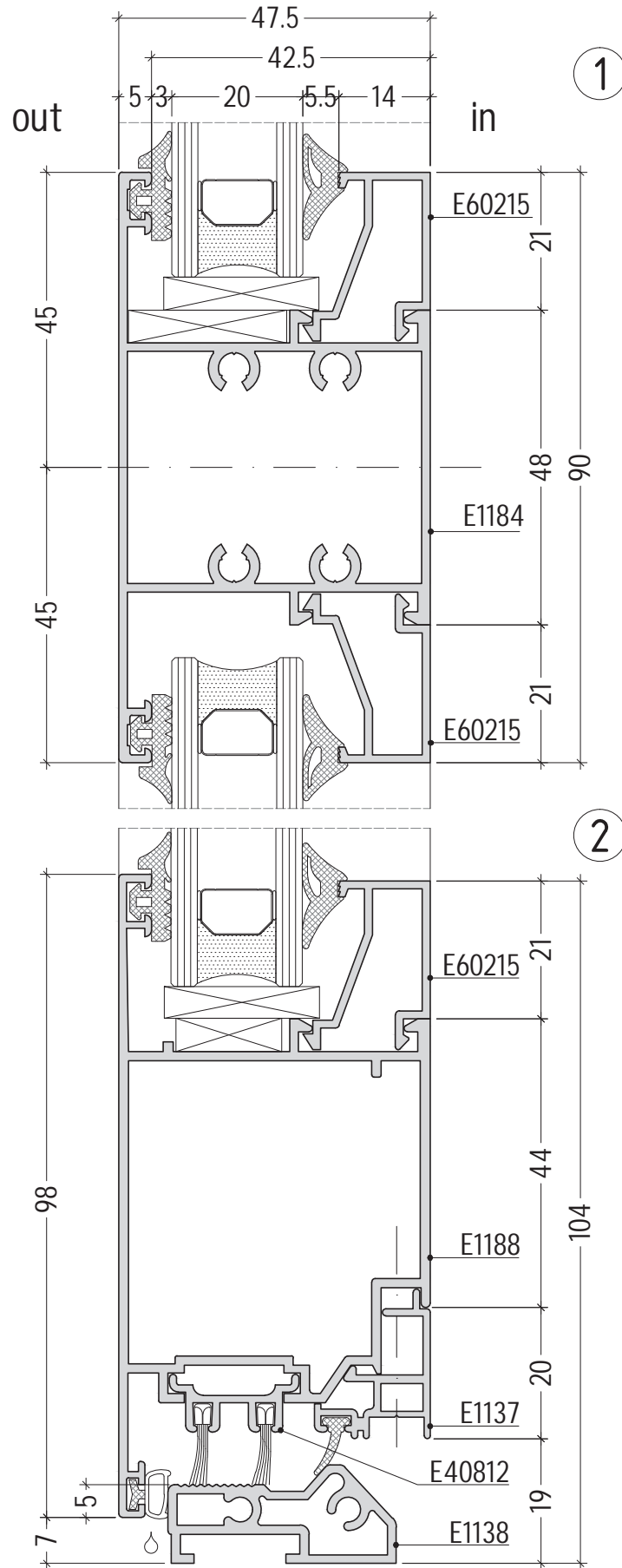
\* lock 35 mm

D1000-07

outward opening



②

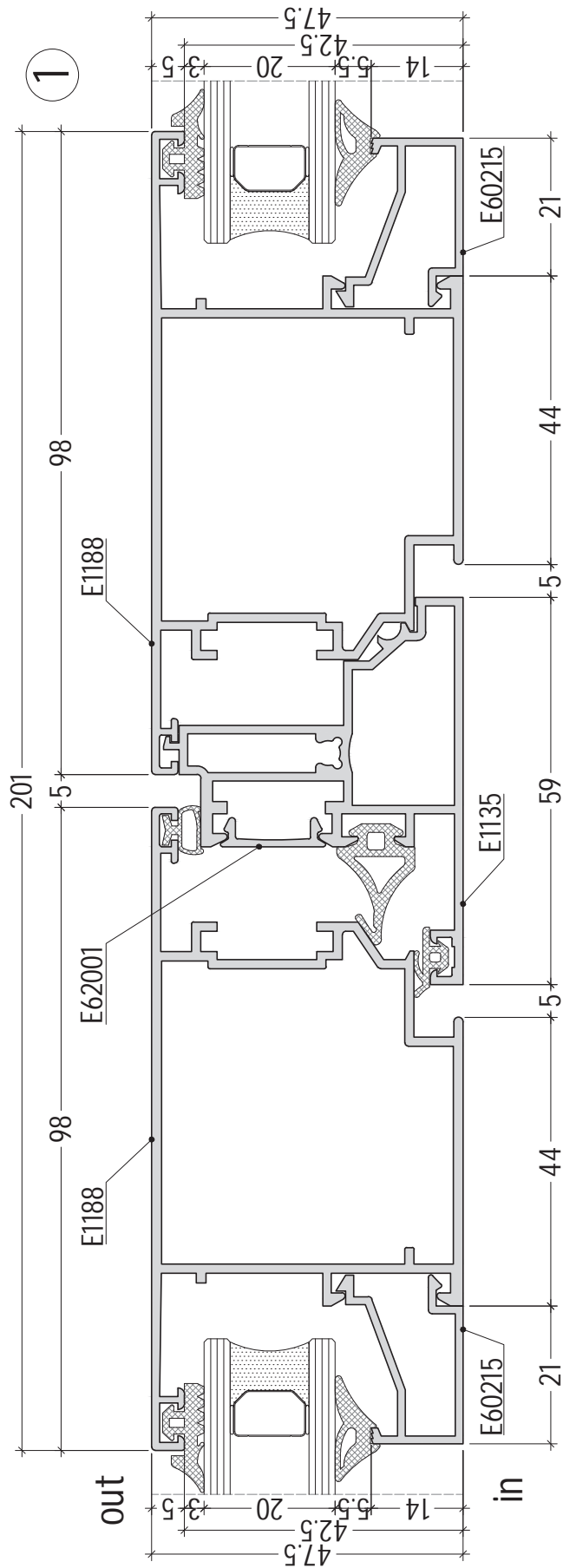
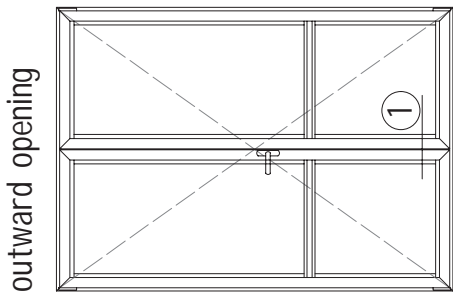


scale: 1:1

D1000-08

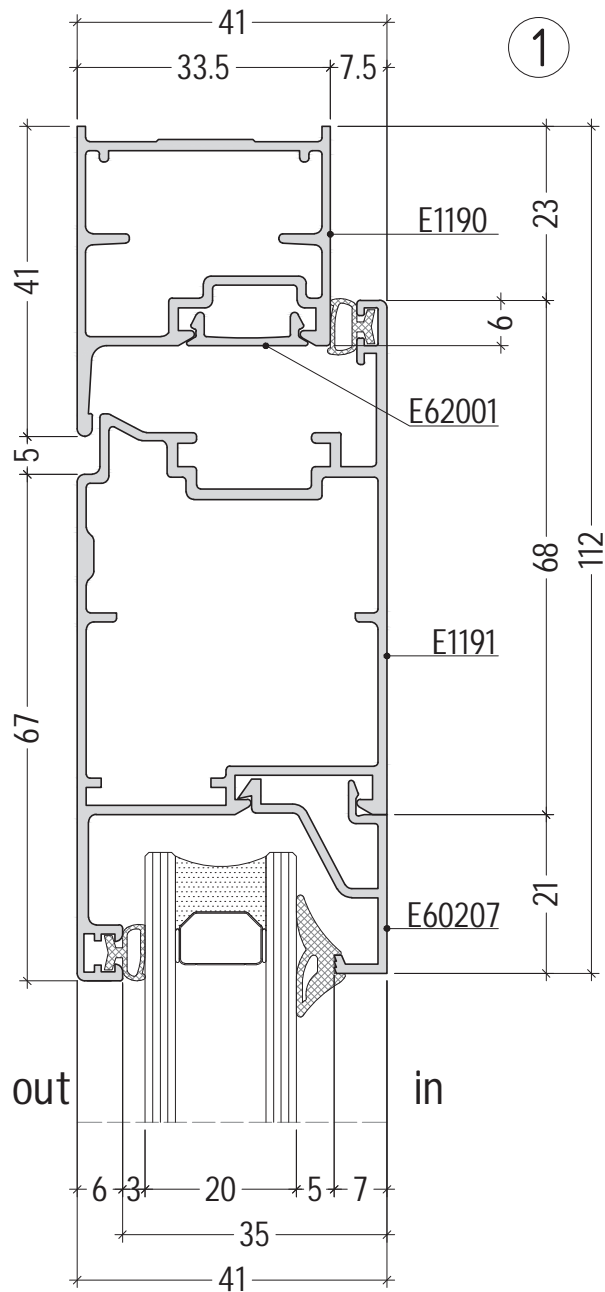
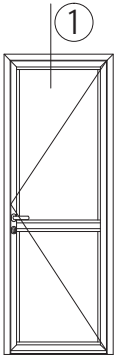
# opening system without thermal break

E1000



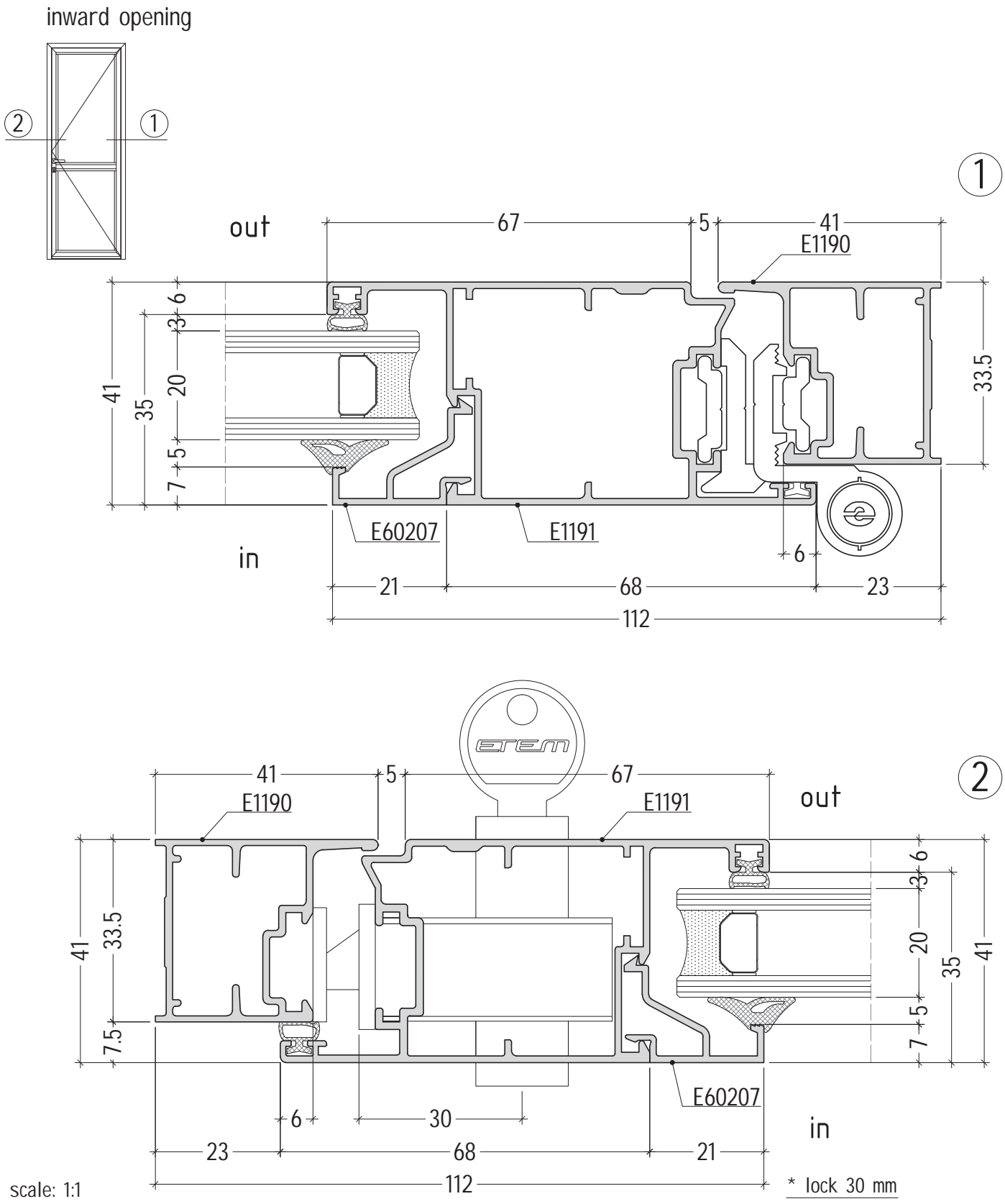
scale: 1:1

inward opening

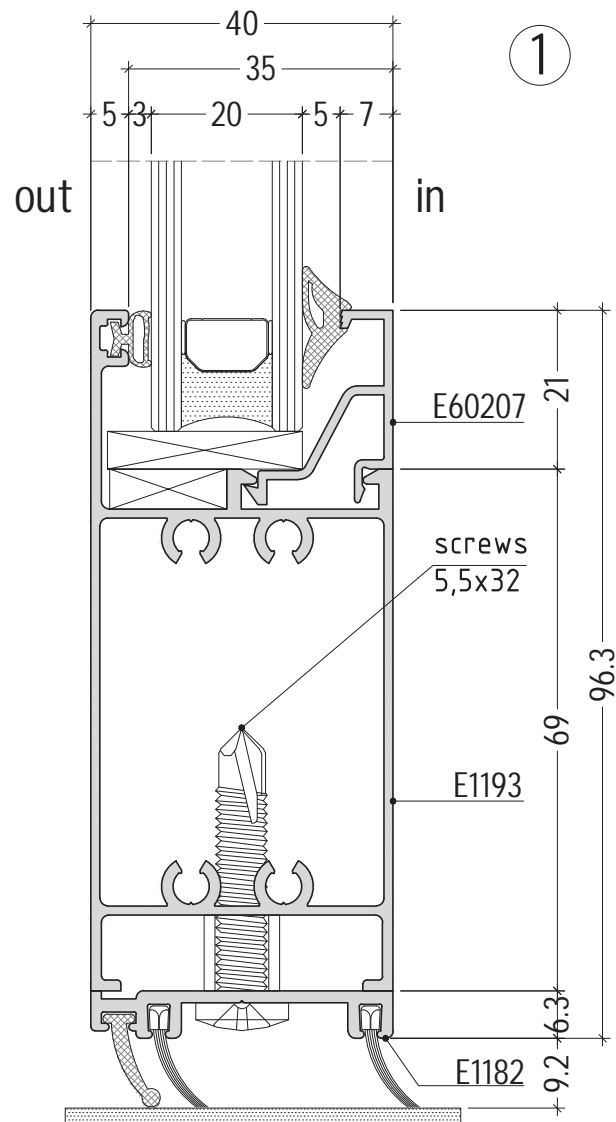
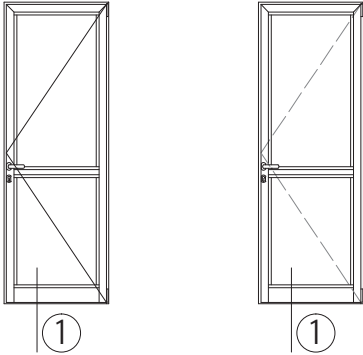


scale: 1:1

D1000-10



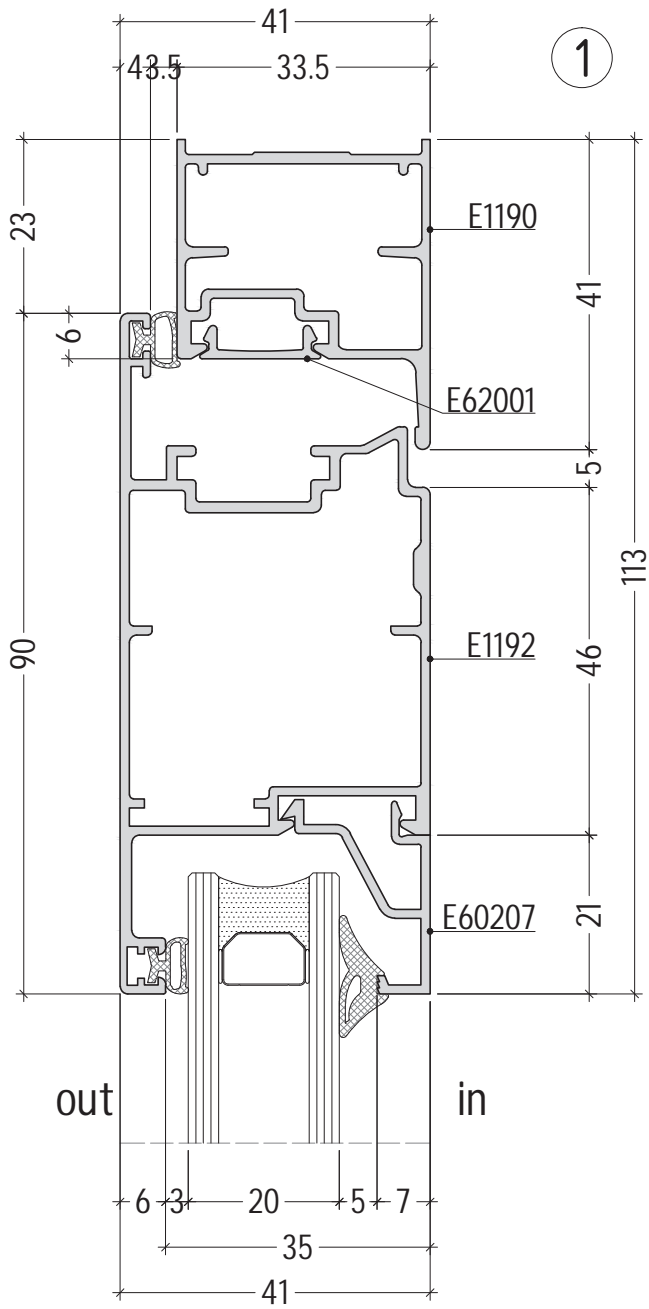
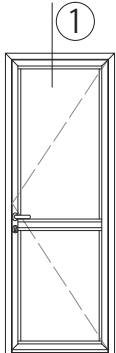
inward opening / outward opening



scale: 1:1



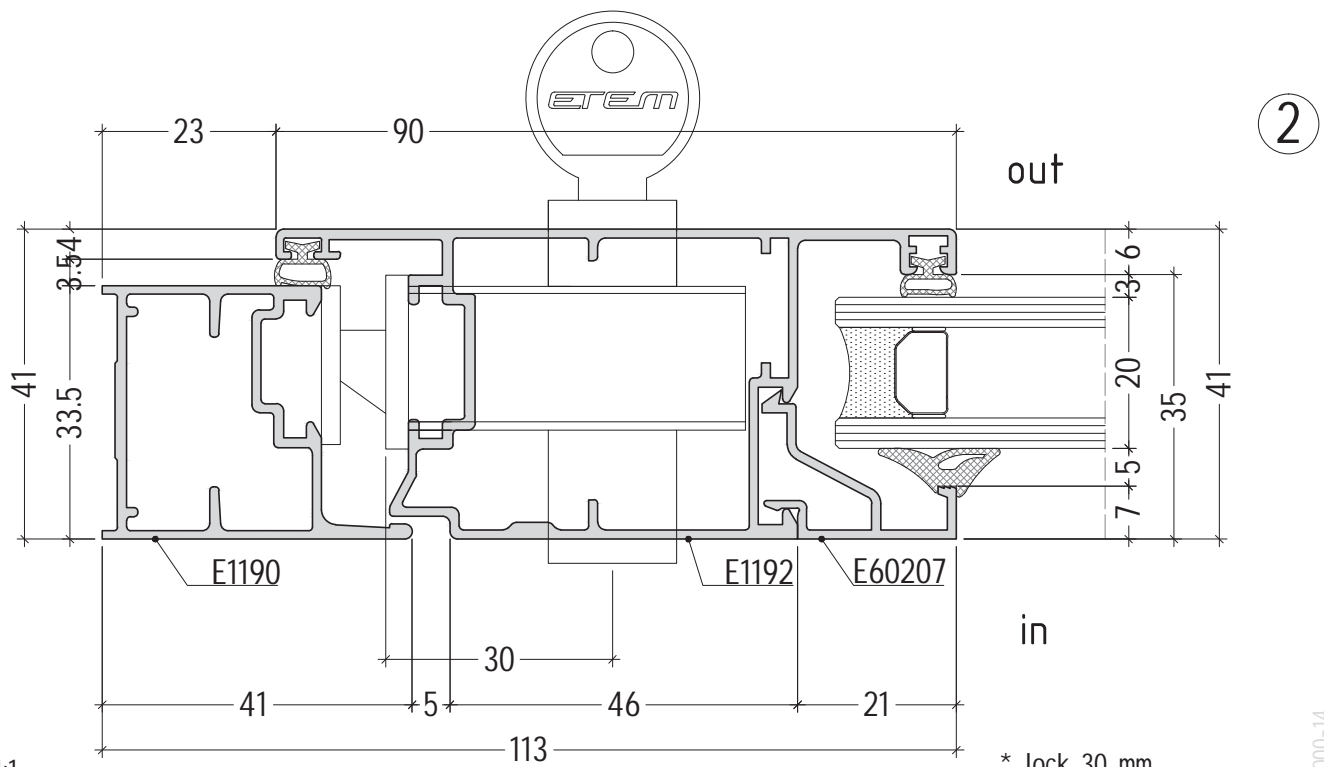
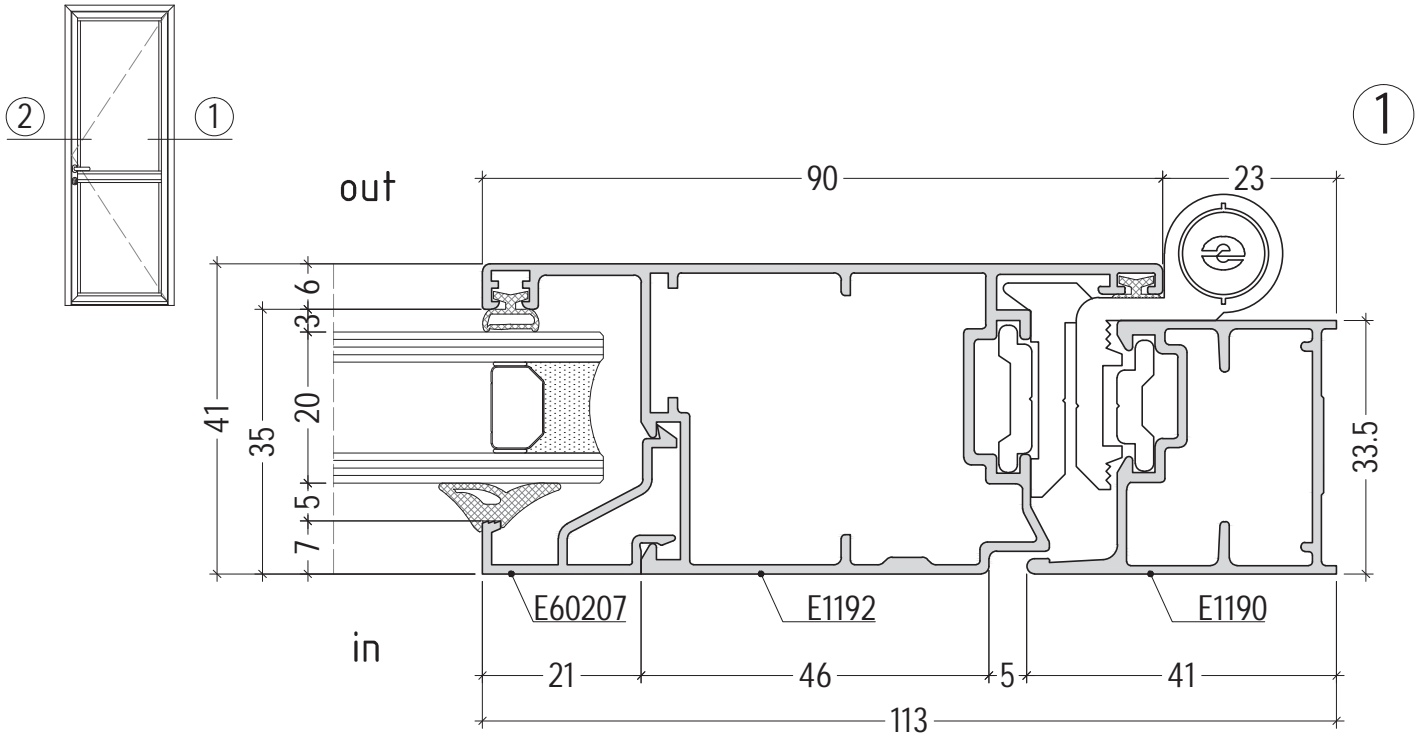
outward opening



scale: 1:1

D1000-13

outward opening

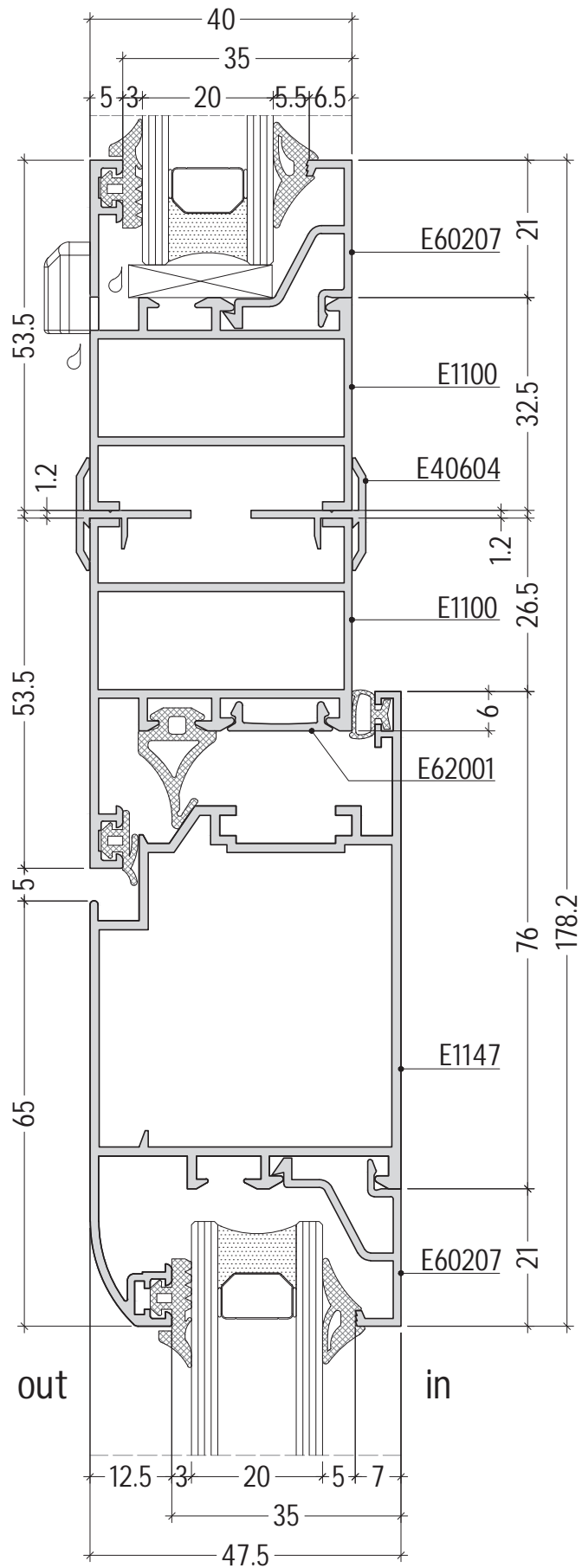
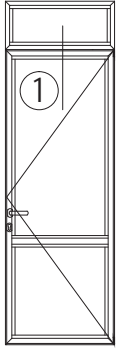


scale: 1:1

\* lock 30 mm

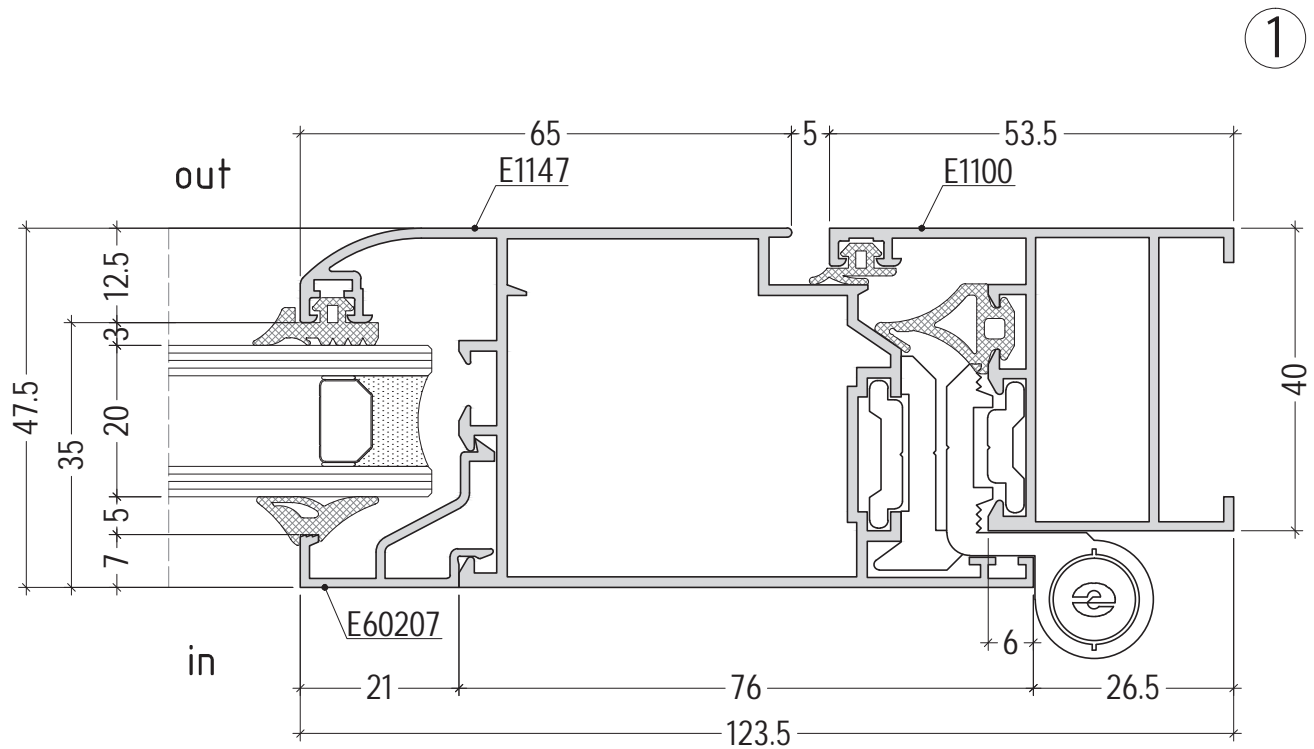
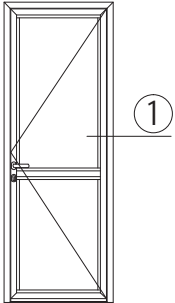
D1000-14

inward opening



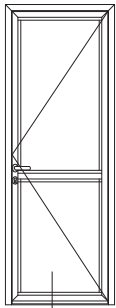
scale: 1:1

inward opening



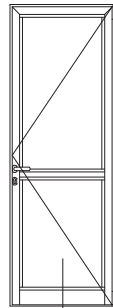
scale: 1:1

inward opening

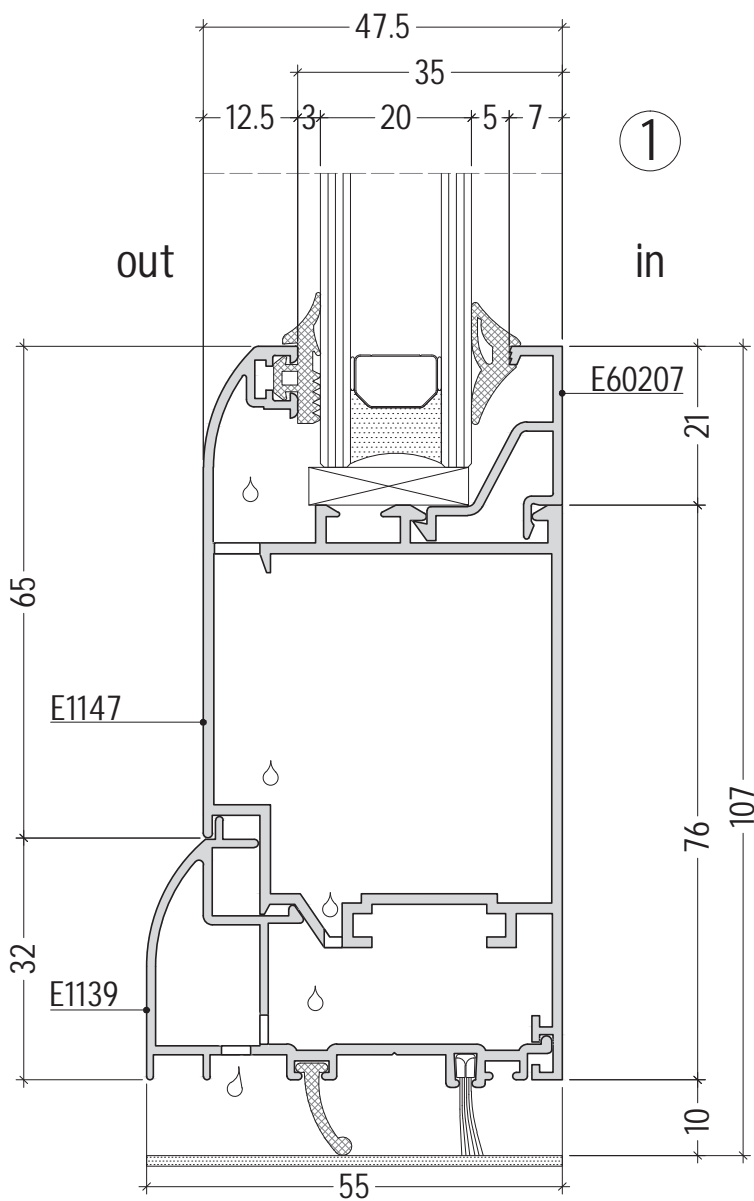


①

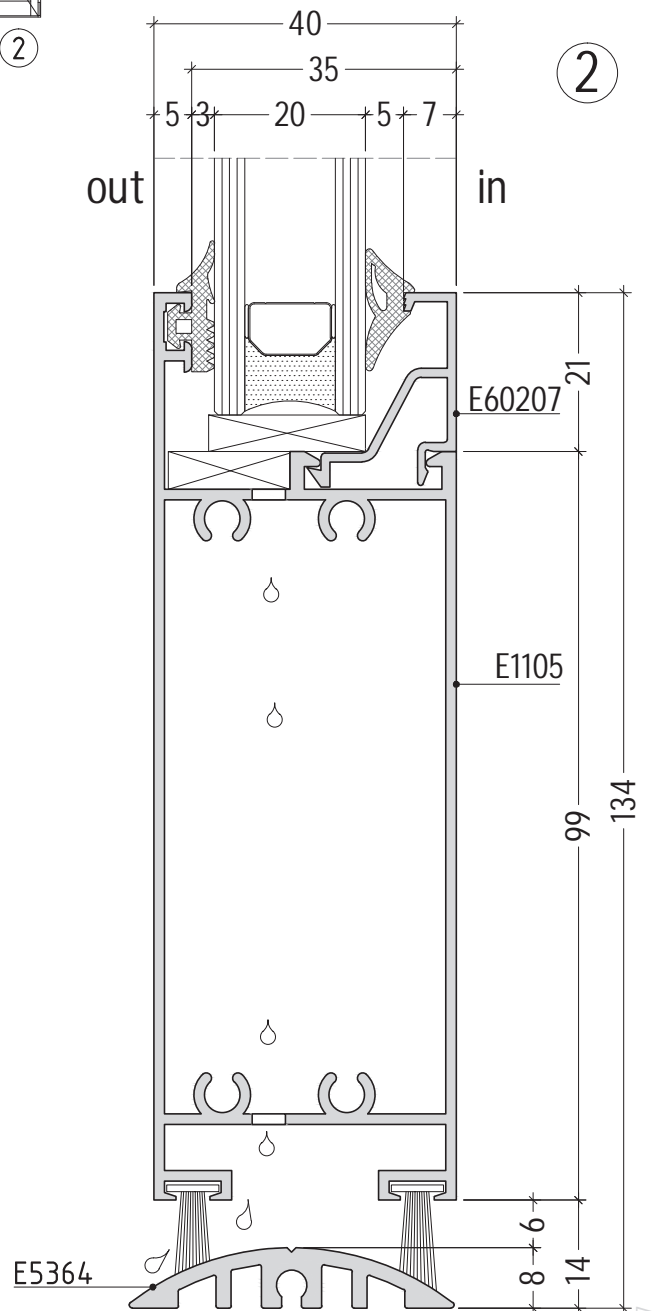
inward opening



②

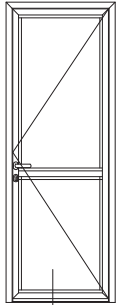


scale: 1:1



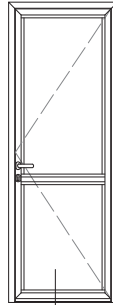
D1000-17

inward opening

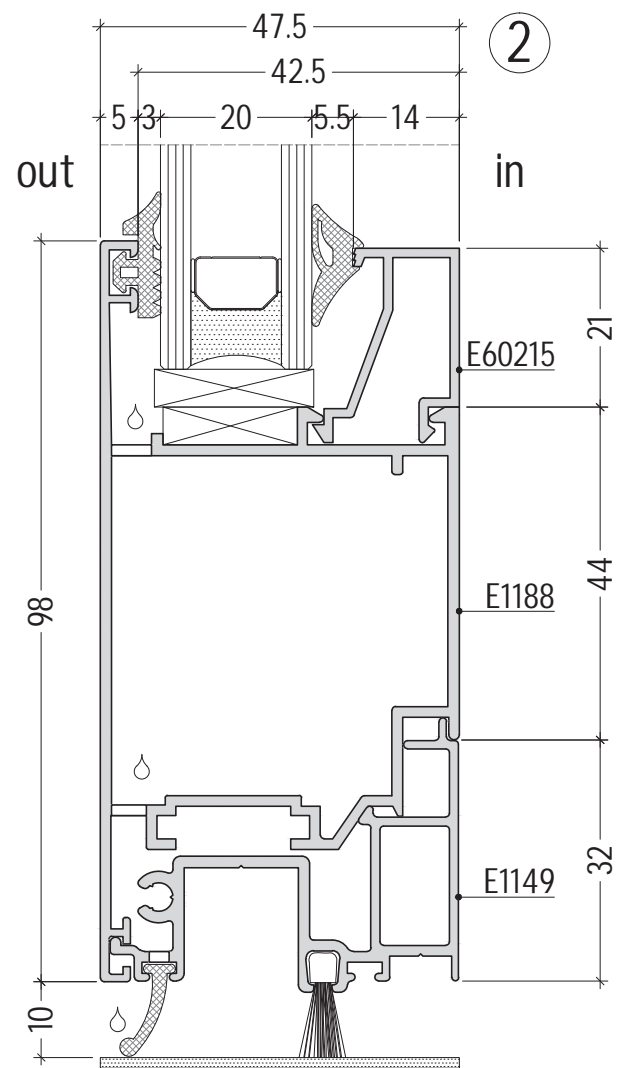
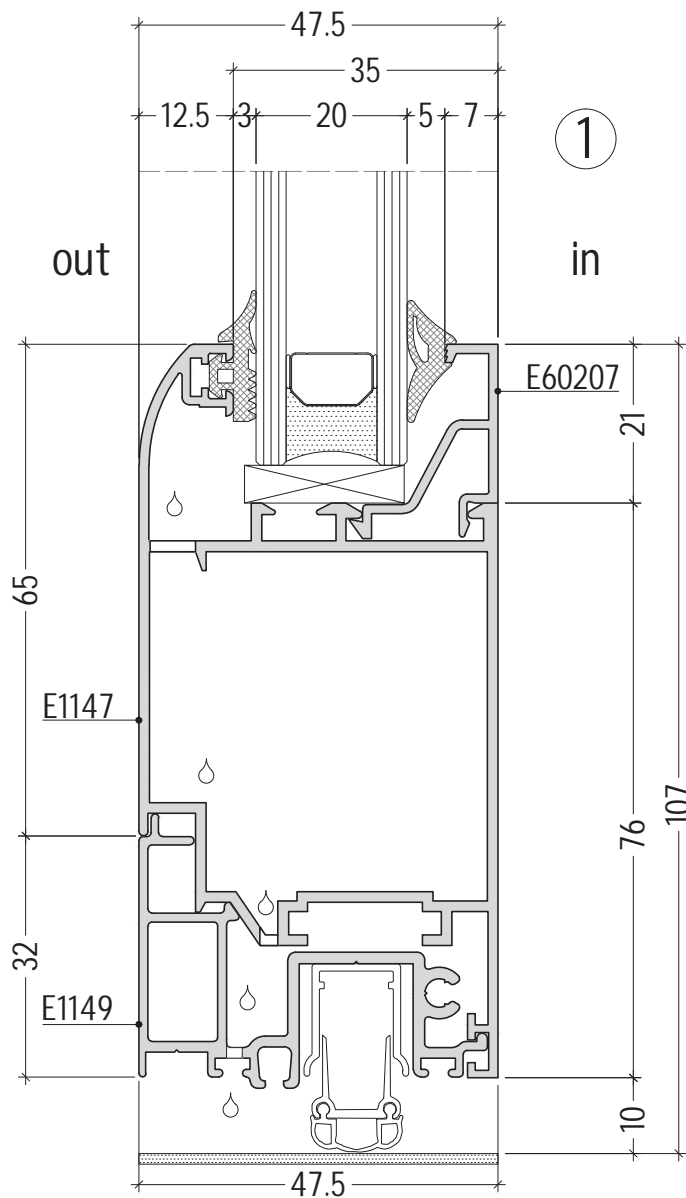


①

outward opening



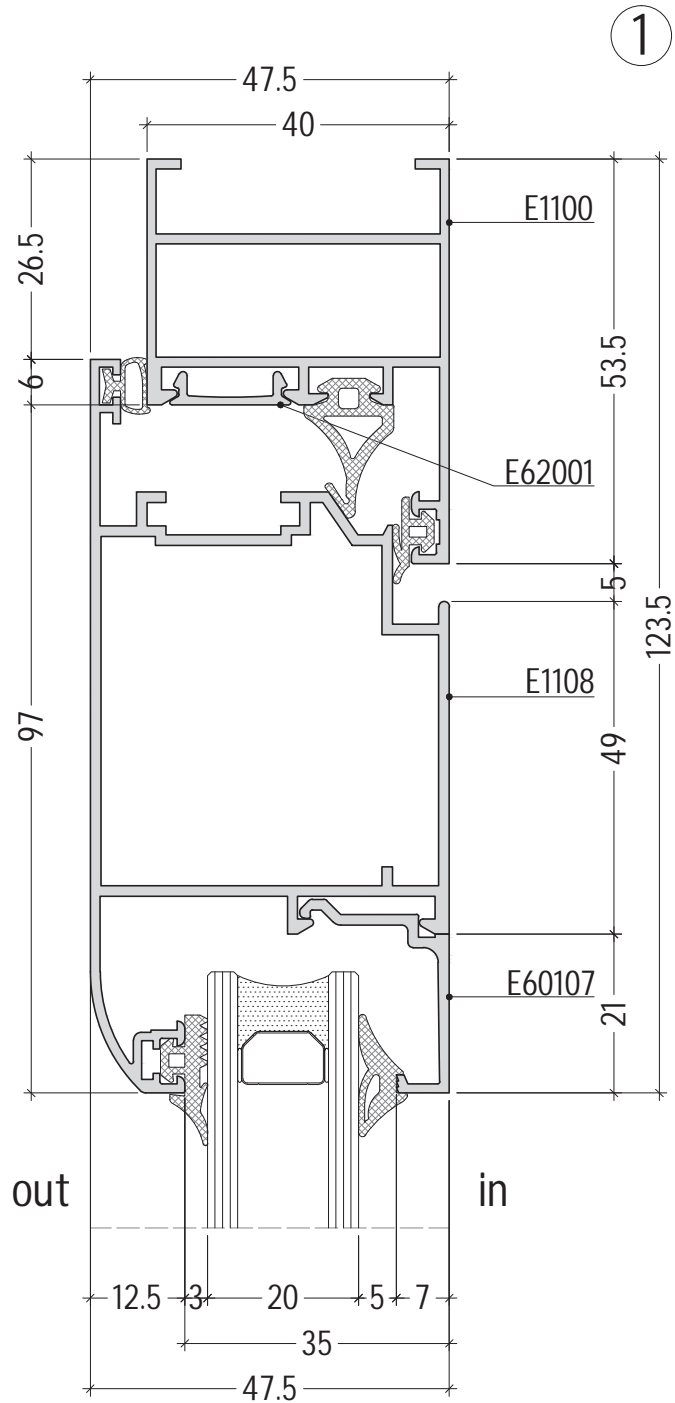
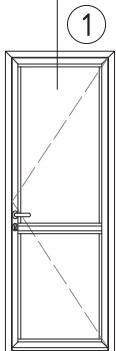
②



scale: 1:1

D1000-18

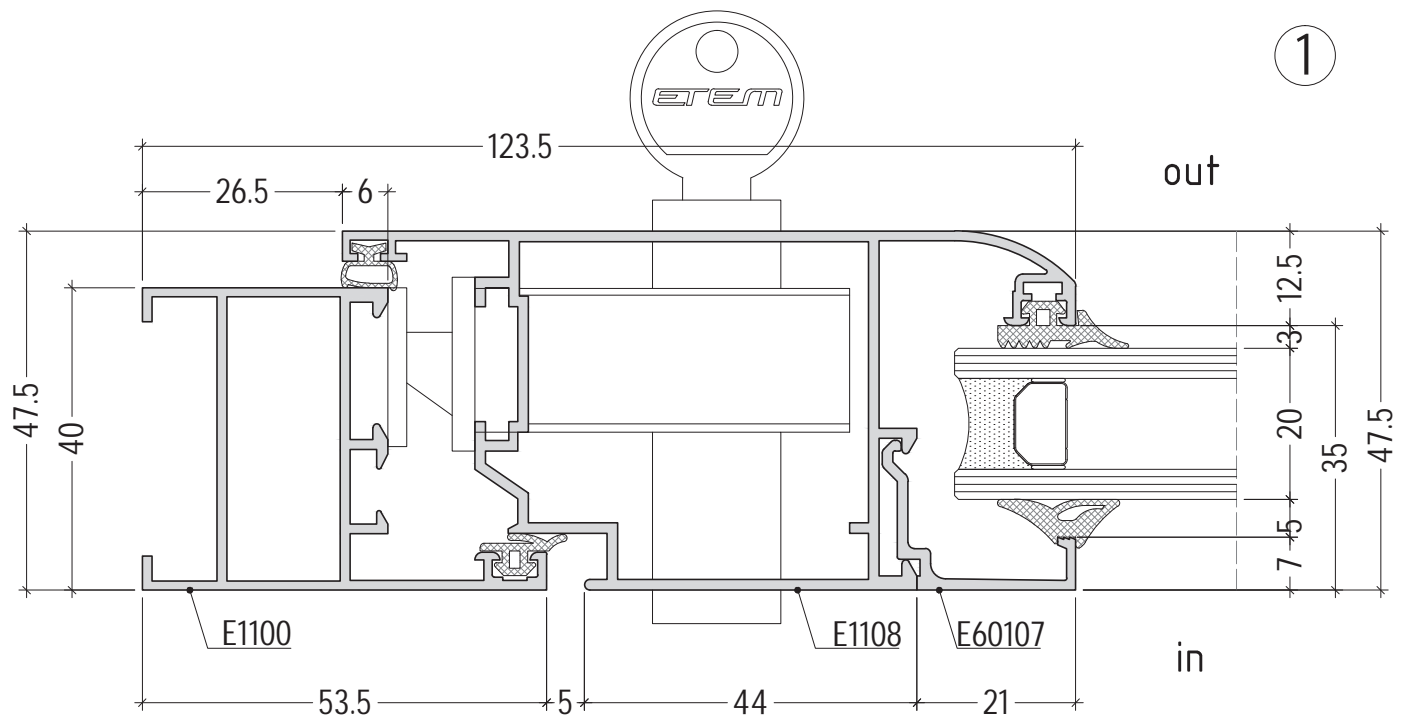
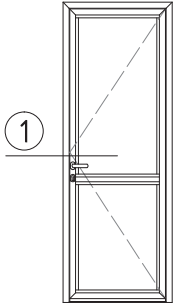
outward opening



scale: 1:1

D1000-19

outward opening



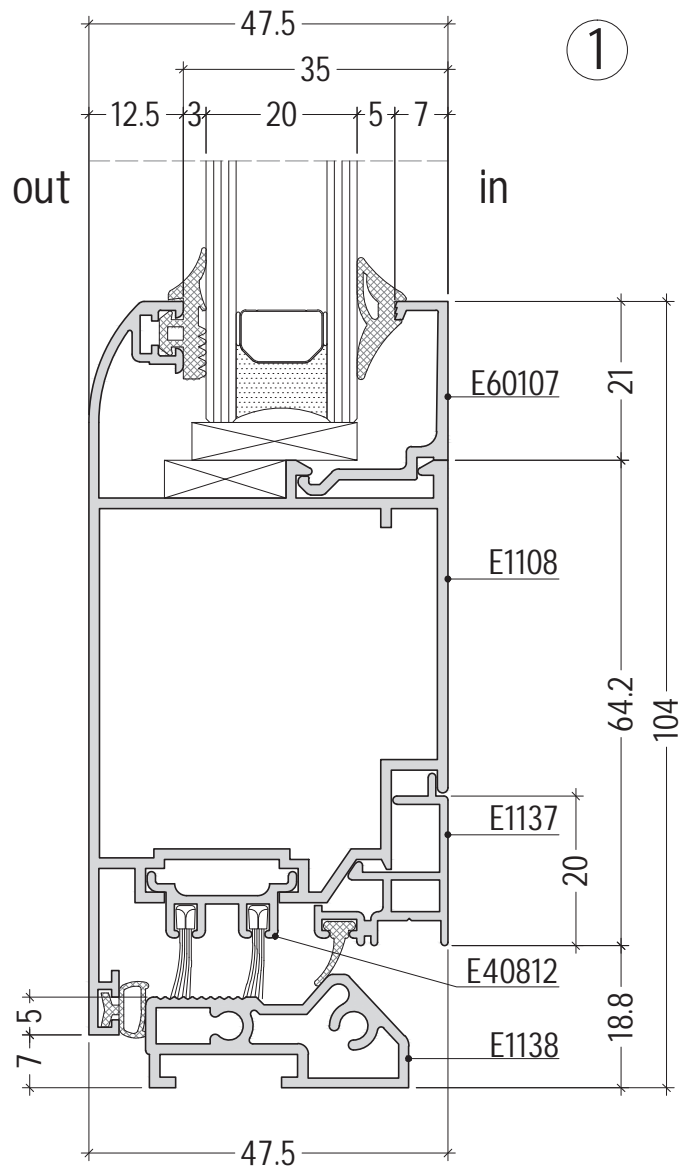
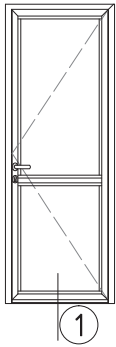
\* lock 35 mm

scale: 1:1

D1000-20

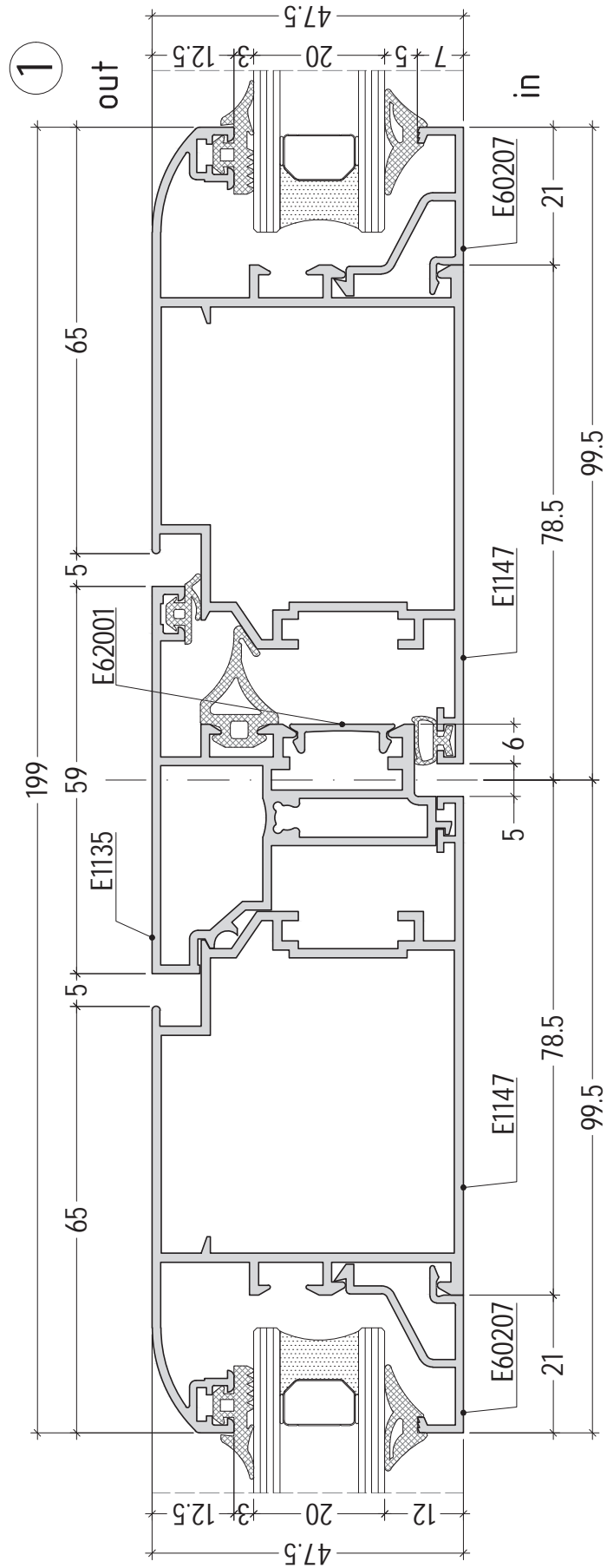
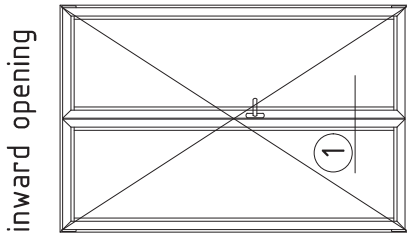


outward opening

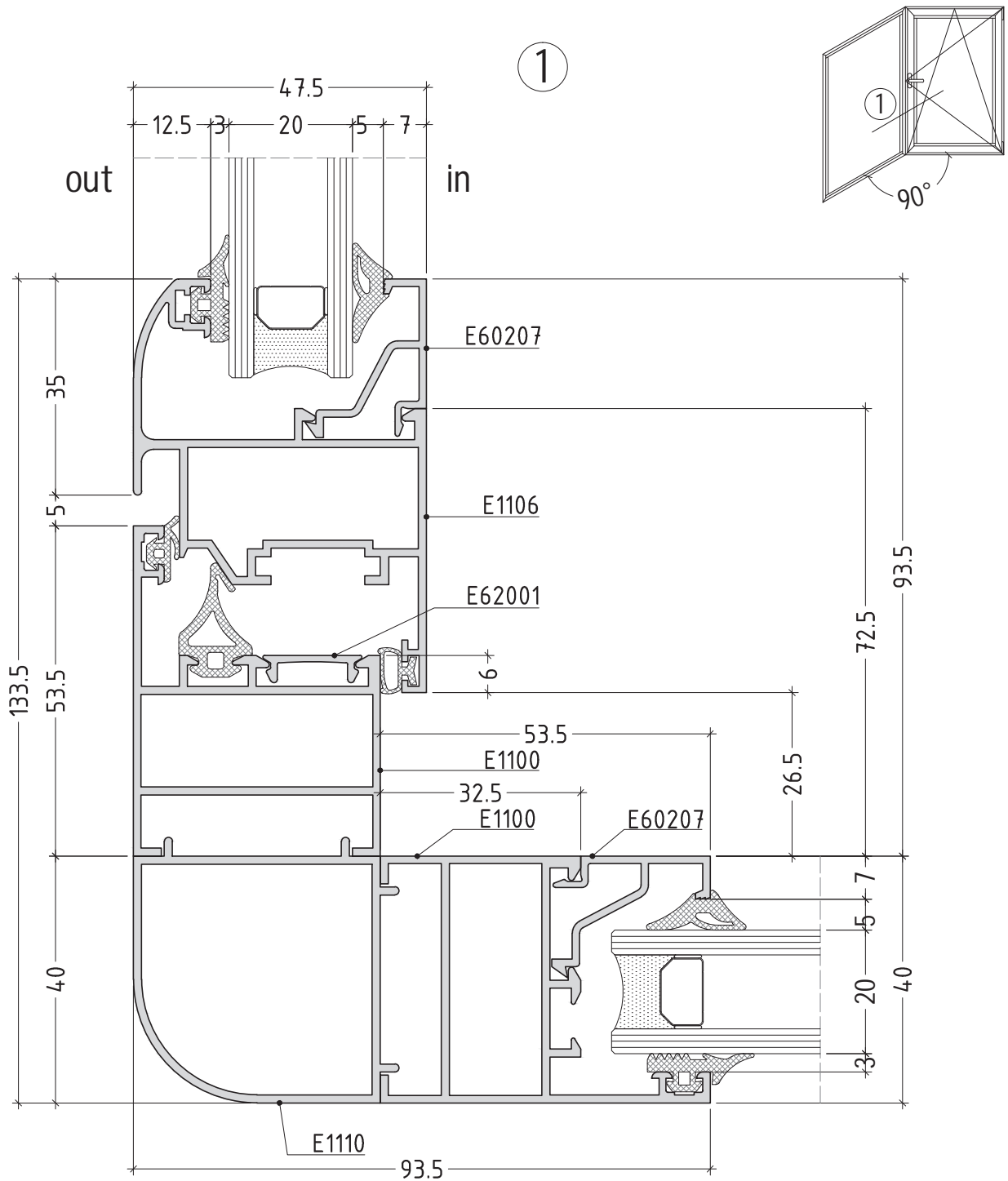


scale: 1:1

D1000-21

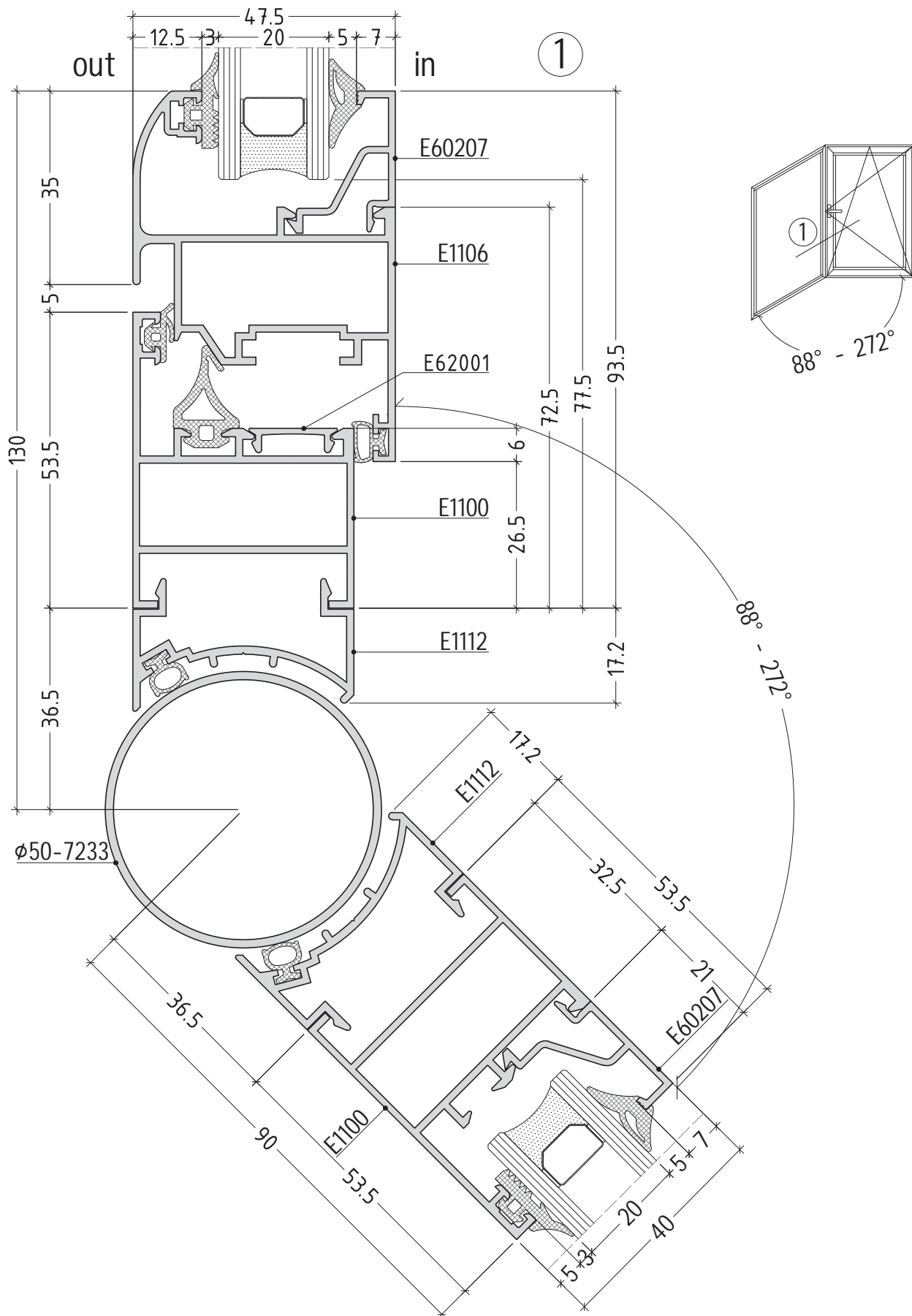


scale: 1:1



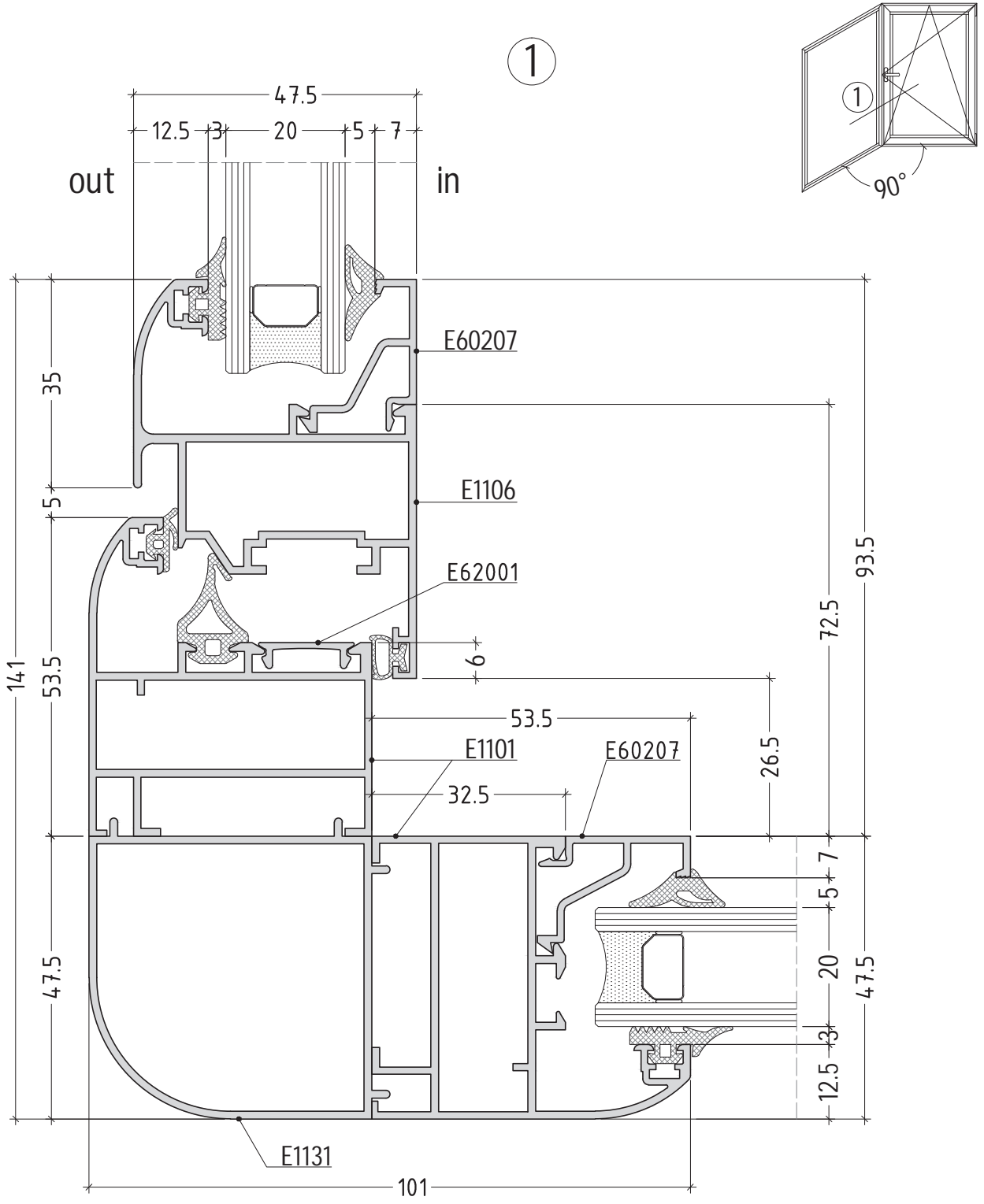
scale: 1:1

D1000-23



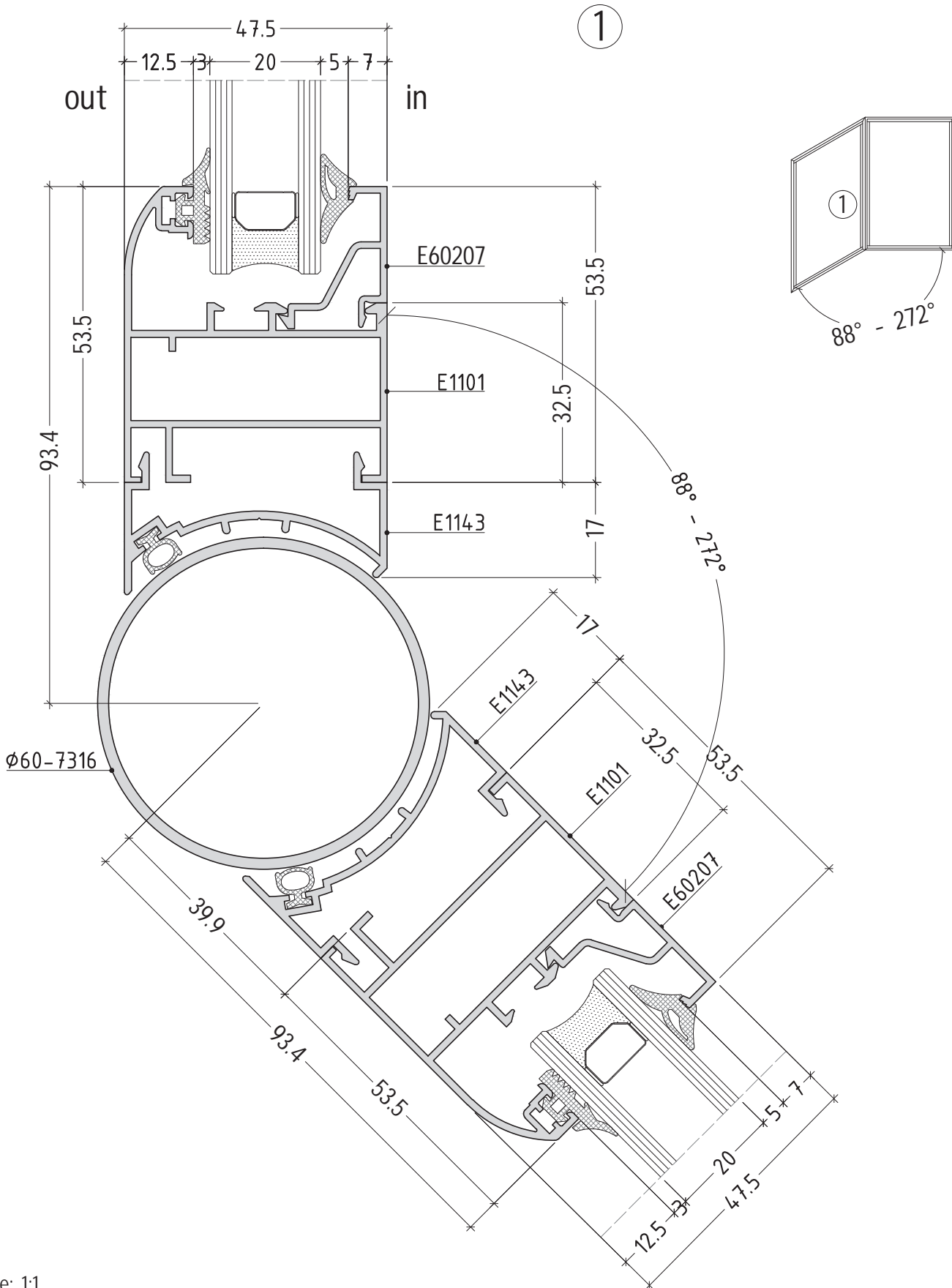
scale: 1:1

D1000-24



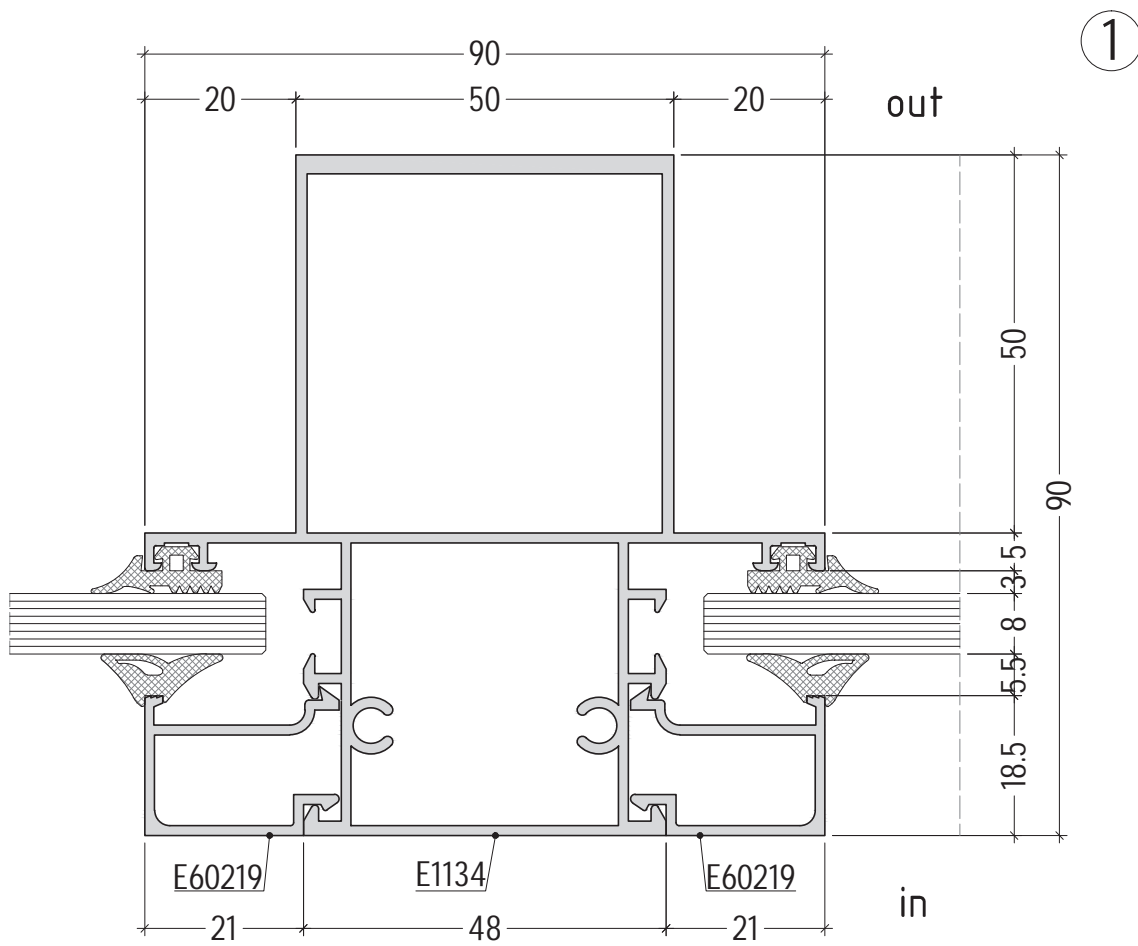
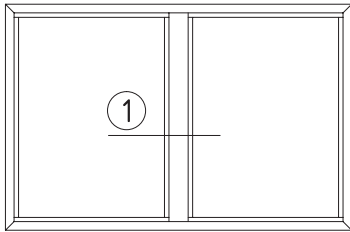
scale: 1:1

D1000-25



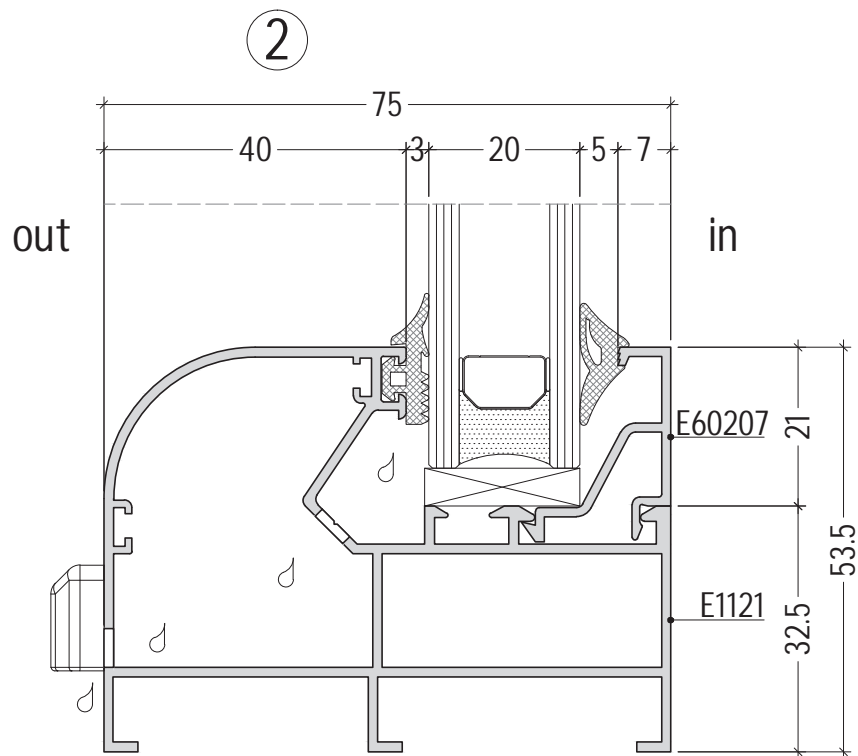
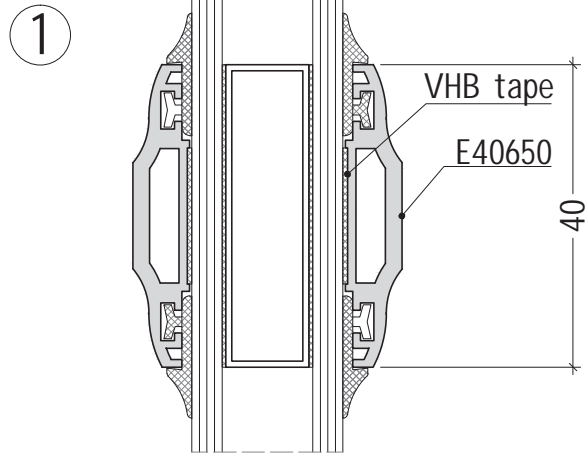
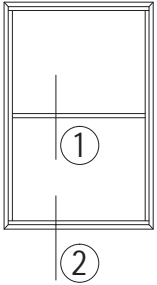
scale: 1:1

D1000-26



scale: 1:1

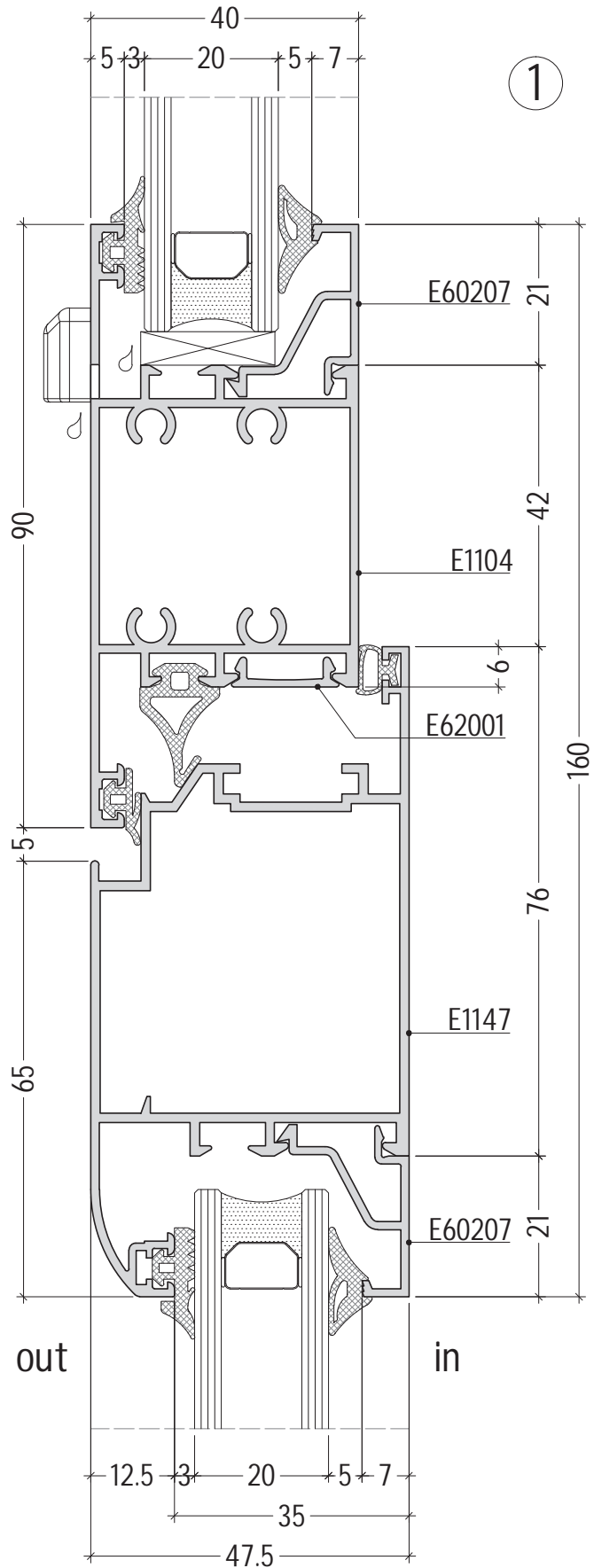
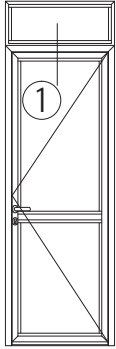
fix  
position



scale: 1:1

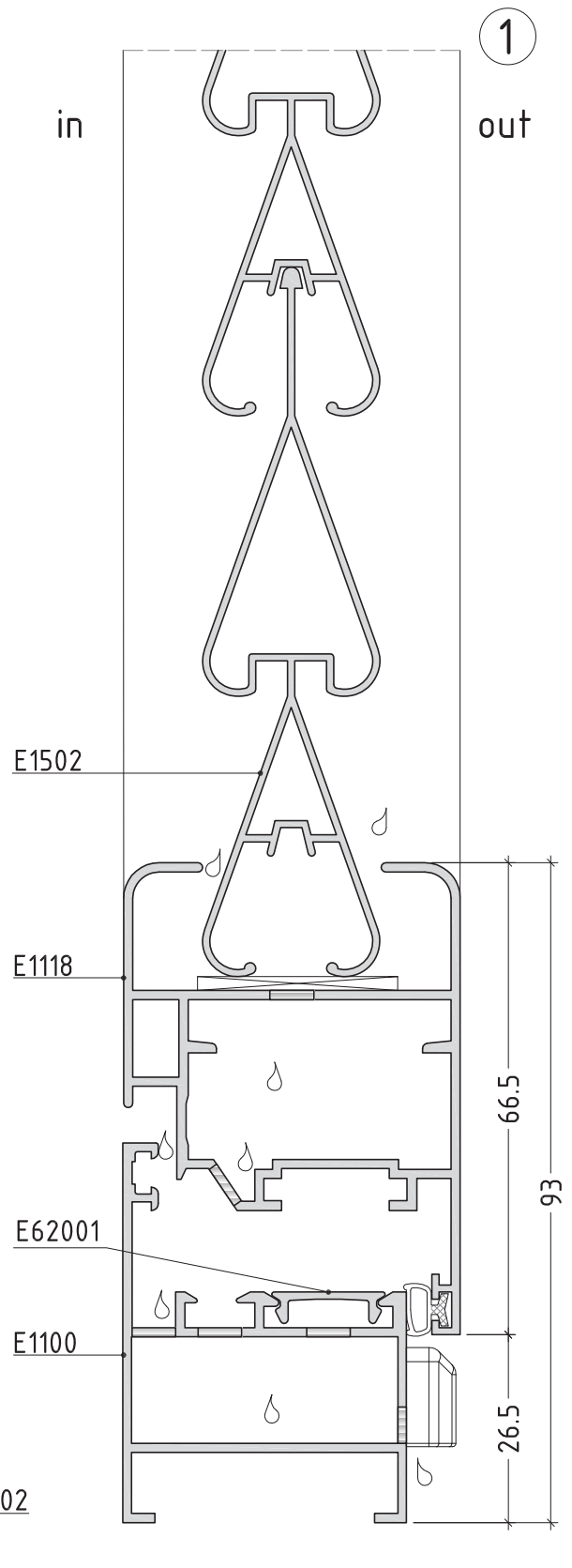
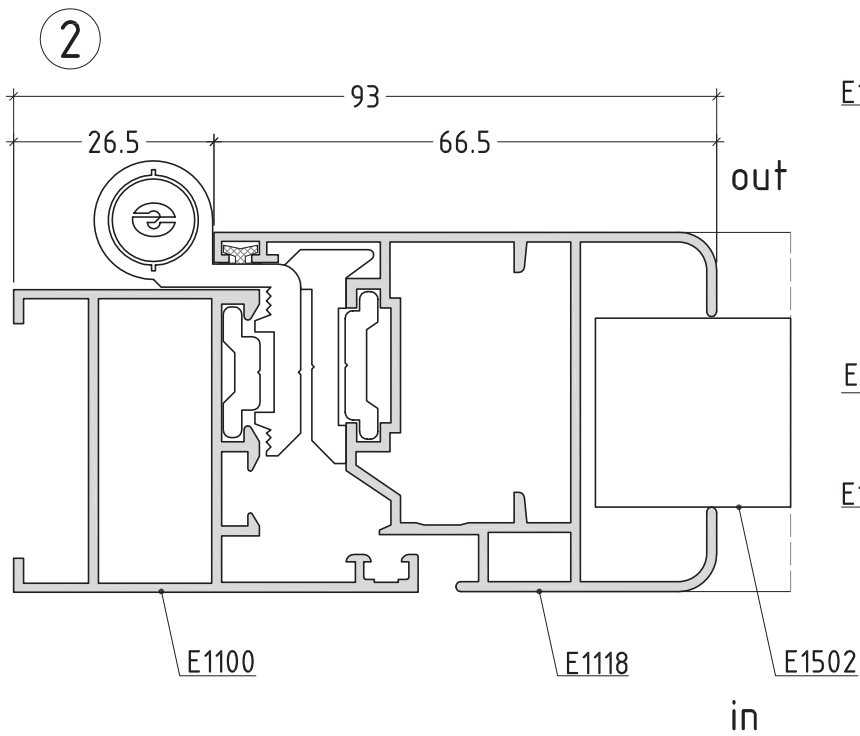
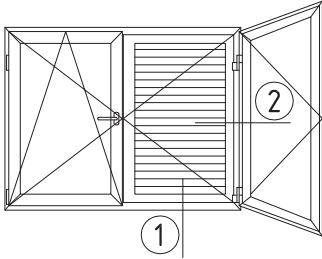


inward opening



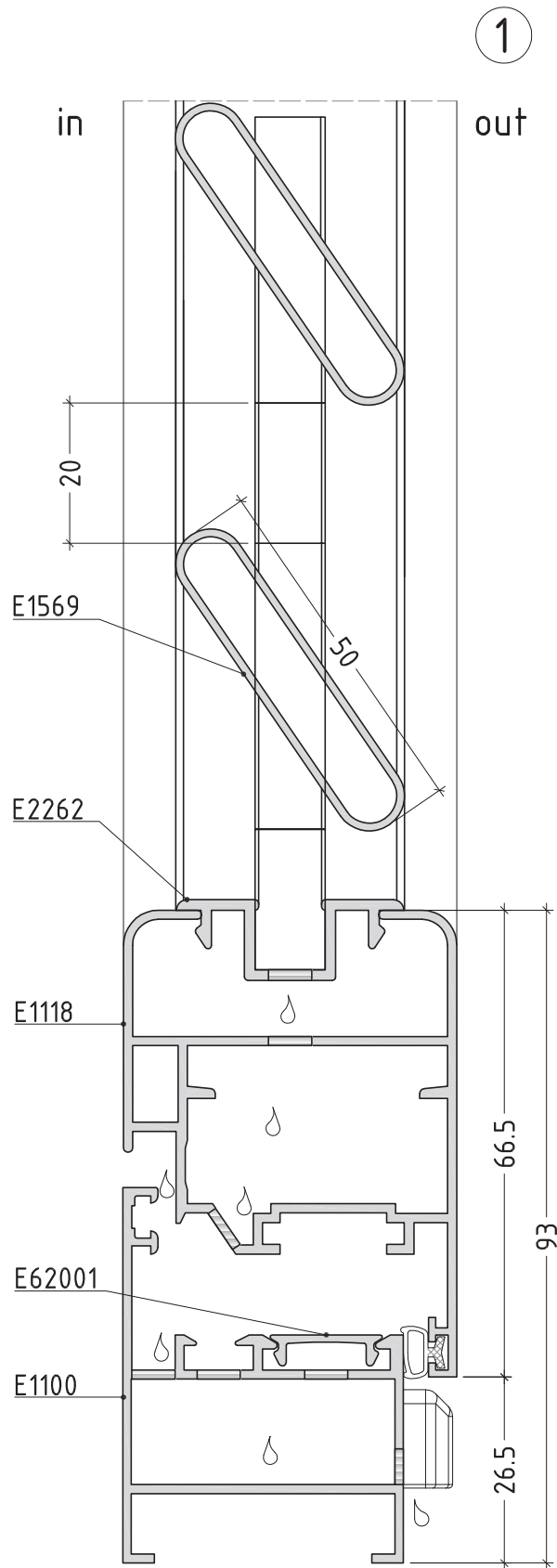
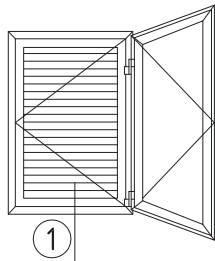
scale: 1:1

D1000-29



scale: 1:1

D1000-30



scale: 1:1

1E-0001D



# GLAZING OPTIONS



external gaskets	INTERNAL GASKETS					GLAZING OPTIONS				
	5 - 6 mm 130176		7 - 8 mm 130177			GLAZING BEADS				
3 mm 130411 5 mm 130402 4 mm 130153	5 mm 130205	6 mm 130206	7 mm 130207	8 mm 130208	10 mm 130210					
	X mm					E601xx	E602xx	E604xx	E605xx	E607xx
130411 130402	20	19	18	17	15	E60107 old code E1114	E60207 old code E1144			
130153	19	18	17	16	14					
130411 130402	17	16	15	14	12	E60110		E60410 old code E1160	E60510 old code E1130	
130153	16	15	14	13	11					
130411 130402	15	14	13	12	10	E60112 old code E5317				E60712
130153	14	13	12	11	9					
130411 130402	13	12	11	10	8		E60215 old code E5324			
130153	12	11	10	9	7					
130411 130402	10	9	8	7	5	E60117 old code E5311				
130153	9	8	7	6	4					
130411 130402	8	7	6	5	-	E60119 old code E5314	E60219 old code E5304	E60419 old code E5394		
130153	7	6	5	4	-					
130411 130402	5	4	-	-	-	E60122 old code E5312	E60222 old code E1113	E60422		E60722
130153	4	-								
							E60235	E60435		

Note:  
Tolerance in dimension chain  $\pm 0.5$  mm

T1000-01

external gaskets	INTERNAL GASKETS					GLAZING OPTIONS				
	5 - 6 mm		7 - 8 mm			GLAZING BEADS				
3 mm 130411		130176		130177		 For profile E1183 E1184 E1185 E1187 E1188				
130402	5 mm 130205	6 mm 130206	7 mm 130207	8 mm 130208	10 mm 130210					
4 mm 130153						E601xx	E602xx	E604xx	E605xx	E607xx
130411 130402	27	26	25	24	22	E60107 old code E1114 	E60207 old code E1144 			
130153	26	25	24	23	21					
130411 130402	24	23	22	21	19	E60110 		E60410 old code E1160 	E60510 old code E1130 	
130153	23	22	21	20	18					
130411 130402	22	21	20	19	17	E60112 old code E5317 				E60712 
130153	21	20	19	18	16					
130411 130402	20	19	18	17	15		E60215 old code E5324 			
130153	19	18	17	16	14					
130411 130402	17	16	15	14	12	E60117 old code E5311 				
130153	16	15	14	13	11					
130411 130402	16	15	14	13	11	E60119 old code E5314 	E60219 old code E5304 	E60419 old code E5394 		
130153	15	14	13	12	10					
130411 130402	12	11	10	9	7	E60122 old code E5312 	E60222 old code E1113 	E60422 		E60722 
130153	11	10	9	8	6					
130411 130402	9	8	7	6	4		E60225 old code E5307 	E60425 old code E5308 		E60725 old code E5348 
130153	8	7	6	5	-					

Note:  
Tolerance in dimension chain  $\pm 0.5$  mm

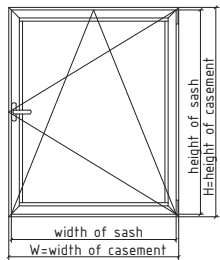
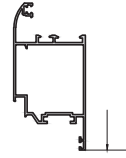
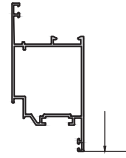
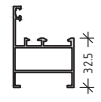
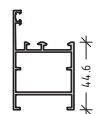
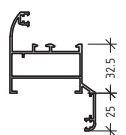
T1000-02



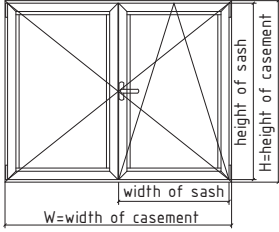
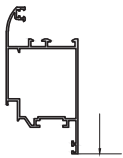
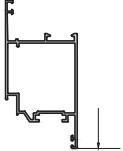

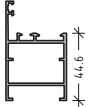
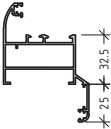
# CUTTING LISTS



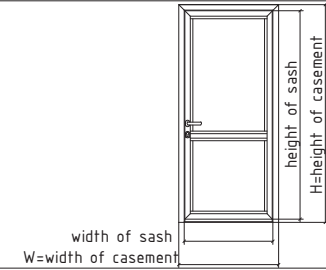
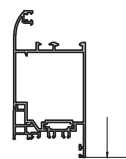
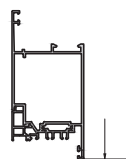
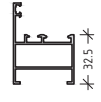
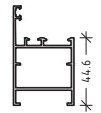
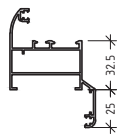



## calculation of cutting length for one leaf window

		sash profile selection	straight line	
frame profile selection			E1106 E1125 E1150 E1147 E1107 E1108 	E1187 E1188 
E1100 E1101 E1121 E1132 E1155 E1120 	width of sash	W - 54	W - 54	
	height of sash	H - 54	H - 54	
E1140 	width of sash	W - 78.2	W - 78.2	
	height of sash	H - 78.2	H - 78.2	
E1102 	width of sash	W - 104	W - 104	
	height of sash	H - 104	H - 104	

## calculation of cutting length for two leaf window

		sash profile selection		
		 E1106 E1125 E1150 E1147 E1107 E1108	straight line  E1187 E1188	
frame profile selection				
E1100 E1101 E1121 E1132 E1155 E1120 	width of sash	$\frac{W - 59}{2}$	$\frac{W - 59}{2}$	
	height of sash	H - 54	H - 54	
	height of secondary sash profile	H - 124	H - 124	
E1140 	width of sash	$\frac{W - 83.2}{2}$	$\frac{W - 83.2}{2}$	
	height of sash	H - 78.2	H - 78.2	
	height of secondary sash profile	H - 148.2	H - 148.2	
E1102 	width of sash	$\frac{W - 109}{2}$	$\frac{W - 109}{2}$	
	height of sash	H - 104	H - 104	
	height of secondary sash profile	H - 174	H - 174	

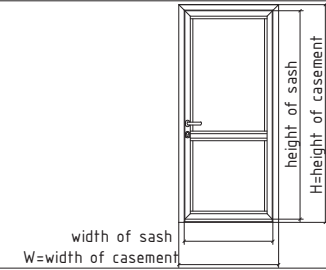
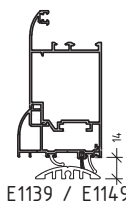
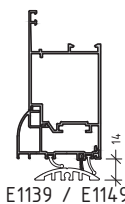
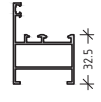
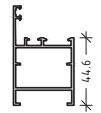
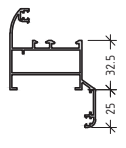


calculation of cutting length for one leaf door with door threshold profile

		sash profile selection	straight line		
frame profile selection		E1106 E1125 E1150 E1147 E1107 E1108 	E1137 + E40812	E1187 E1188 	E1137 + E40812
E1100 E1101 E1121 E1132 E1155 E1120 	width of sash	W - 54	W - 54	W - 54	
	height of sash	H - 34	H - 34	H - 34	
E1140 	width of sash	W - 78.2	W - 78.2	W - 78.2	
	height of sash	H - 46	H - 46	H - 46	
E1102 	width of sash	W - 104	W - 104	W - 104	
	height of sash	H - 59	H - 59	H - 59	
four side sash with door threshold profile		E1138 	E1138 	E1138 	

calculation of cutting length for one leaf door with door threshold profile

		sash profile selection	straight line	
			 E1139 / E1149	 E1187 / E1188
E1100 E1101 E1121 E1132 E1155 E1120 	width of sash	W - 54	W - 54	
	height of sash	H - 37	H - 37	
E1140 	width of sash	W - 78.2	W - 78.2	
	height of sash	H - 49	H - 49	
E1102 	width of sash	W - 104	W - 104	
	height of sash	H - 62	H - 62	

## calculation of cutting length for one leaf door with door threshold profile

		sash profile selection	straight line		
frame profile selection		E1106 E1125 E1150 E1147 E1107 E1108 	E1187 E1188 	E1139 / E1149	E1139 / E1149
E1100 E1101 E1121 E1132 E1155 E1120 	width of sash	W - 54	W - 54	W - 54	W - 54
	height of sash	H - 41	H - 41	H - 41	H - 41
E1140 	width of sash	W - 78.2	W - 78.2	W - 78.2	W - 78.2
	height of sash	H - 53	H - 53	H - 53	H - 53
E1102 	width of sash	W - 104	W - 104	W - 104	W - 104
	height of sash	H - 66	H - 66	H - 66	H - 66
four side sash with door threshold profile		E5364		E5364	

calculation of cutting length for two leaf door with bottom rail and threshold profile

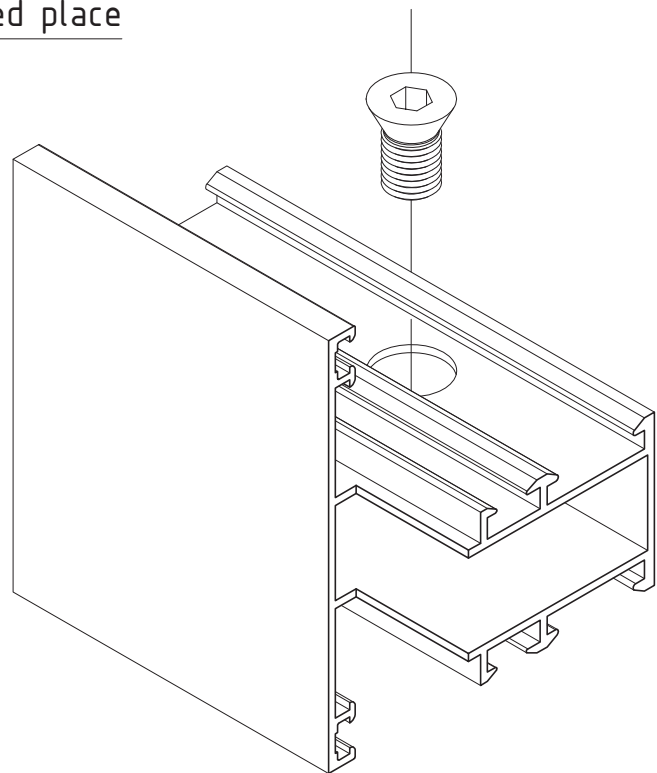
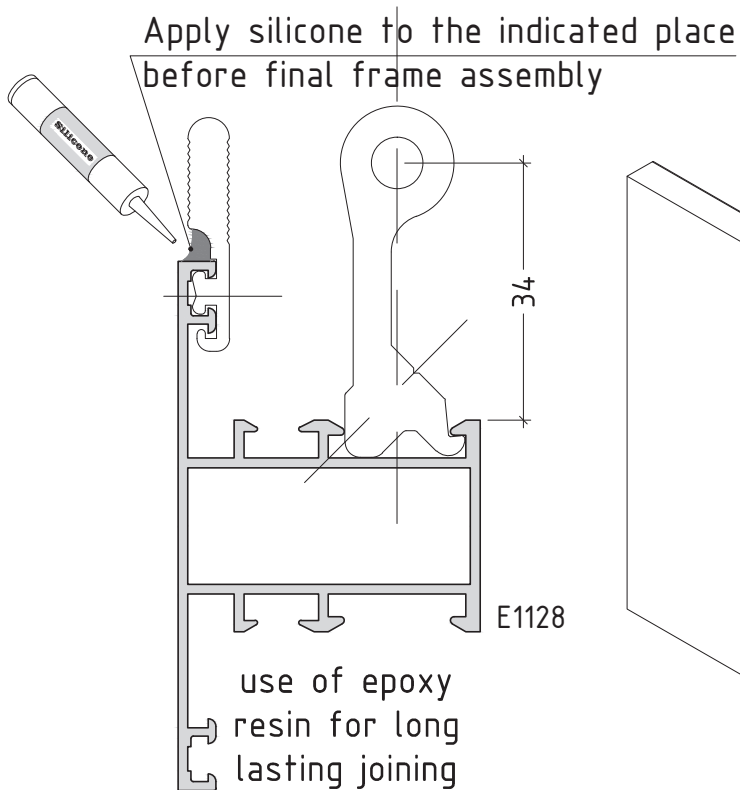
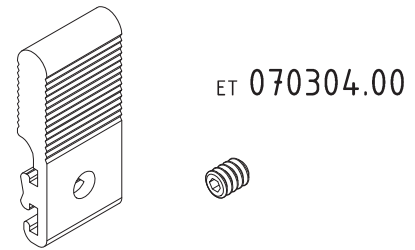
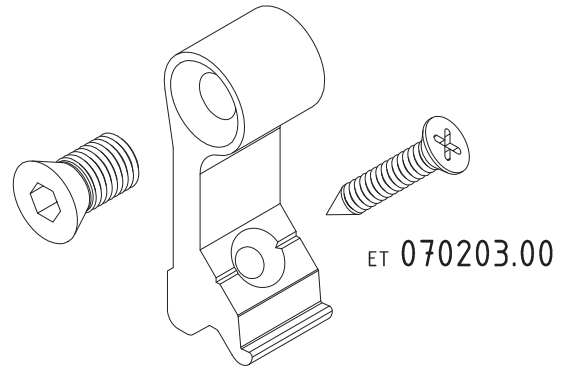
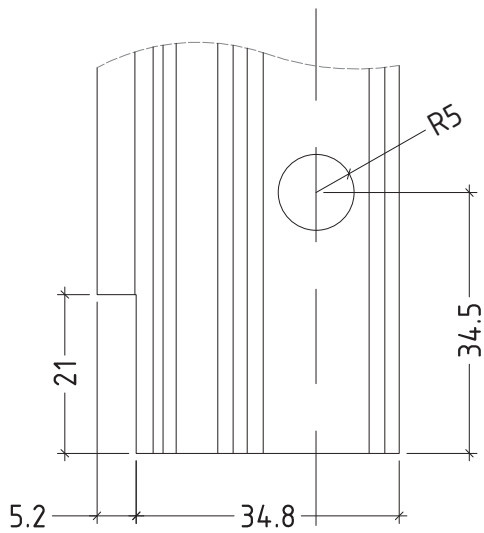
		sash profile selection	straight line		
frame profile selection		E1106 E1125 E1150 E1147 E1107 E1108		E1187 E1188	
E1100 E1101 E1121 E1132 E1155 E1120		width of sash	$\frac{W - 59}{2}$	$\frac{W - 59}{2}$	
		height of sash	H - 41	H - 42.5	
		height of secondary sash profile	H - 76	H - 71.2	
E1140		width of sash	$\frac{W - 83.2}{2}$	$\frac{W - 83.2}{2}$	
		height of sash	H - 53.6	H - 54.6	
		height of secondary sash profile	H - 88	H - 83.2	
E1102		width of sash	$\frac{W - 109}{2}$	$\frac{W - 109}{2}$	
		height of sash	H - 66.5	H - 67.5	
		height of secondary sash profile	H - 101	H - 96.2	
three side sash with door bottom rail		E1105 door bottom rail 	E1185 door bottom rail for straight line 	E5364 	E1189 



# MACHINING

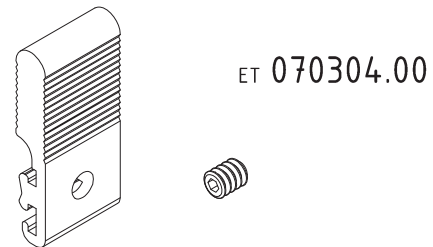
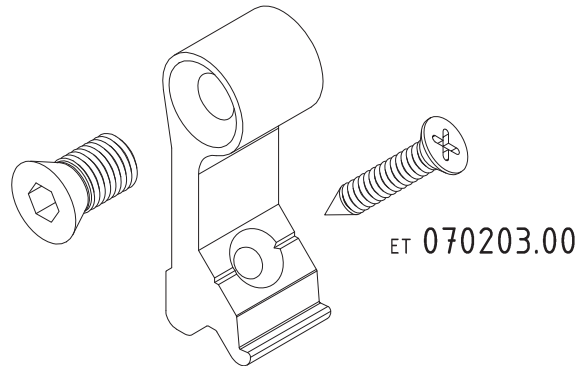
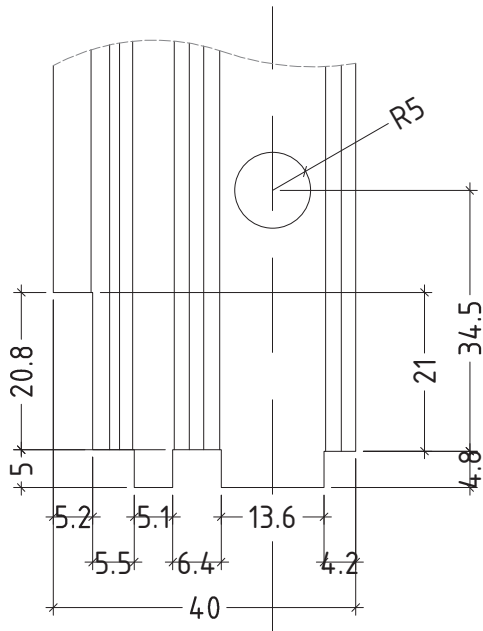


machining to use T-bracket - T-bracket for frames, sashes, T-profile, kickplate

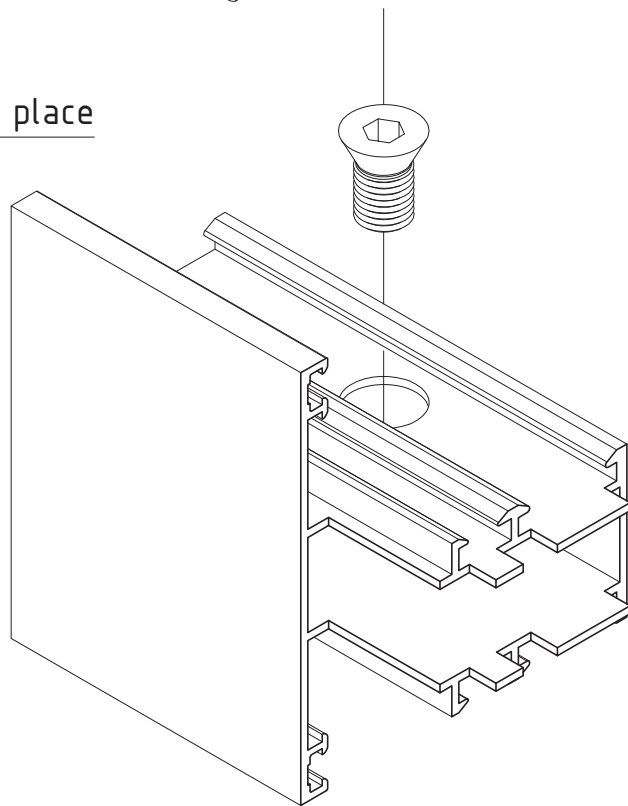
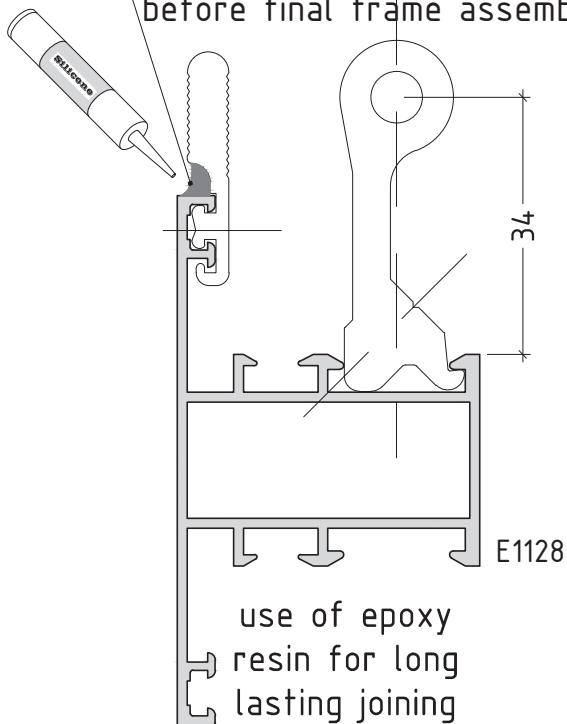


scale : 1:1

machining to use T-bracket - T-bracket for frames, sashes, T-profile, kickplate

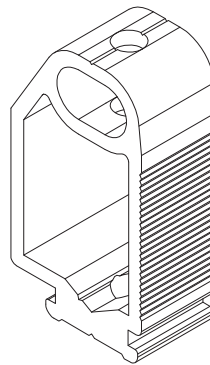
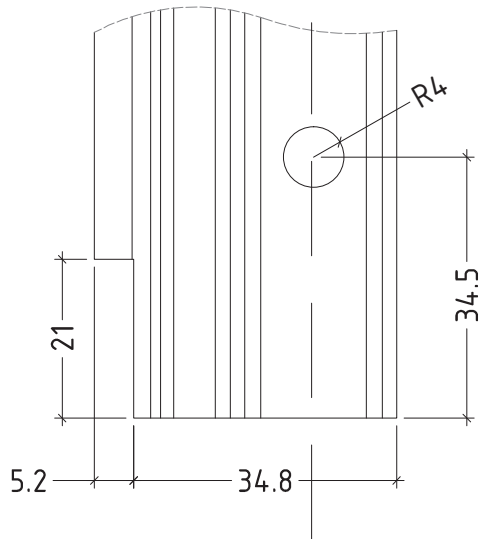


Apply silicone to the indicated place before final frame assembly

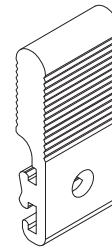


scale : 1:1

machining to use T-bracket - T-bracket for frames, sashes, T-profile, kickplate



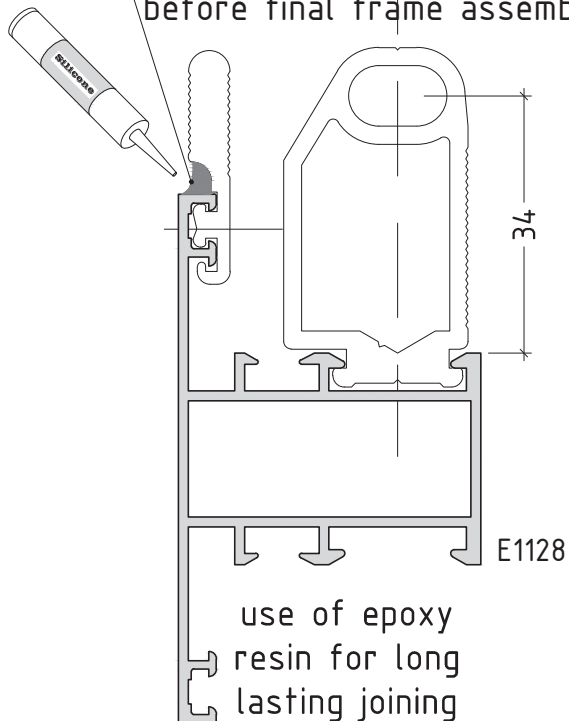
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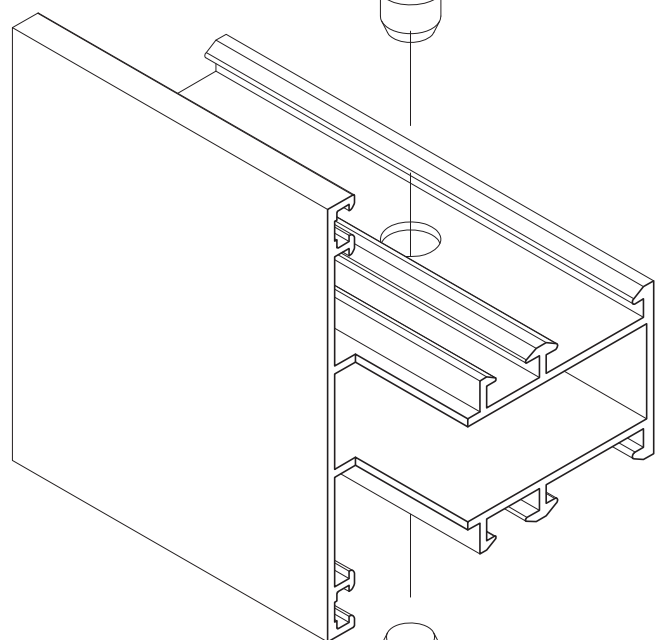
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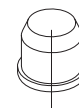
Apply silicone to the indicated place before final frame assembly



ET 143901.00

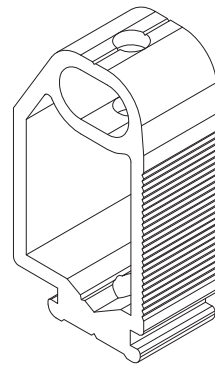
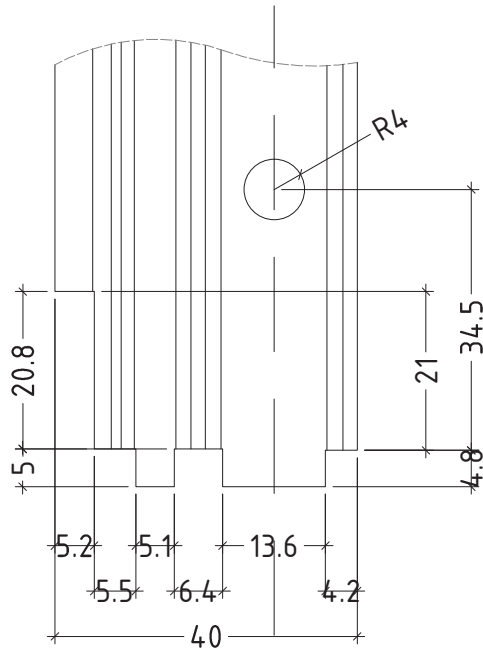


ET 143901.00

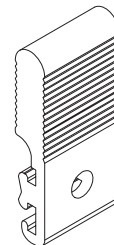


scale : 1:1

machining to use T-bracket - T-bracket for frames, sashes, T-profile, kickplate



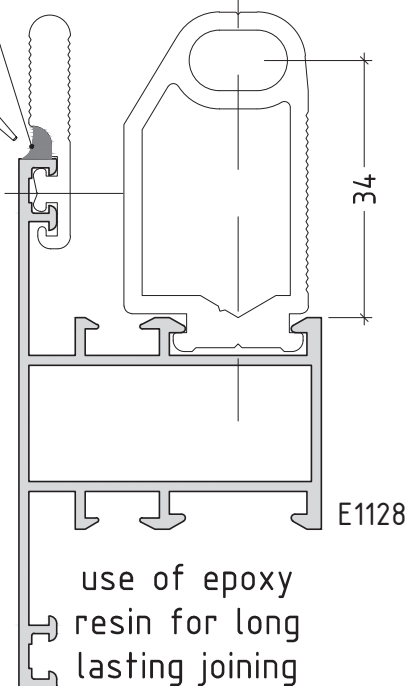
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ET 070304.00



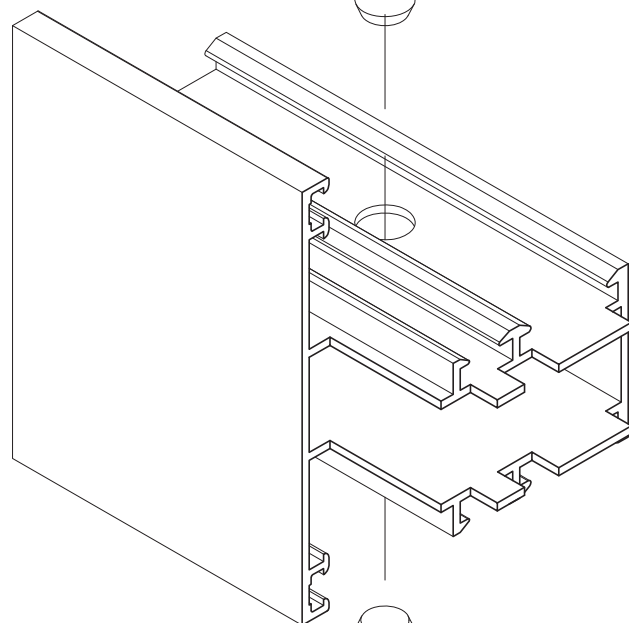
Apply silicone to the indicated place before final frame assembly



E1128

use of epoxy resin for long lasting joining

ET 143901.00

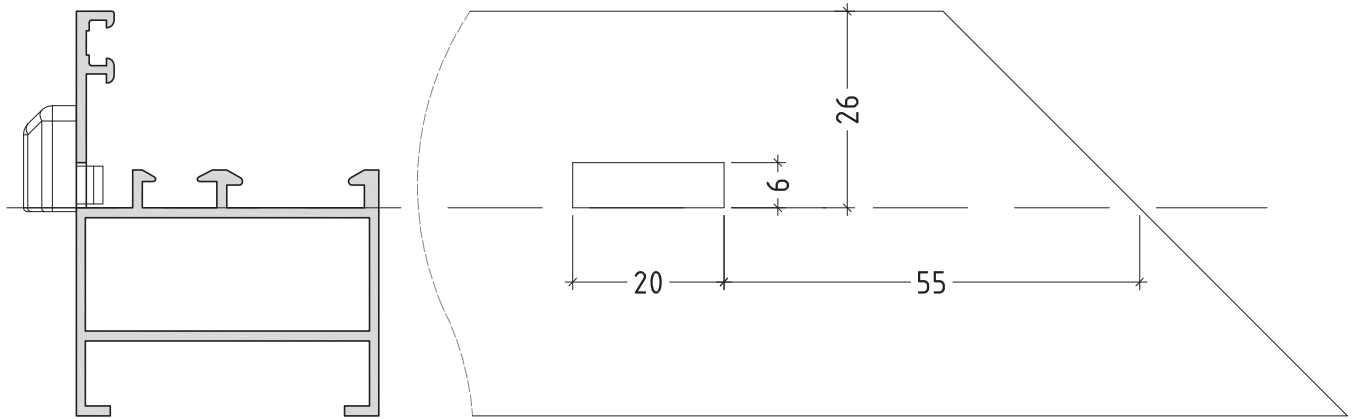


ET 143901.00

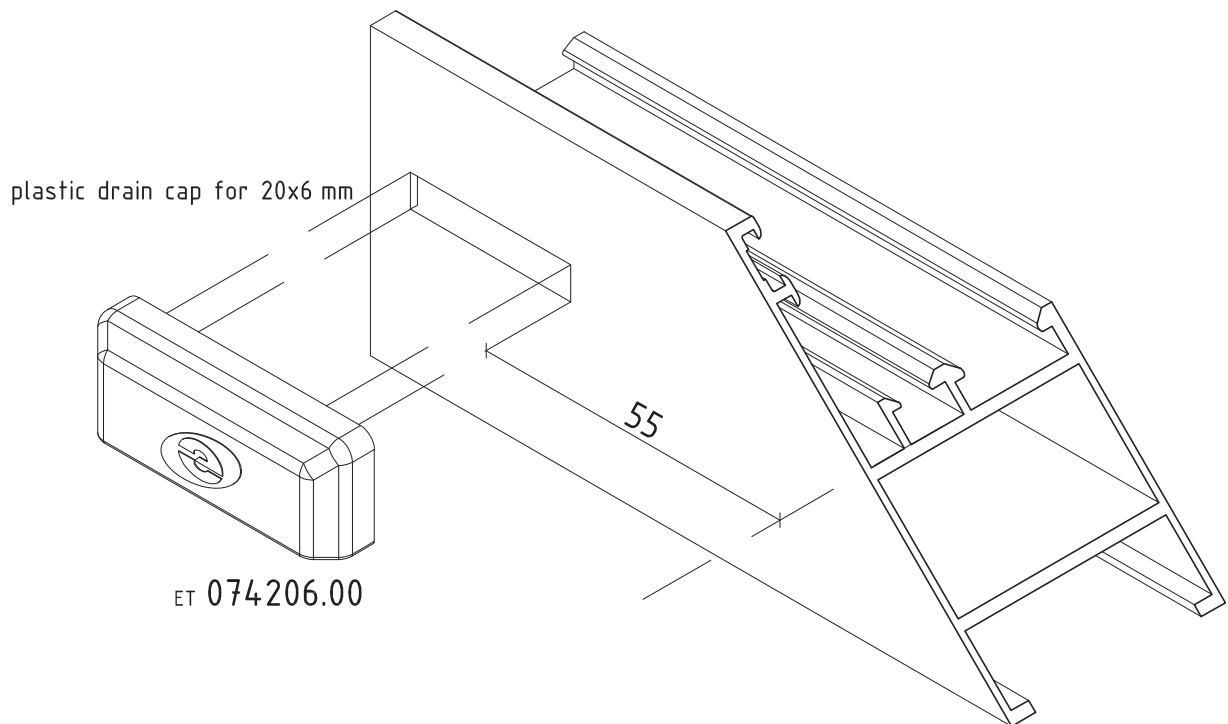


scale : 1:1

machining for drainage and plastic cap - ET 074206.00

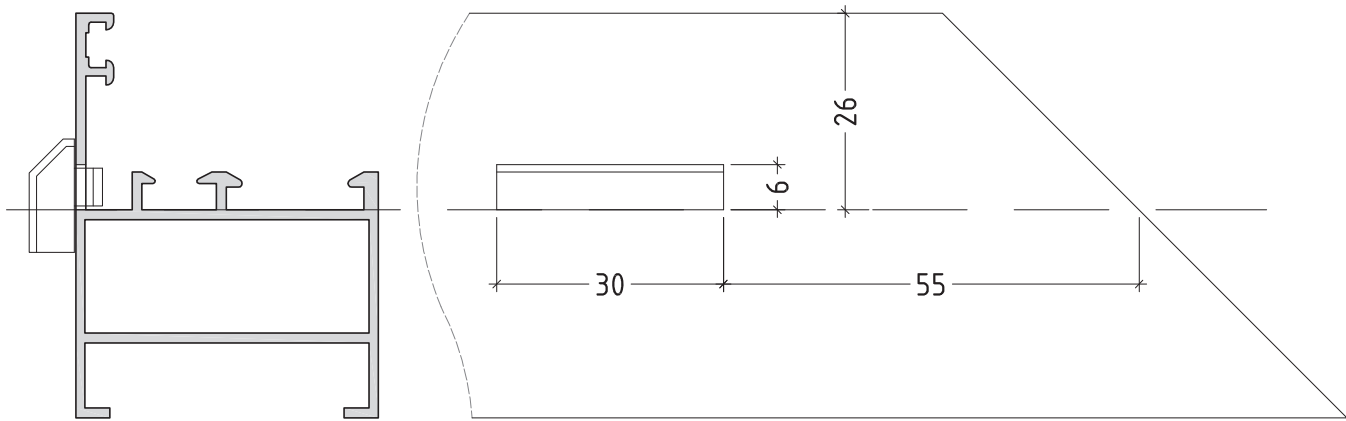


E1100

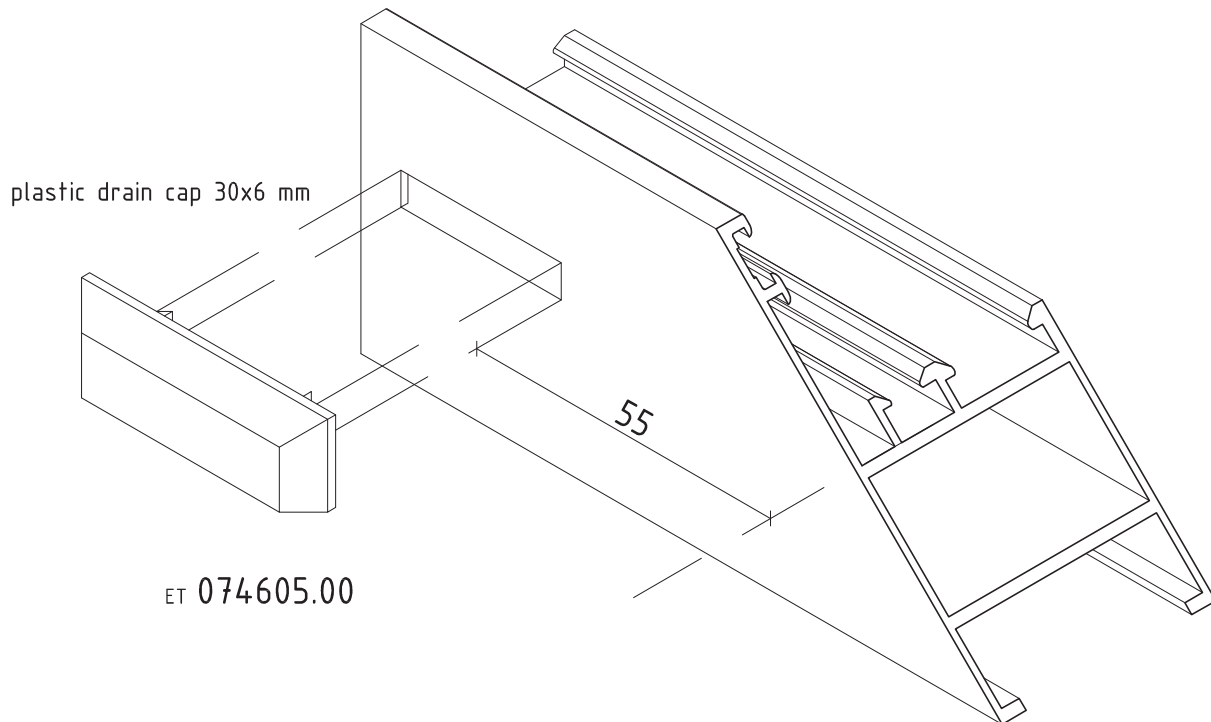


scale : 1:1

machining for drainage and plastic cap - ET 074605.00



E1100



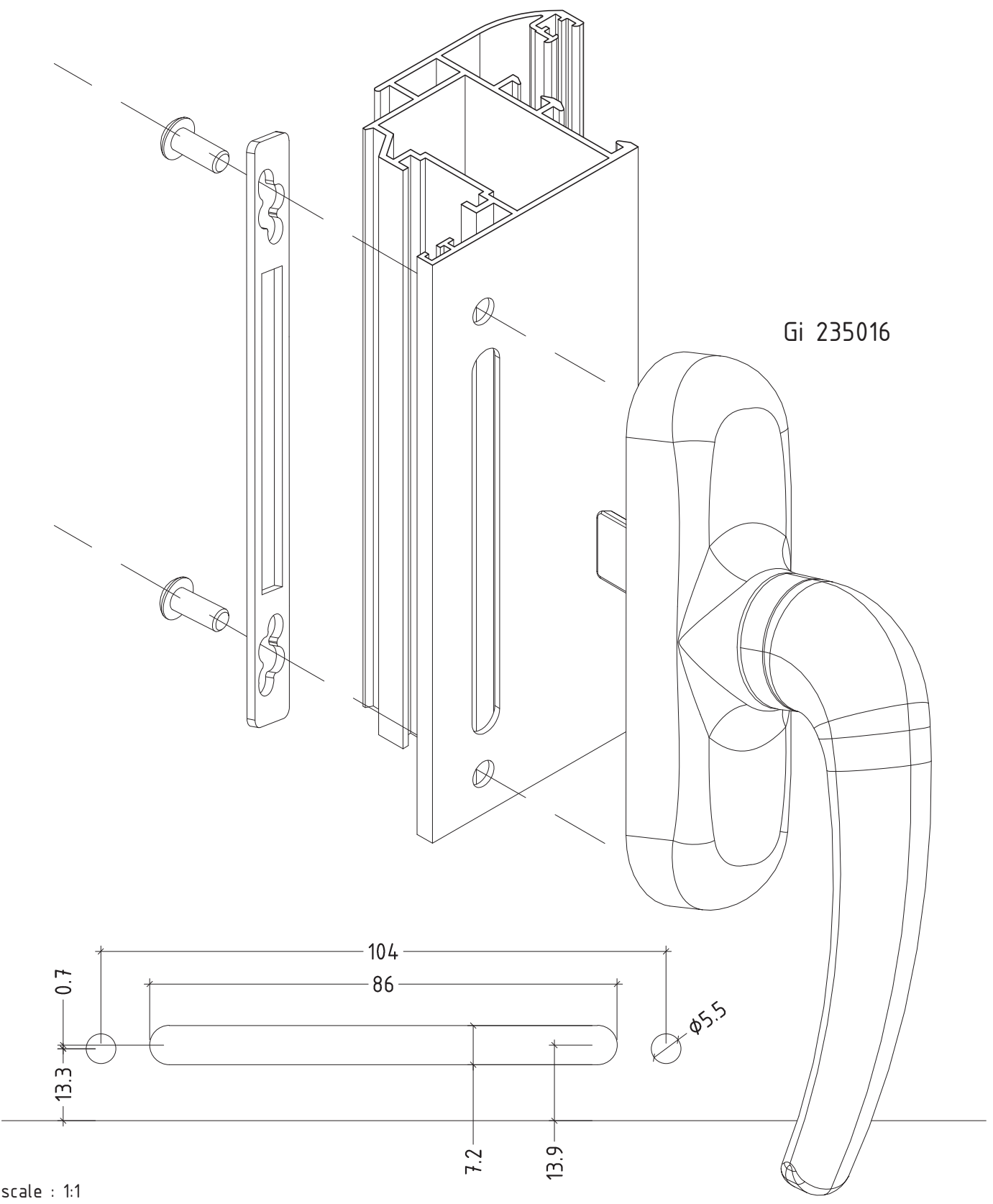
ET 074605.00

scale : 1:1

D1000-05.1

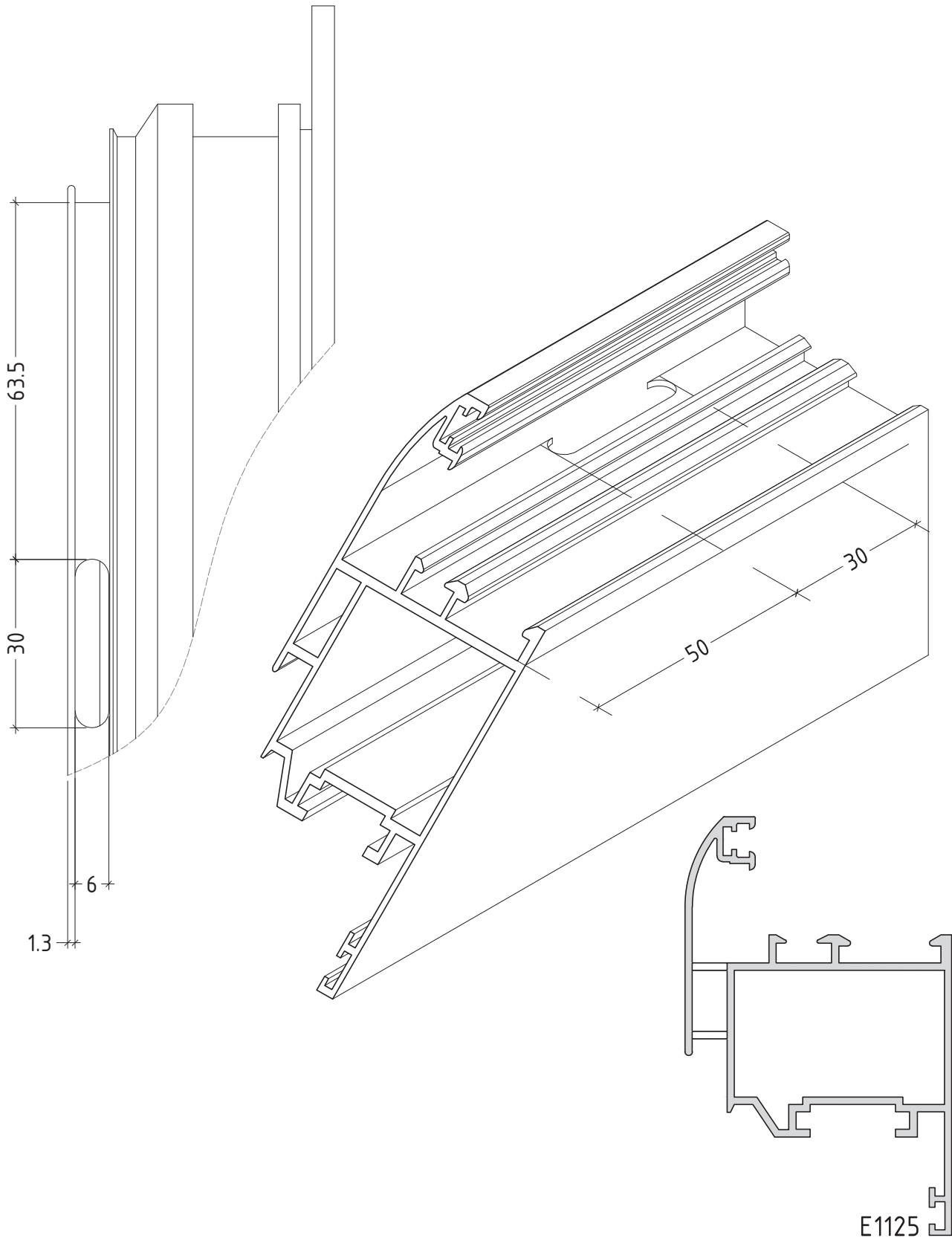


machining for window handle



D1000-06

machining for drainage on sash

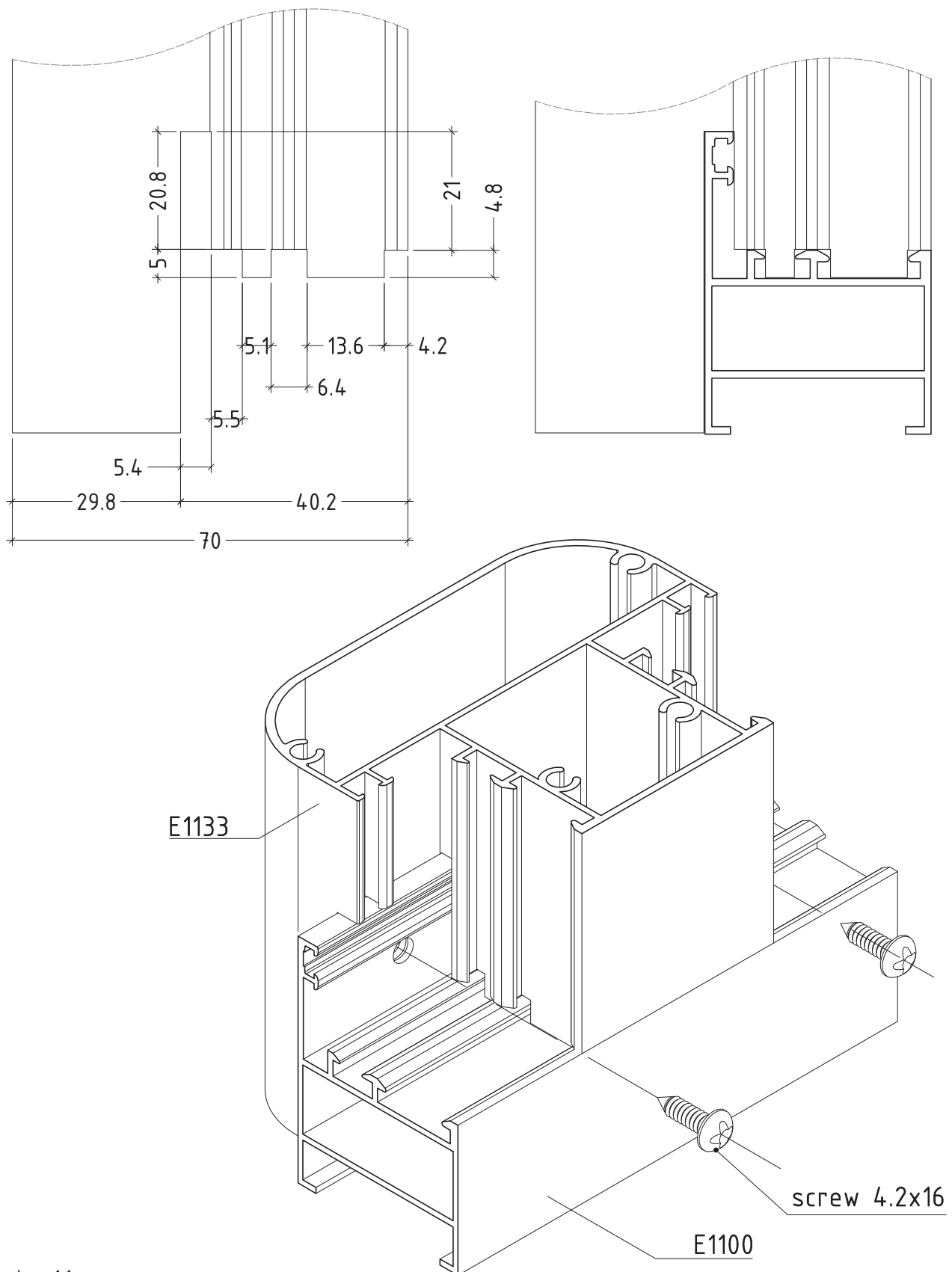


scale : 1:1

E1125

D1000-07

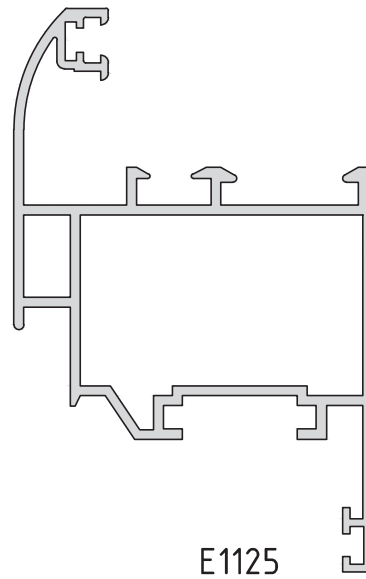
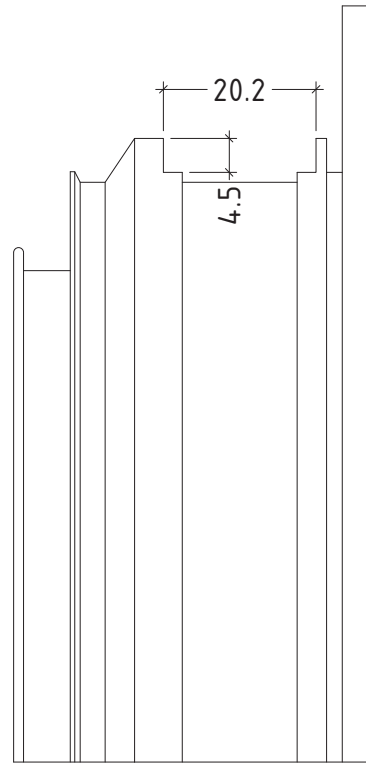
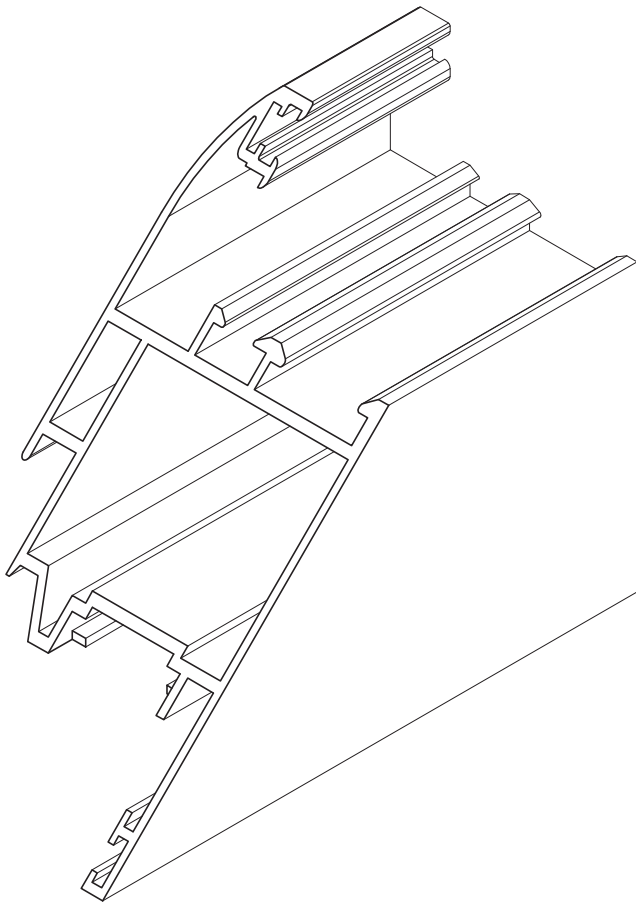
machining to use E1133 profile



scale : 1:1

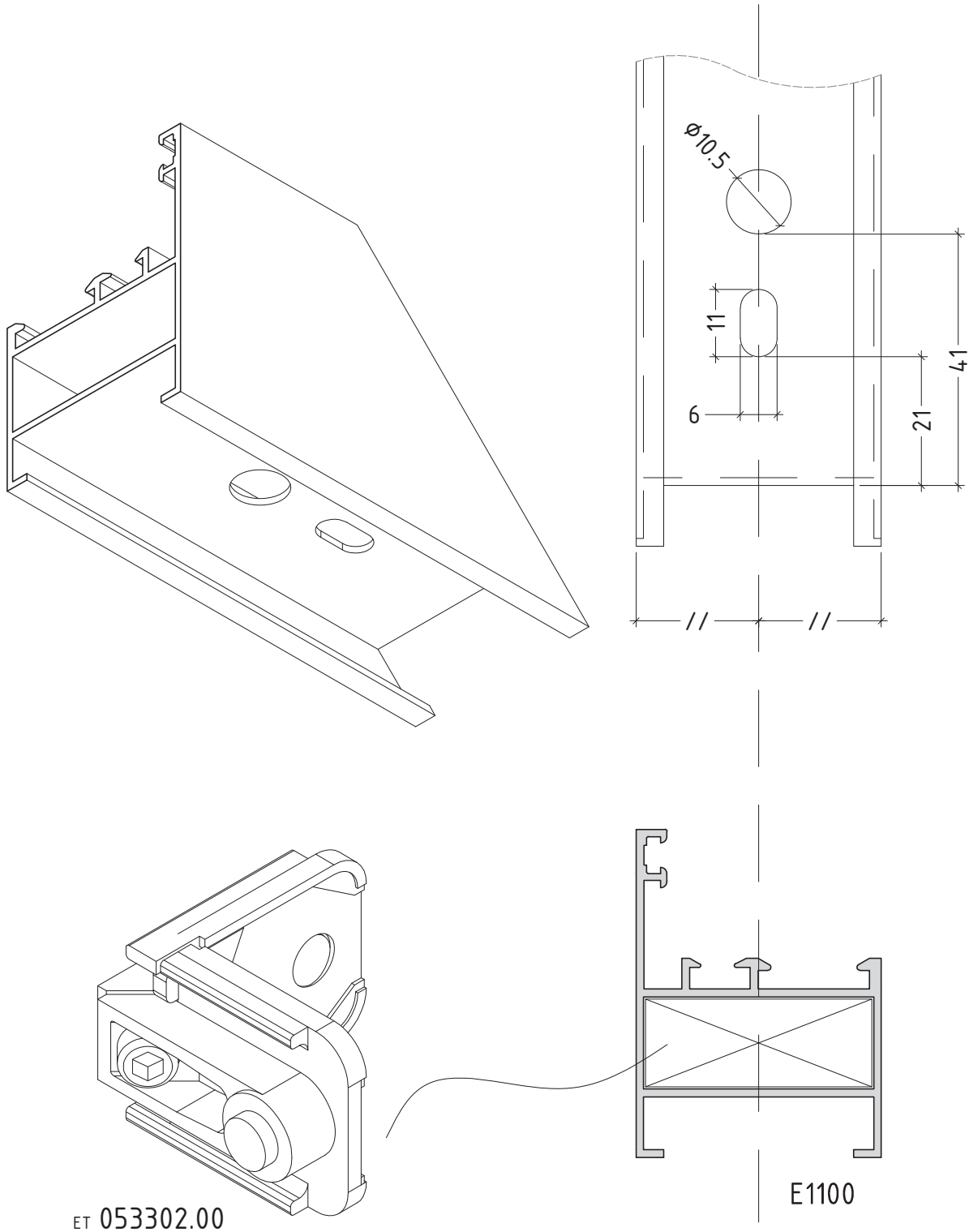
D1000-08

machining for connecting rod



scale : 1:1

die cust al. joint corner bracket

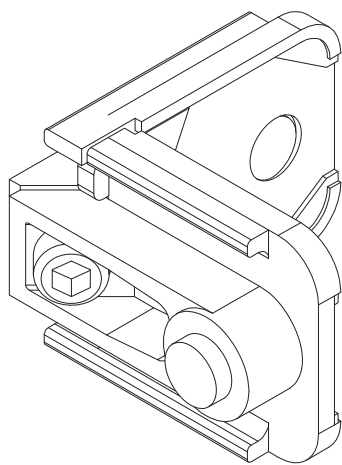
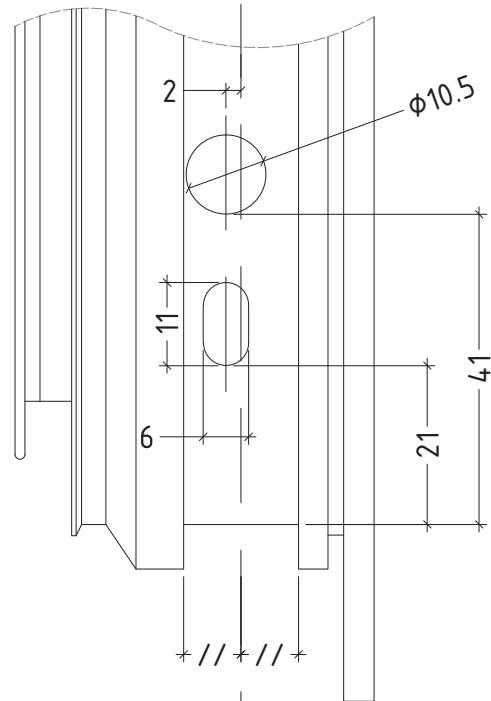
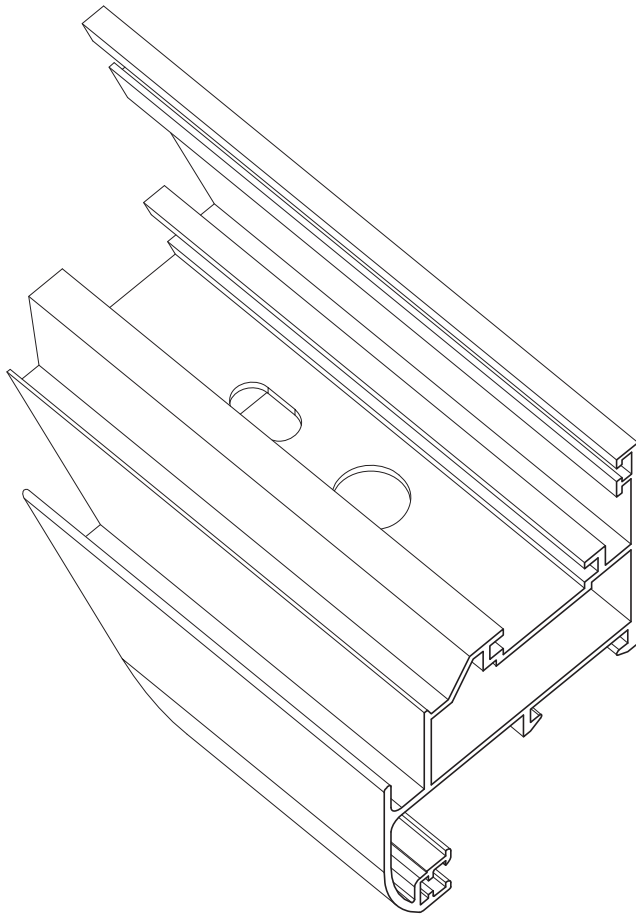


ET 053302.00

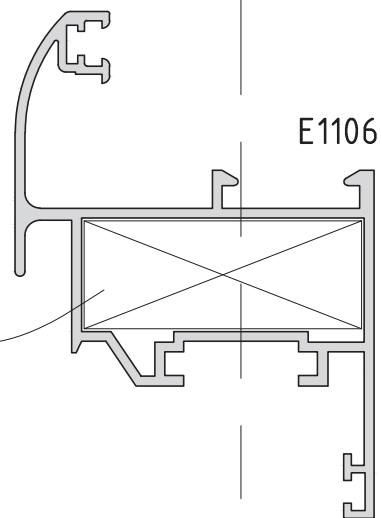
E1100

scale : 1:1

die cust al. joint corner bracket

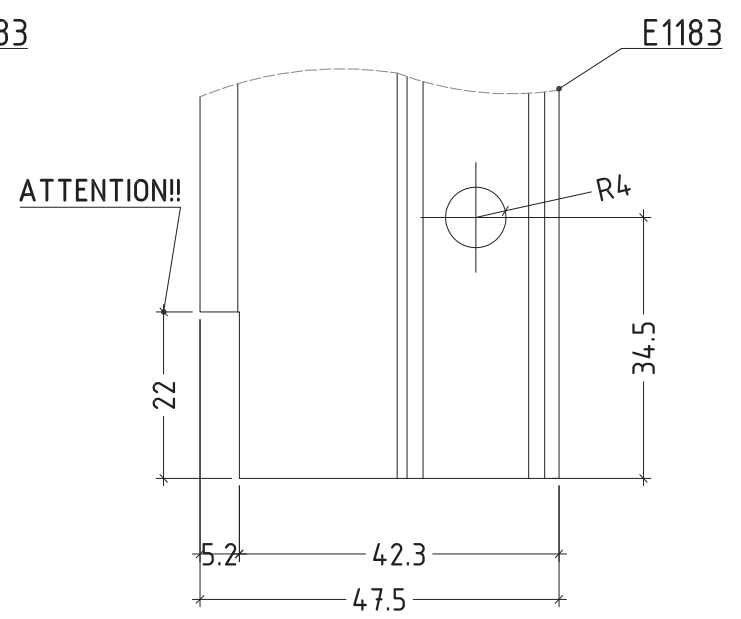
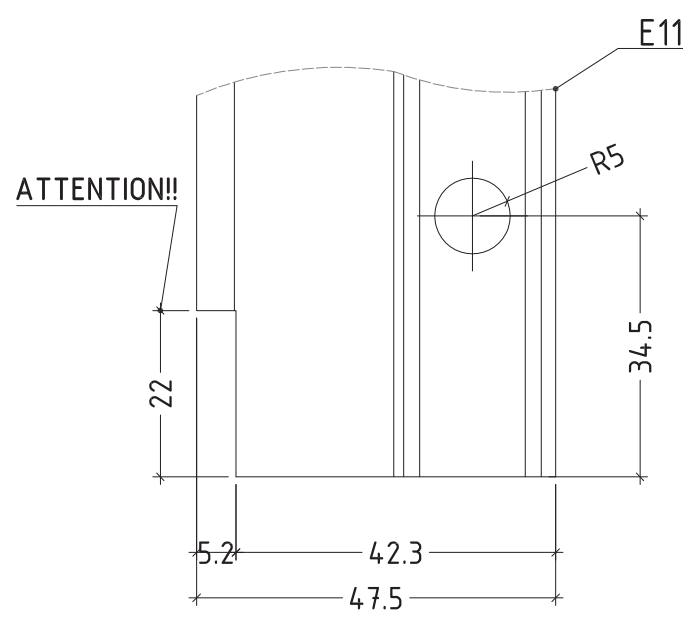
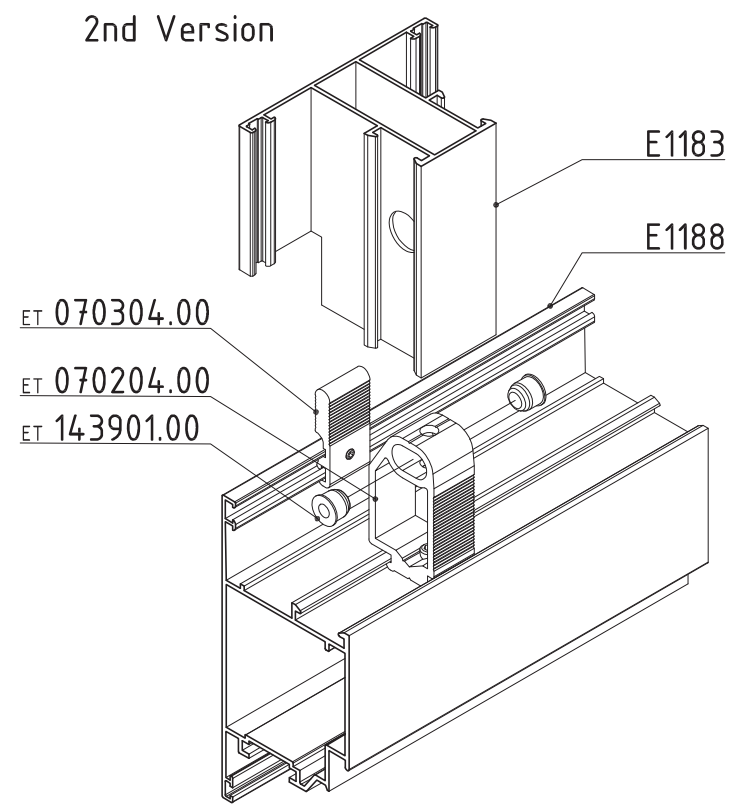
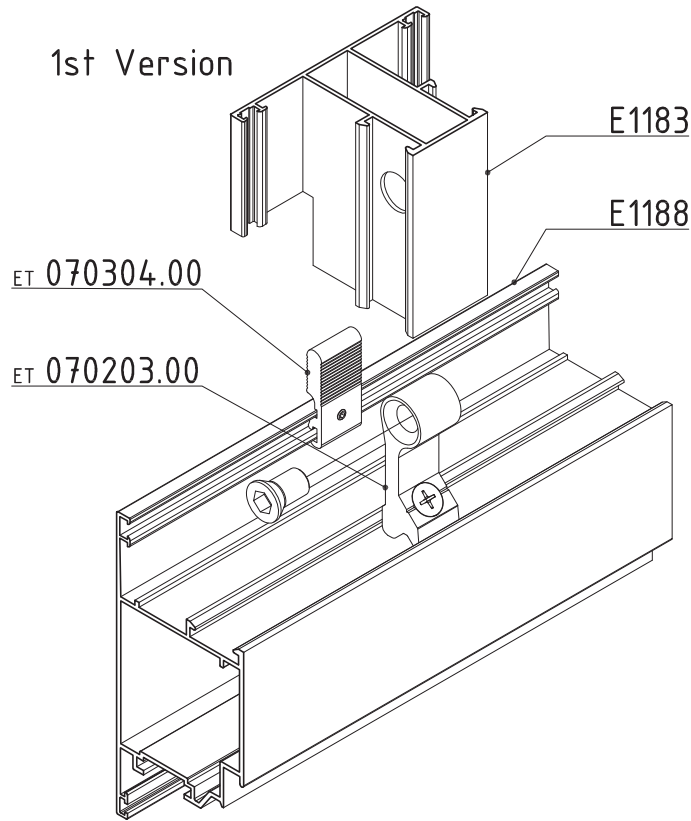


ET 053302.00



scale : 1:1

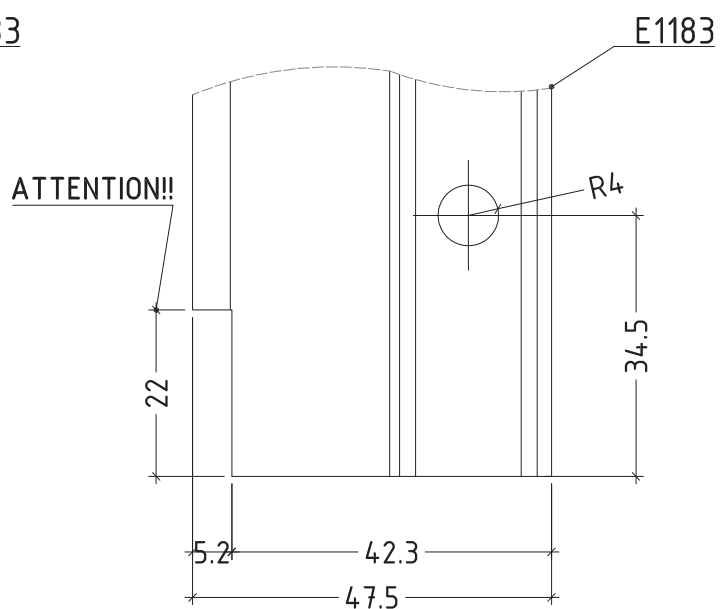
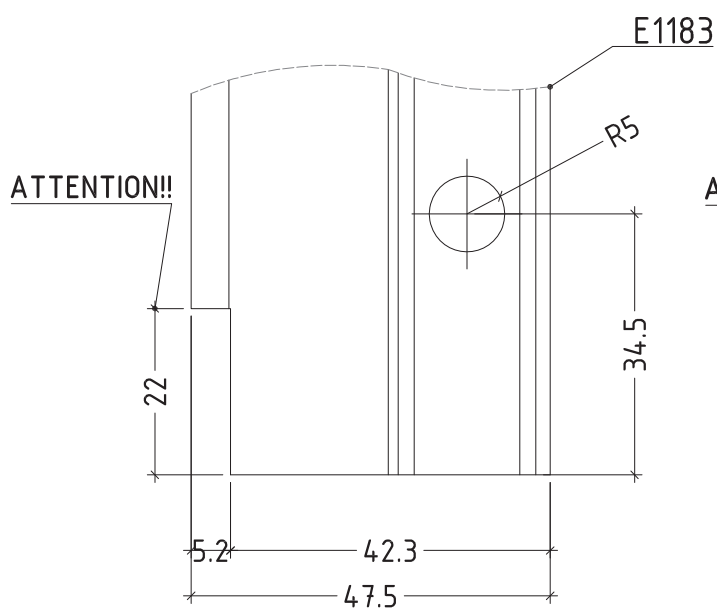
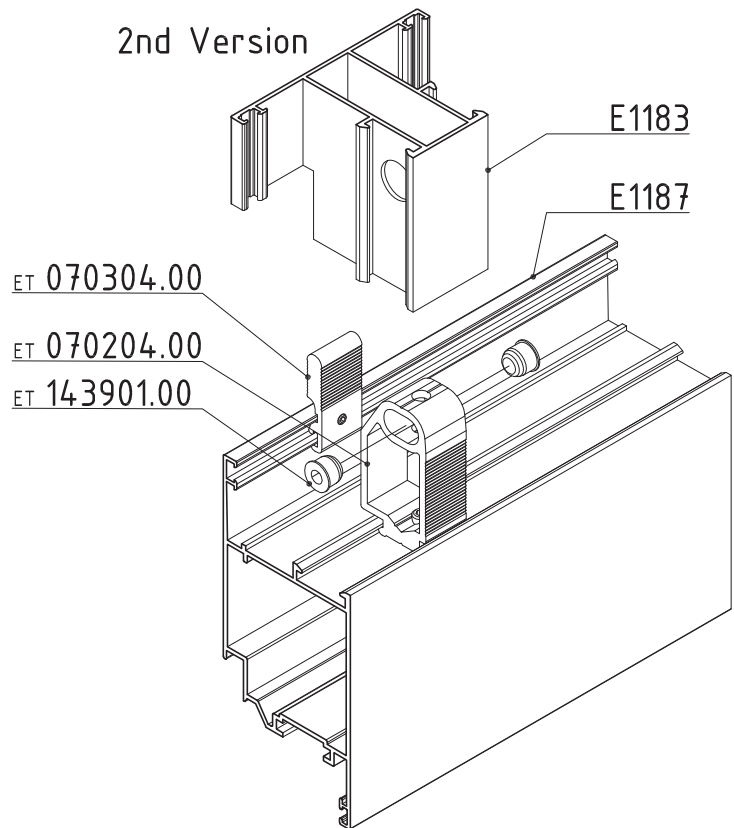
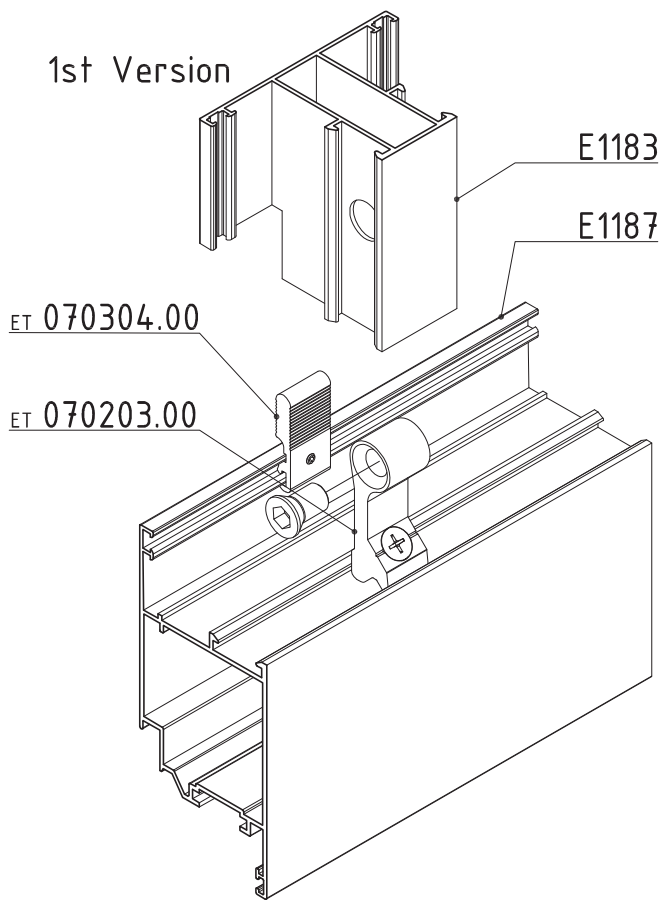
Fixing scheme for T-profile E1183  
 Scheme for fixing of T-profile E1183 to sash E1188



T-profile processing

scale : 1:1

Scheme for fixing of T-profile E1183 to Z sash E1188 with brackets



T-profile processing

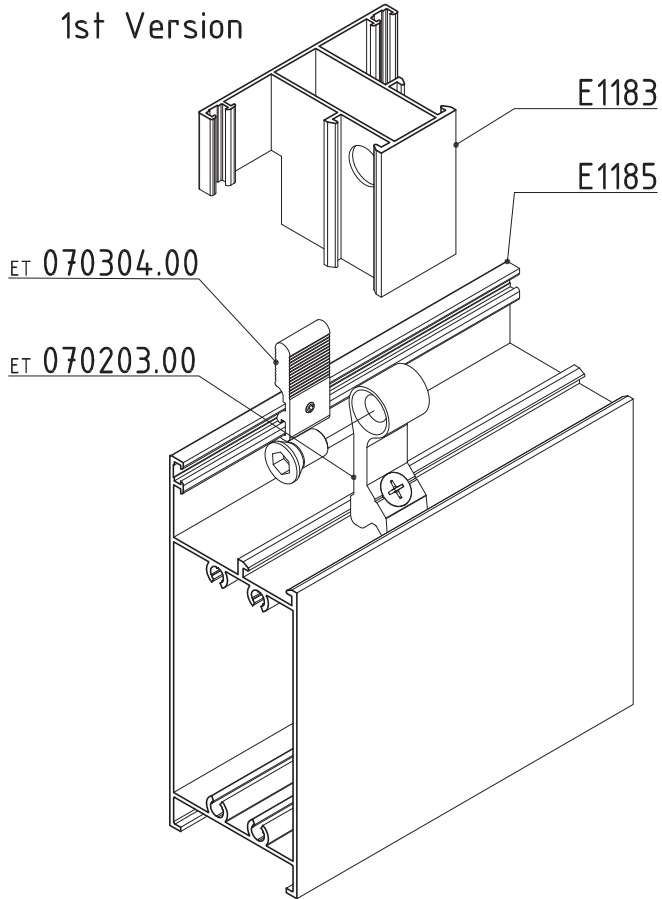
scale : 1:1

D1000-13

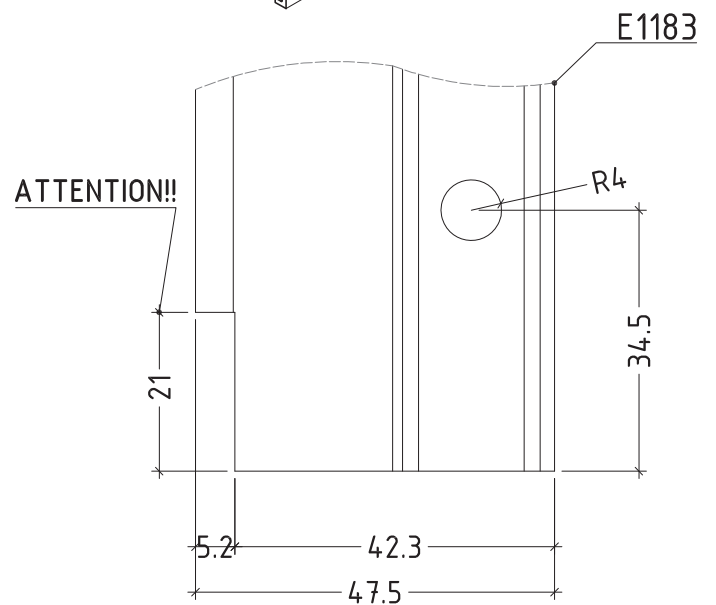
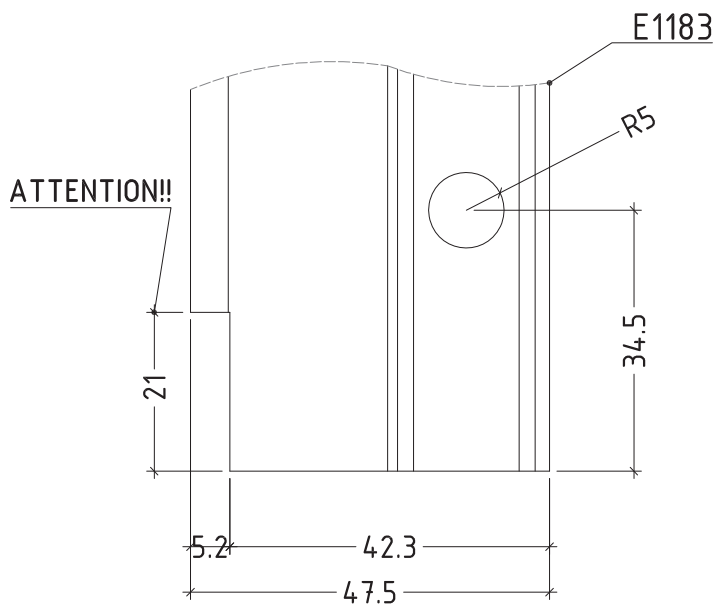
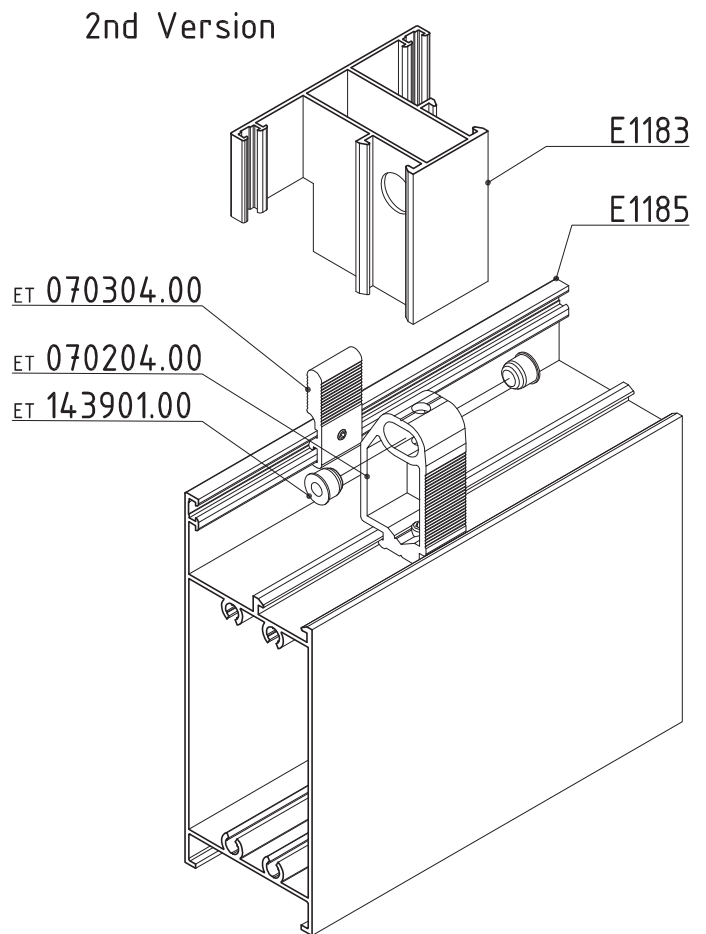


Scheme for fixing of T-profile E1183 to door bottom rail E1185

1st Version



2nd Version

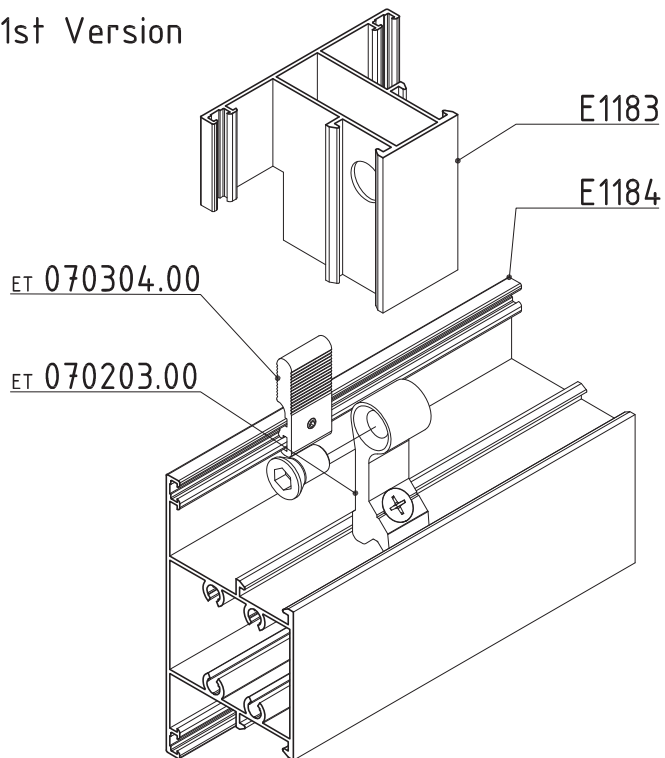


T-profile processing

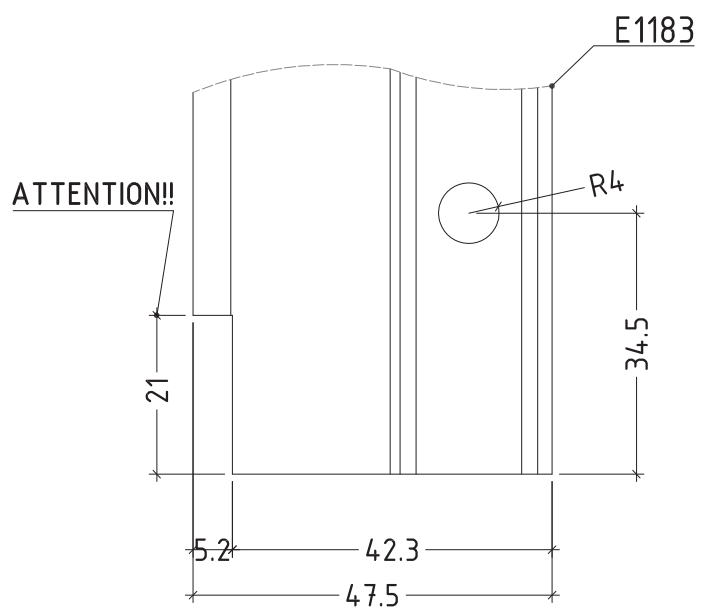
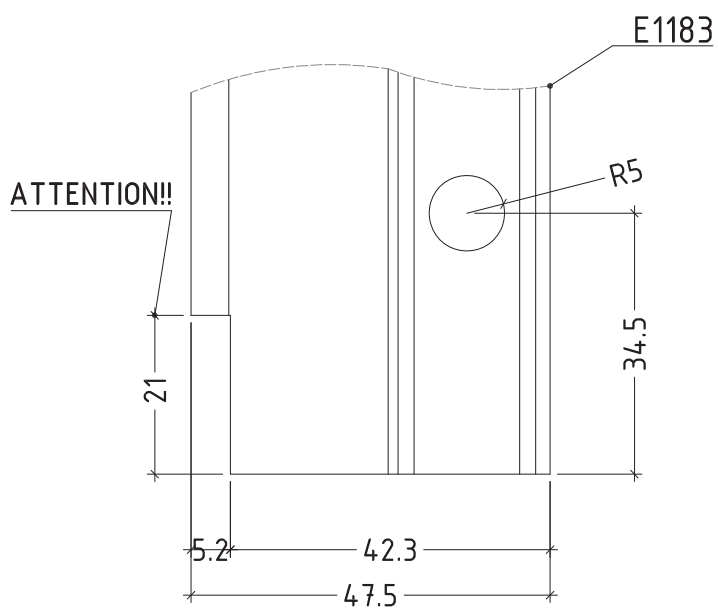
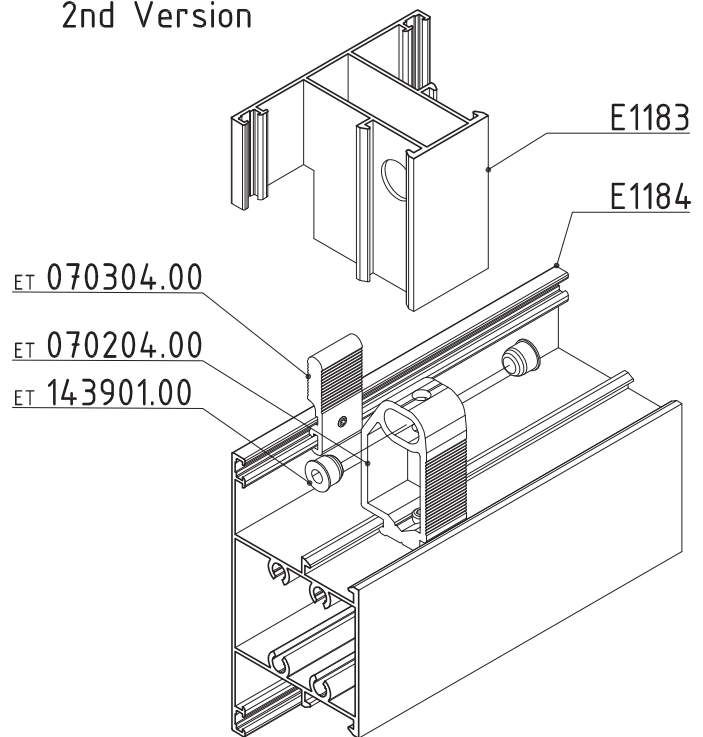
scale : 1:1

Scheme for fixing of T-profile E1183 to T-profile E1184

1st Version



2nd Version

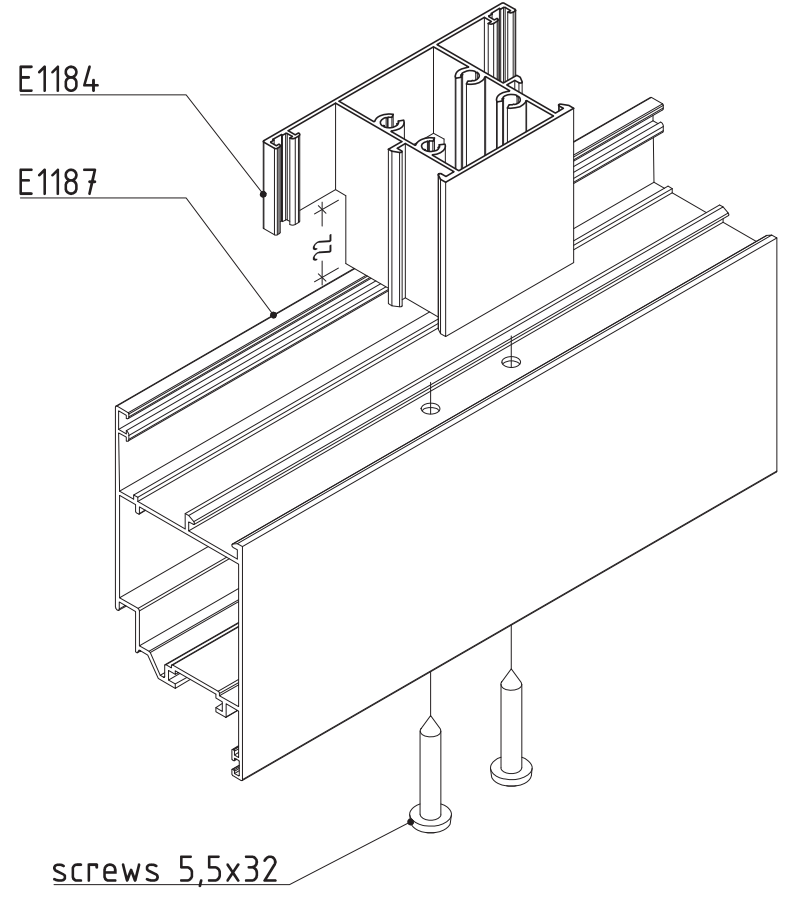
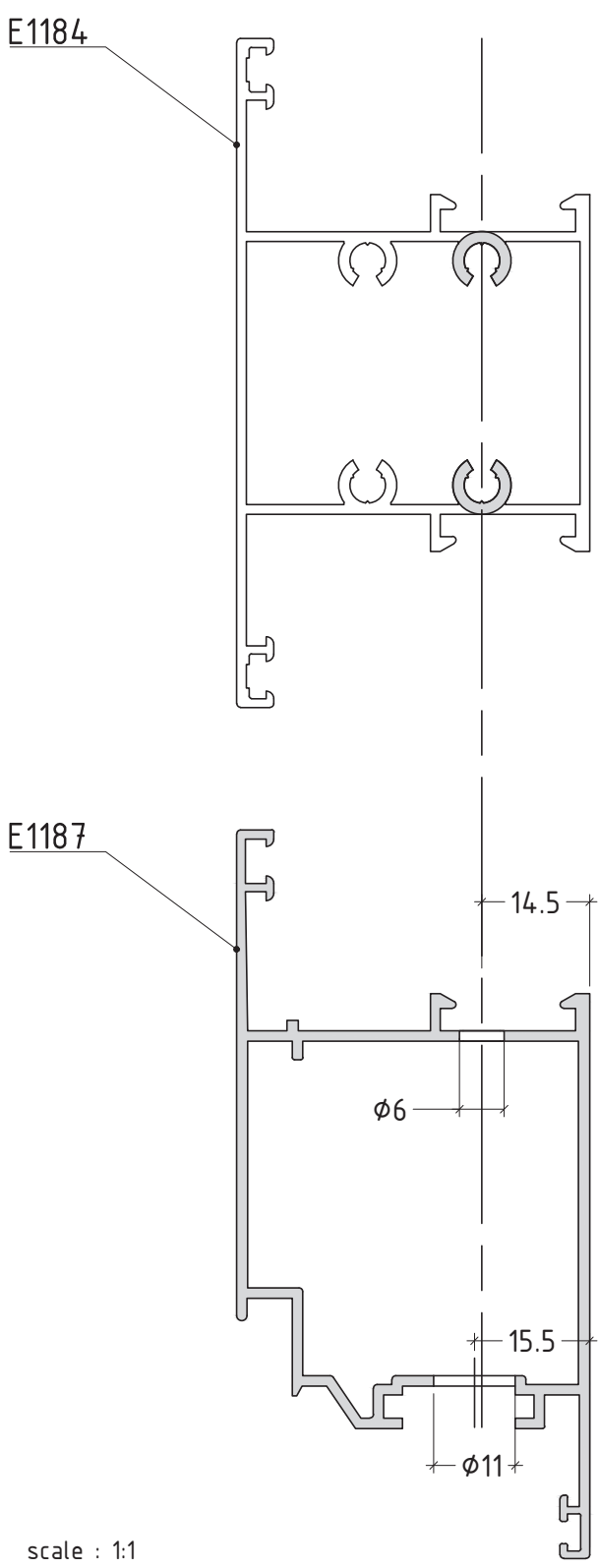


T-profile processing

scale : 1:1

D1000-15

Fixing scheme for T-profile E1184  
Scheme for fixing of T-profile E1184 to sash E1187



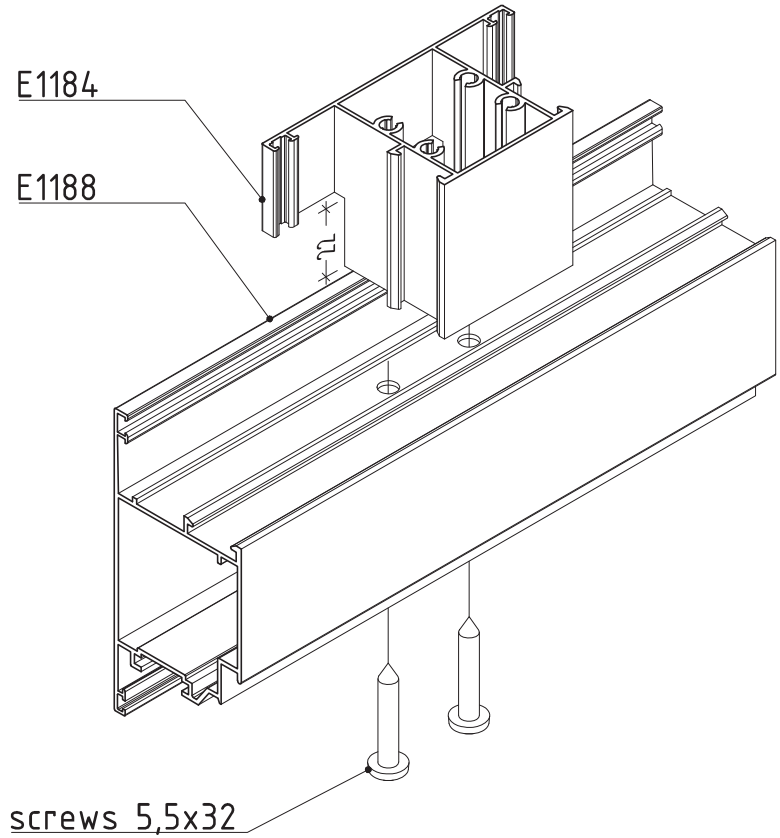
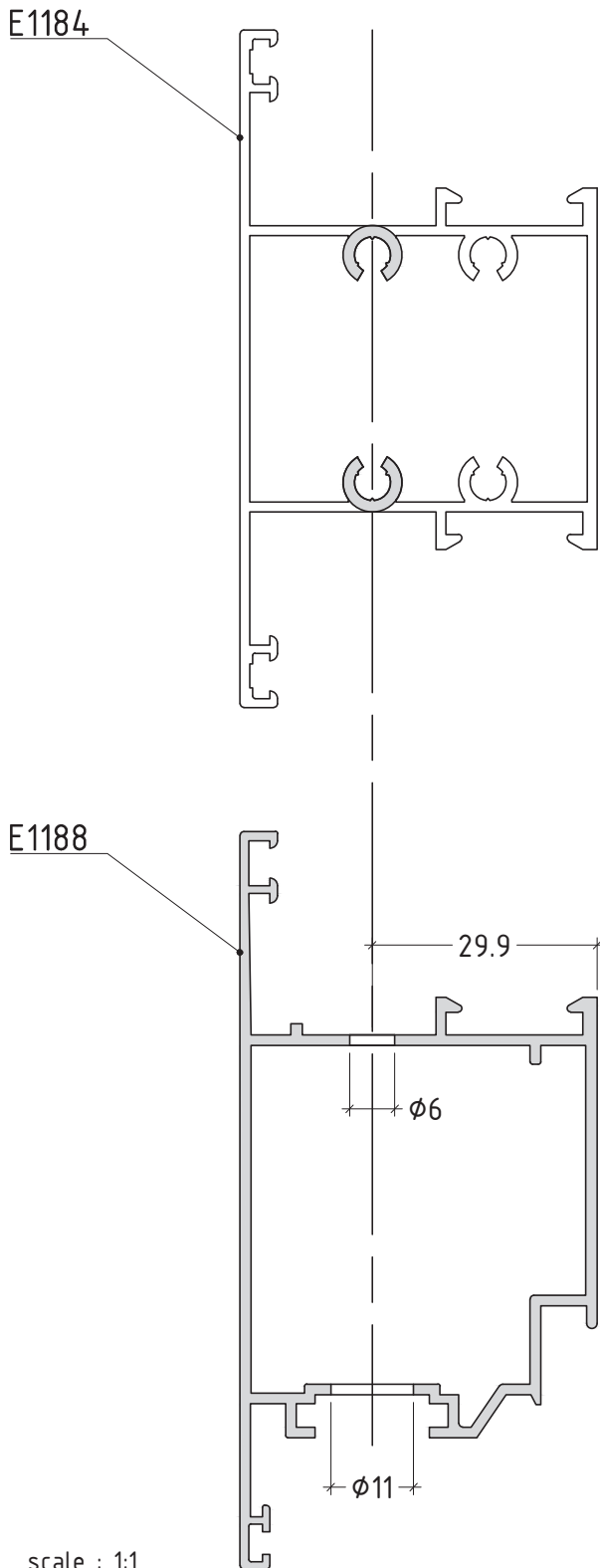
screws 5,5x32

Drilling of sash E1187

scale : 1:1

D1000-16

Fixing scheme for T-profile E1184  
Scheme for fixing of T-profile E1184 to sash E1188

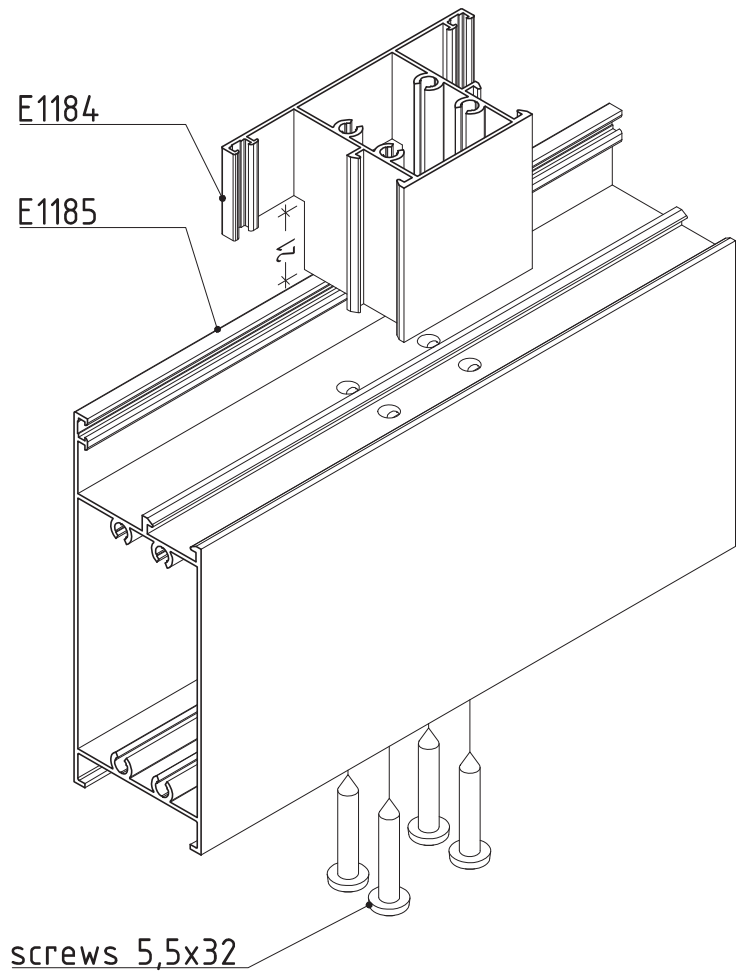
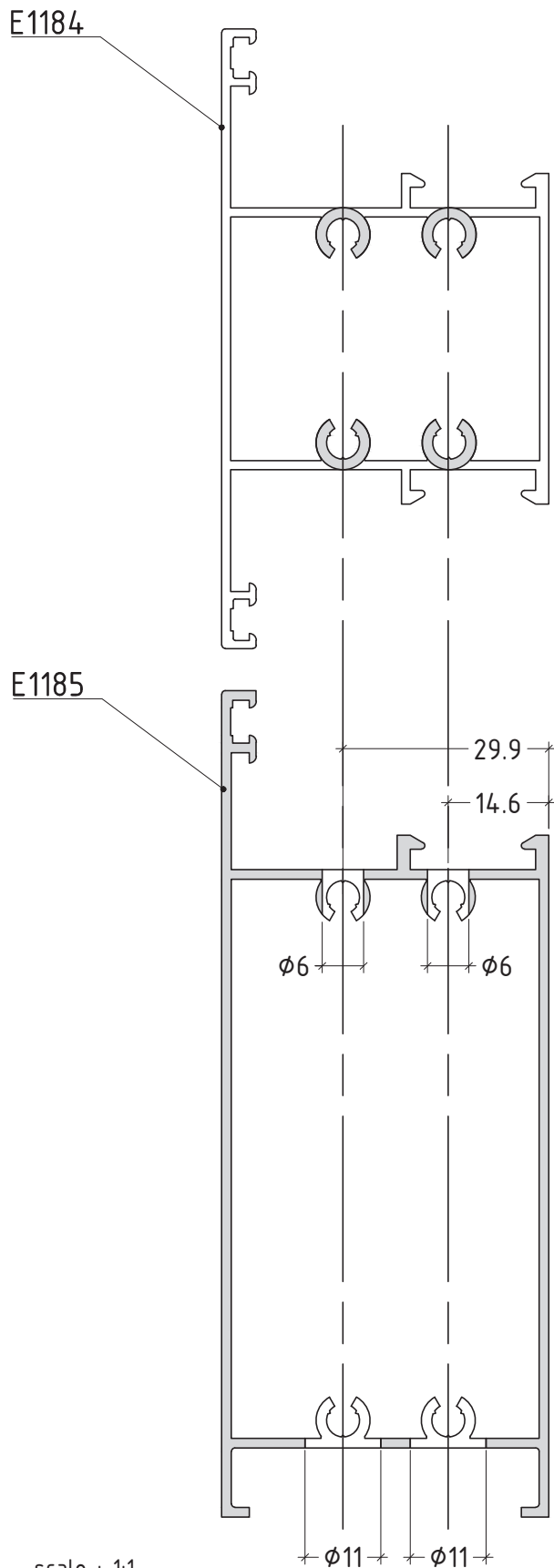


Drilling of sash E1188

scale : 1:1

D1000-17

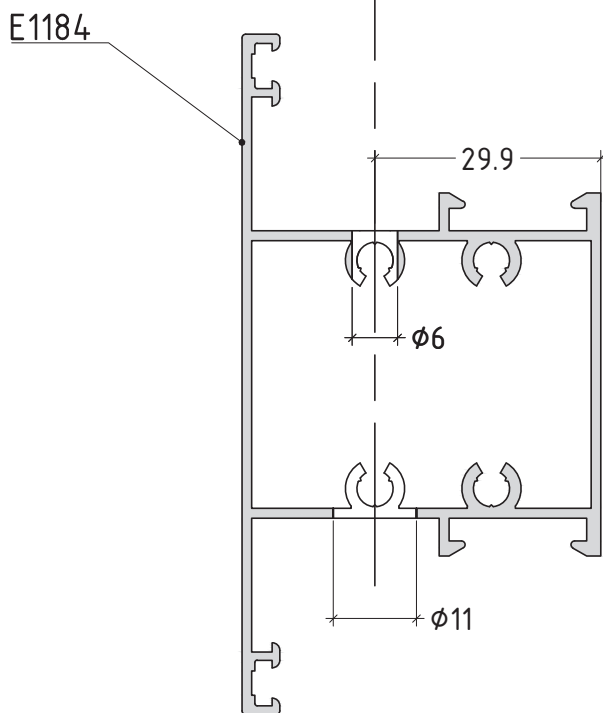
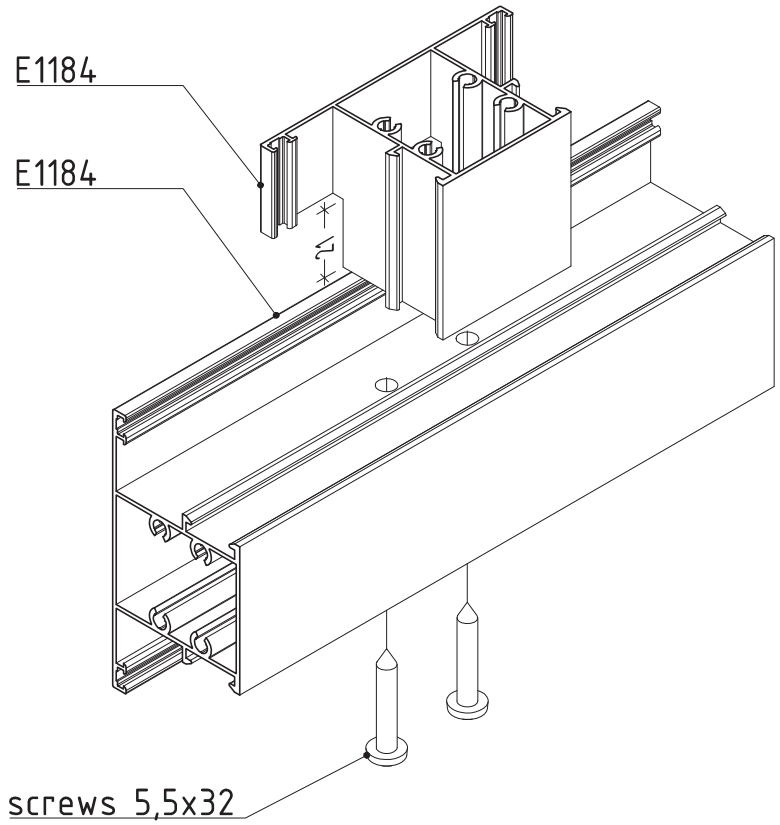
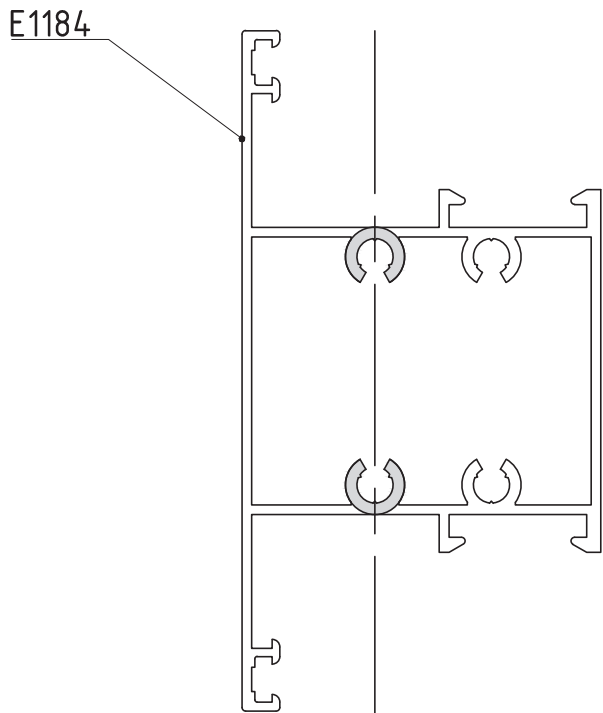
Hole scheme for fixing of T-profile E1184 to door bottom rail E1185



Drilling of door bottom rail E1185

scale : 1:1

Hole scheme for fixing of T-profile E1184 to T-profile E1184

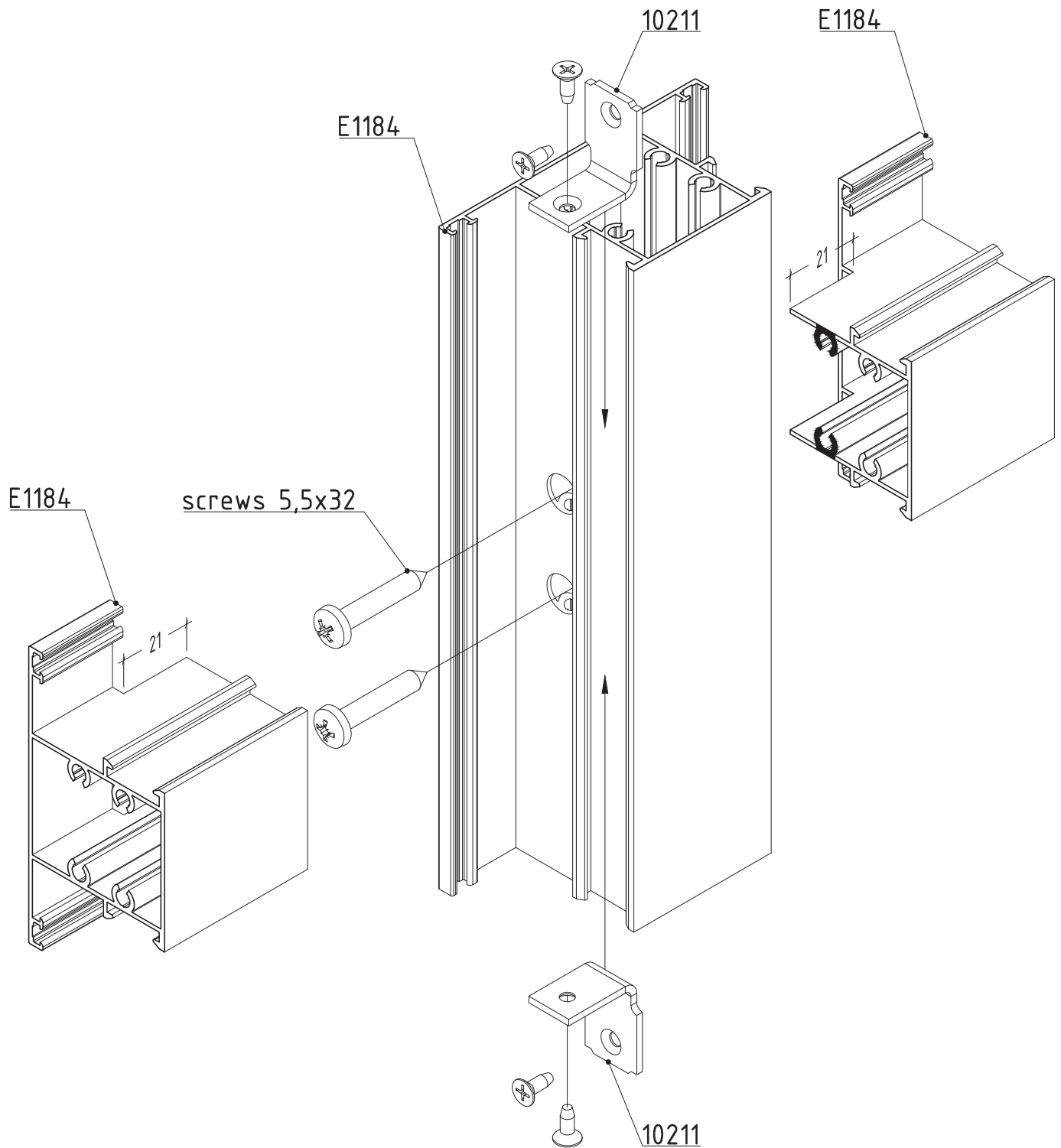


Drilling of T-profile E1184

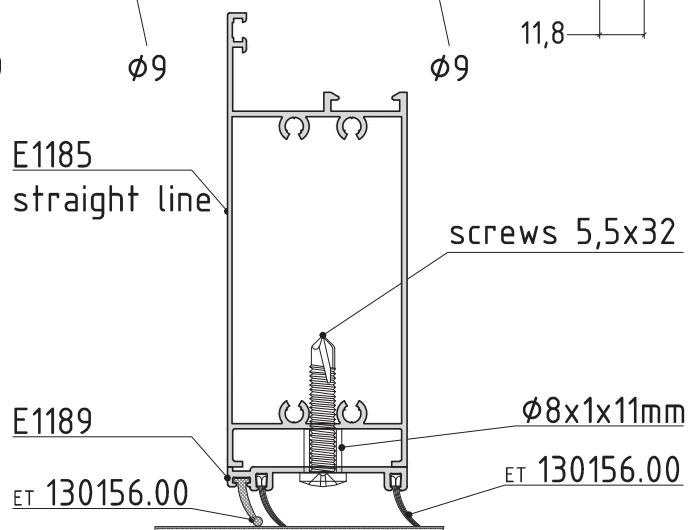
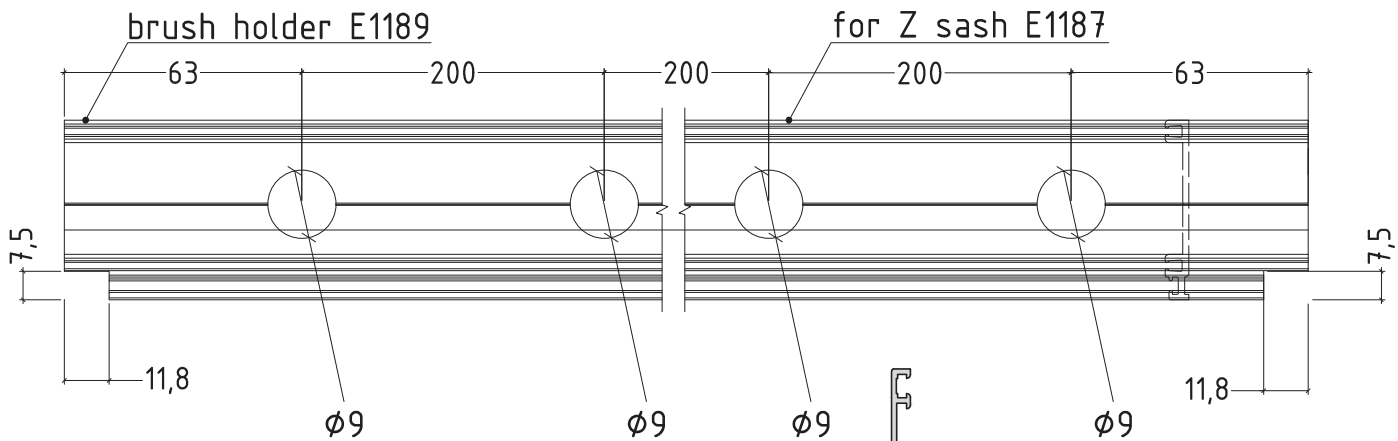
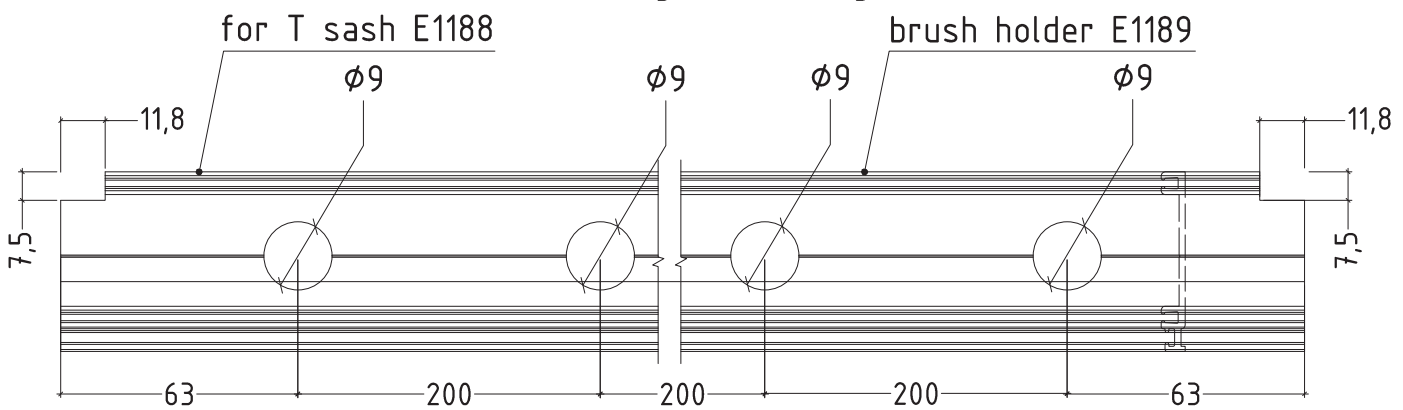
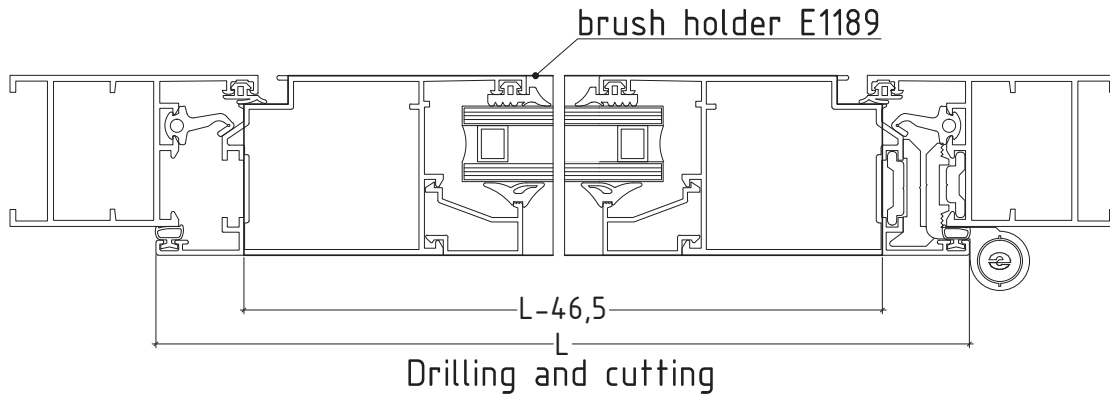
scale : 1:1

D1000-19

Fitting two horizontal profiles to a vertical profile

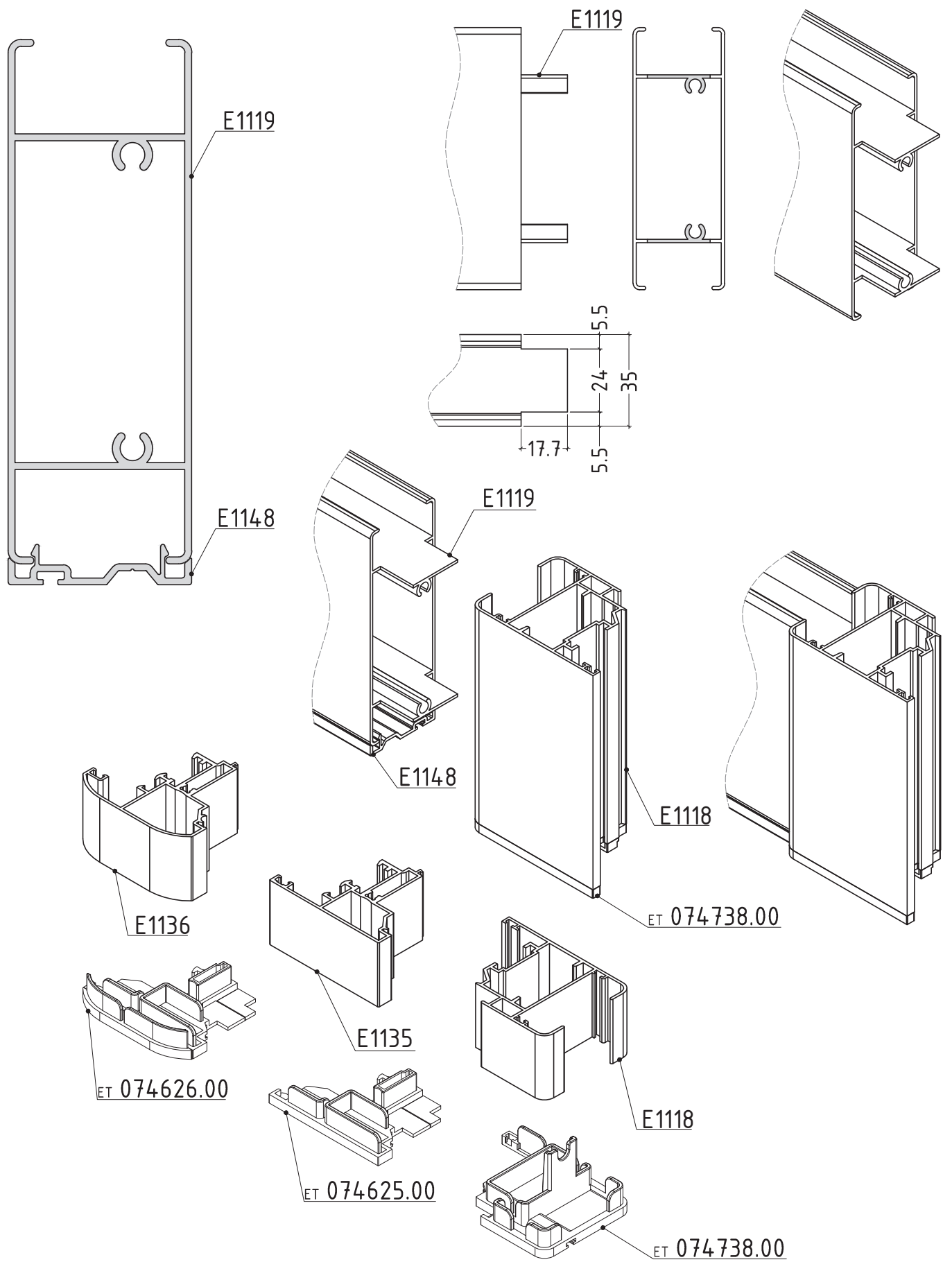


Sequence of mounting of brush holder E1189

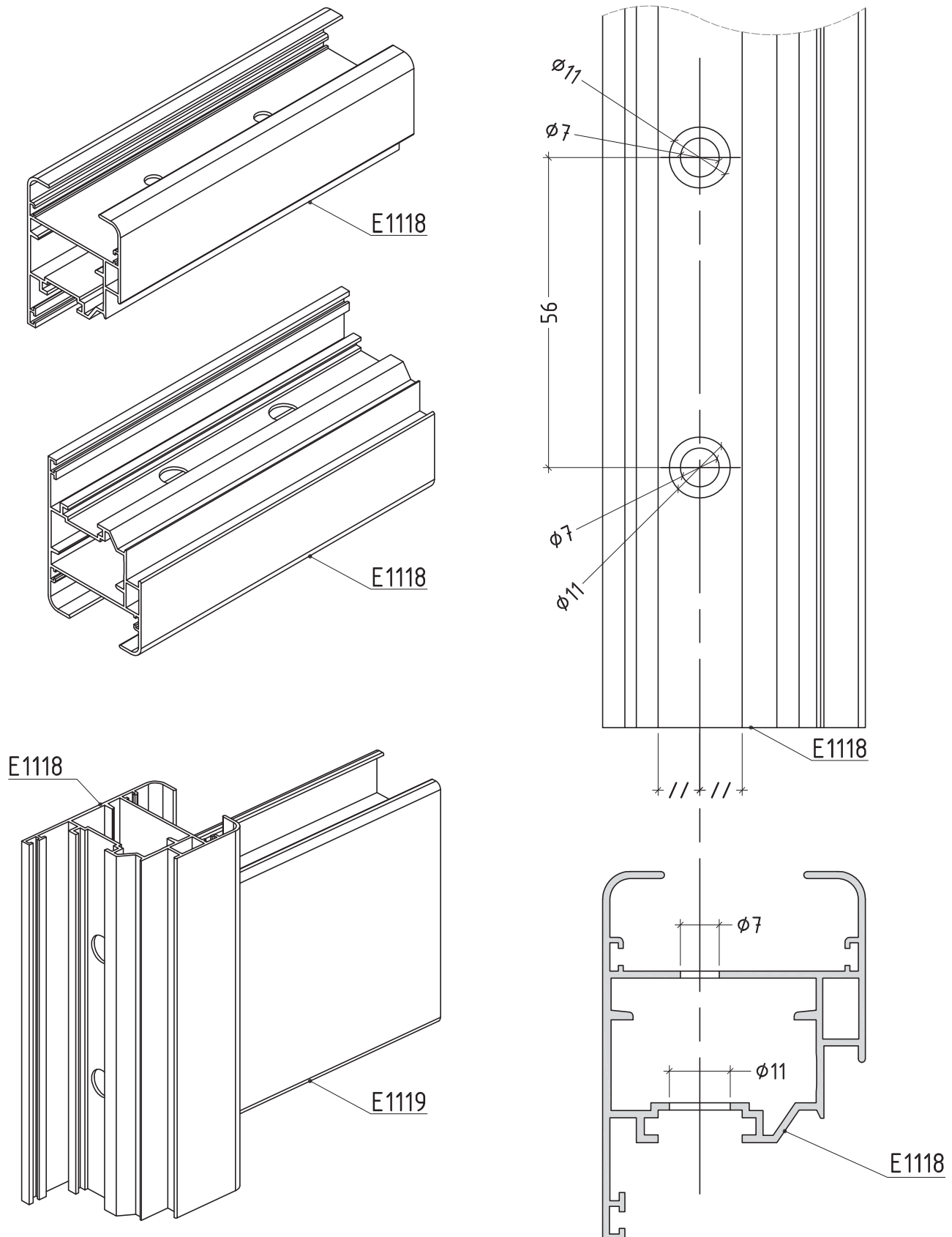


scale 1:2



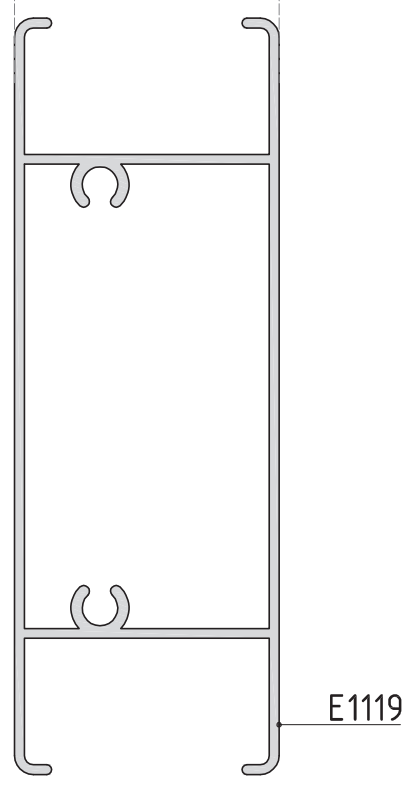
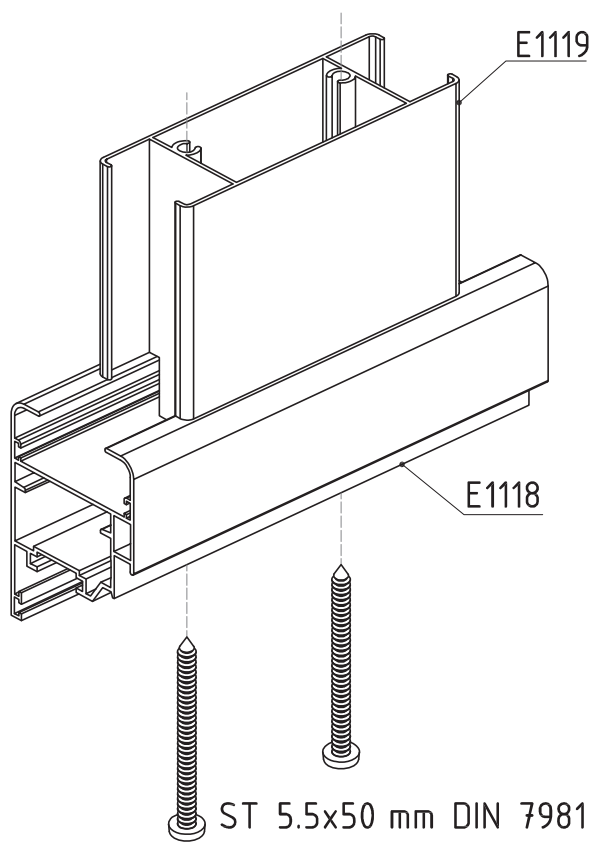
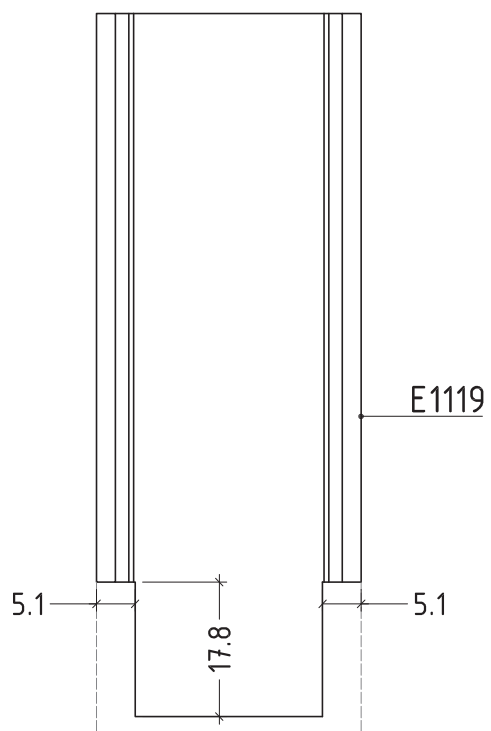
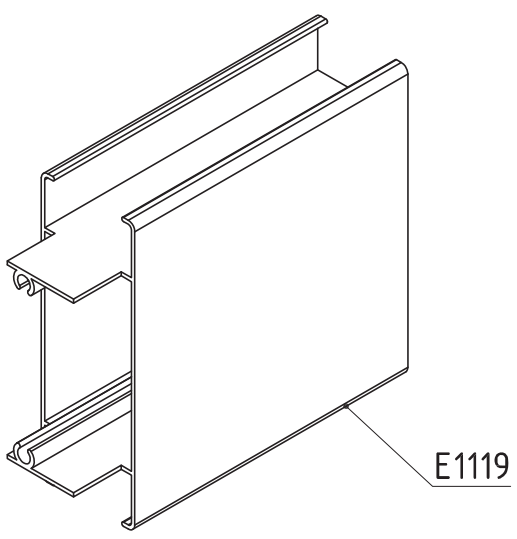


machining on E1118 so that to fix E1119

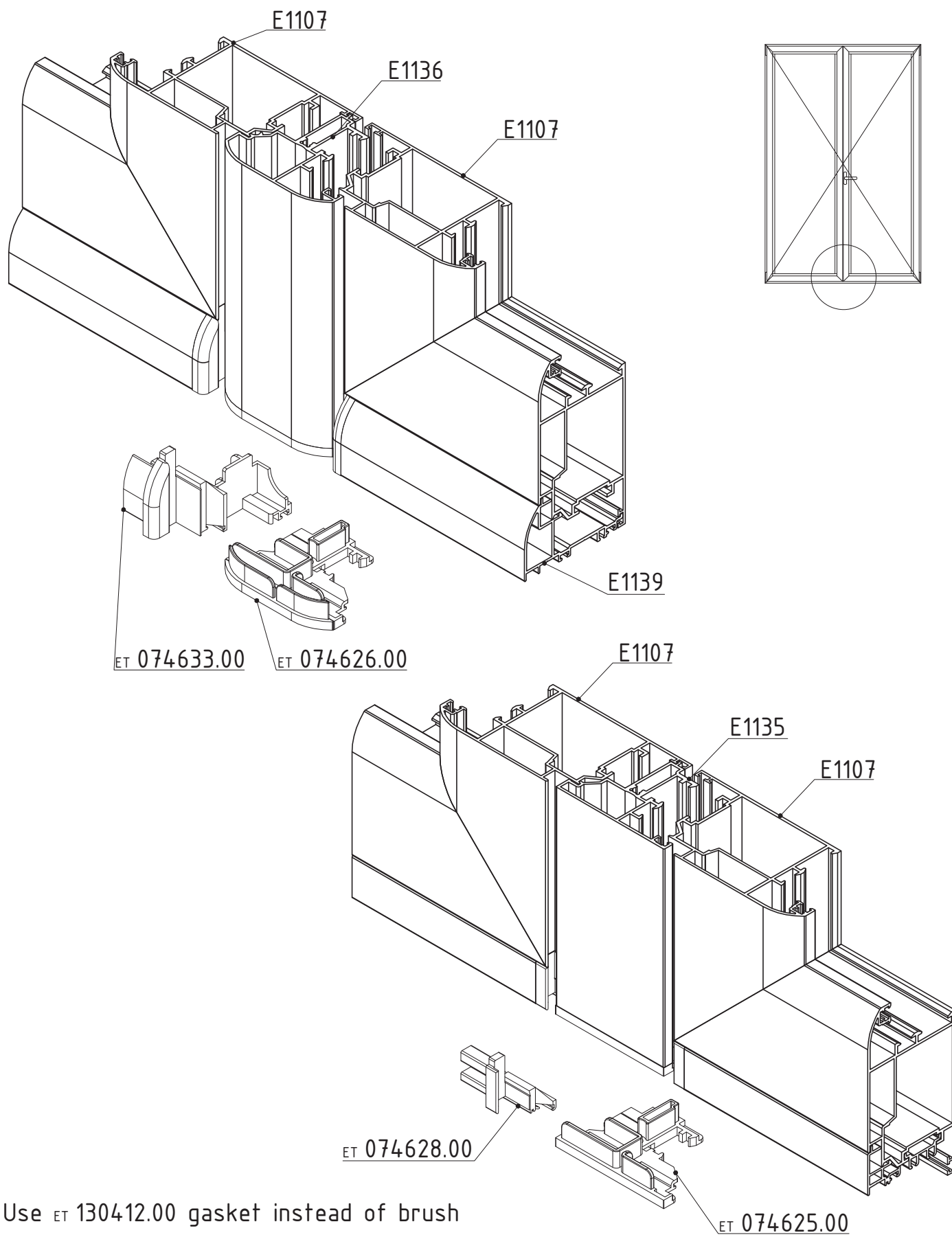


D1000-22-1

machining on E1119 so that to fix sash E1118

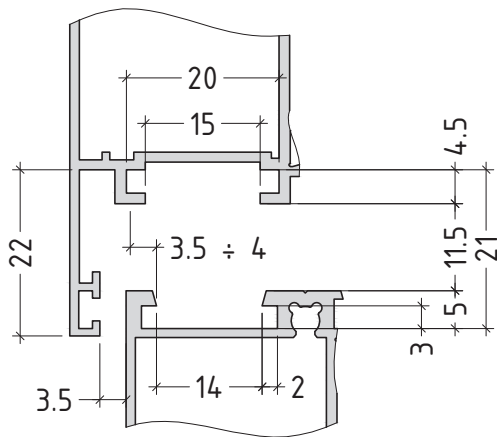


D1000-22-2

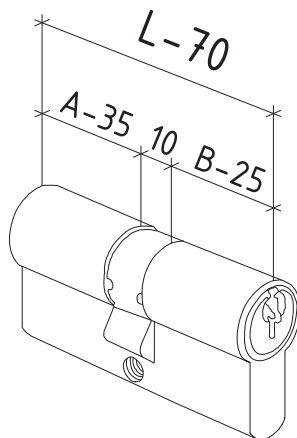
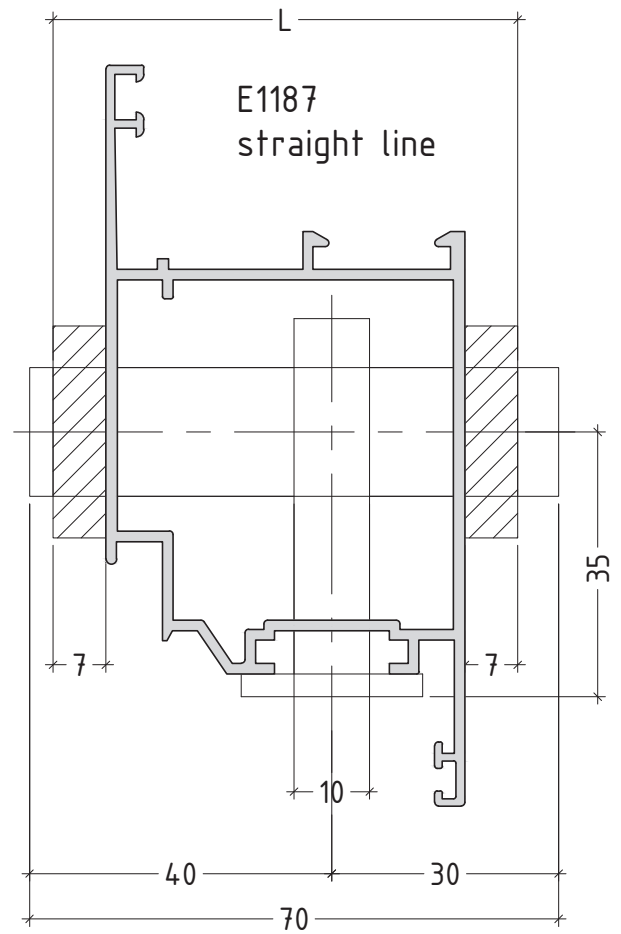


Use ET 130412.00 gasket instead of brush

D1000-23

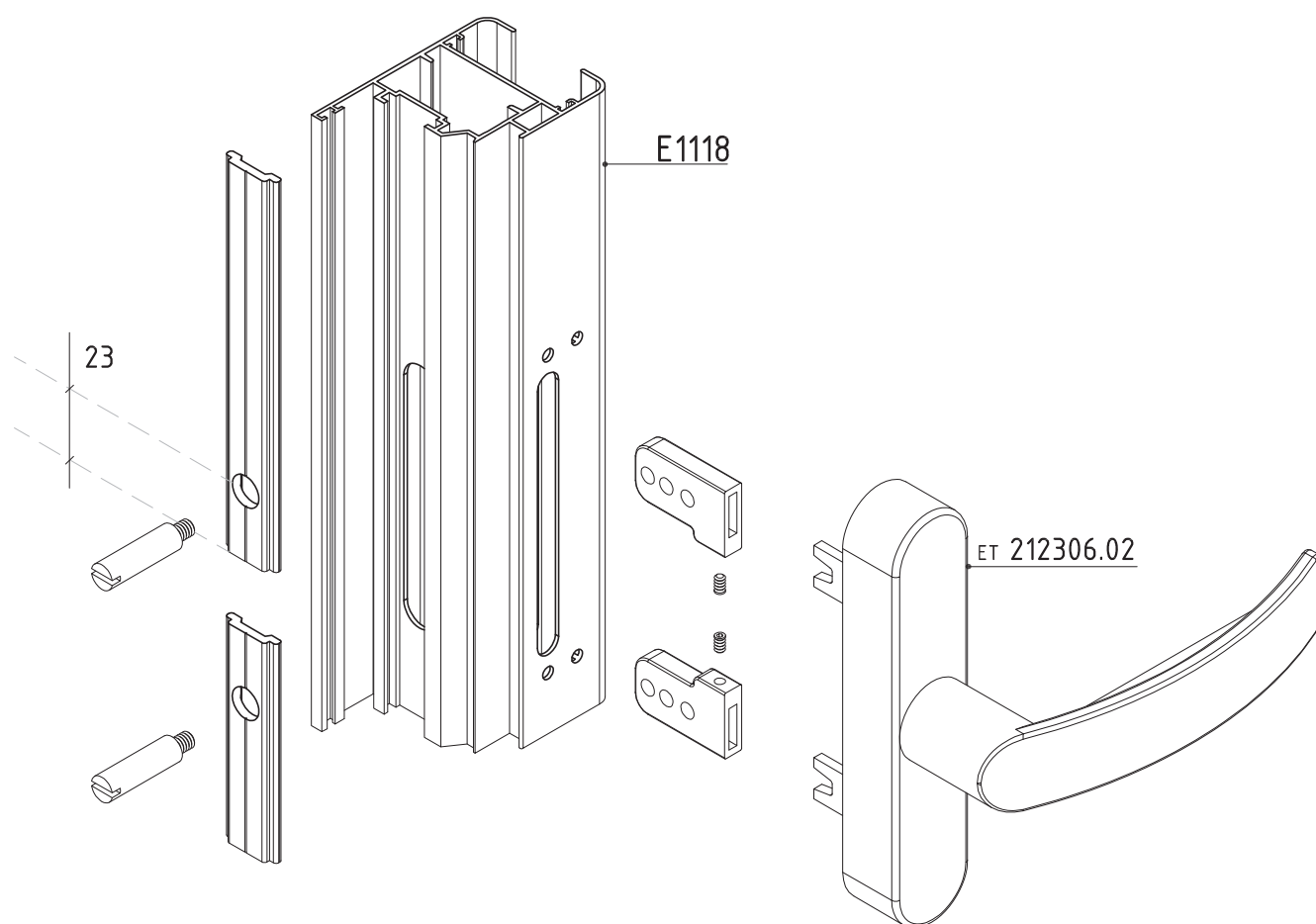


Note:  
Hardware used for E1000 is intended for Eurogroove with the noted parameters



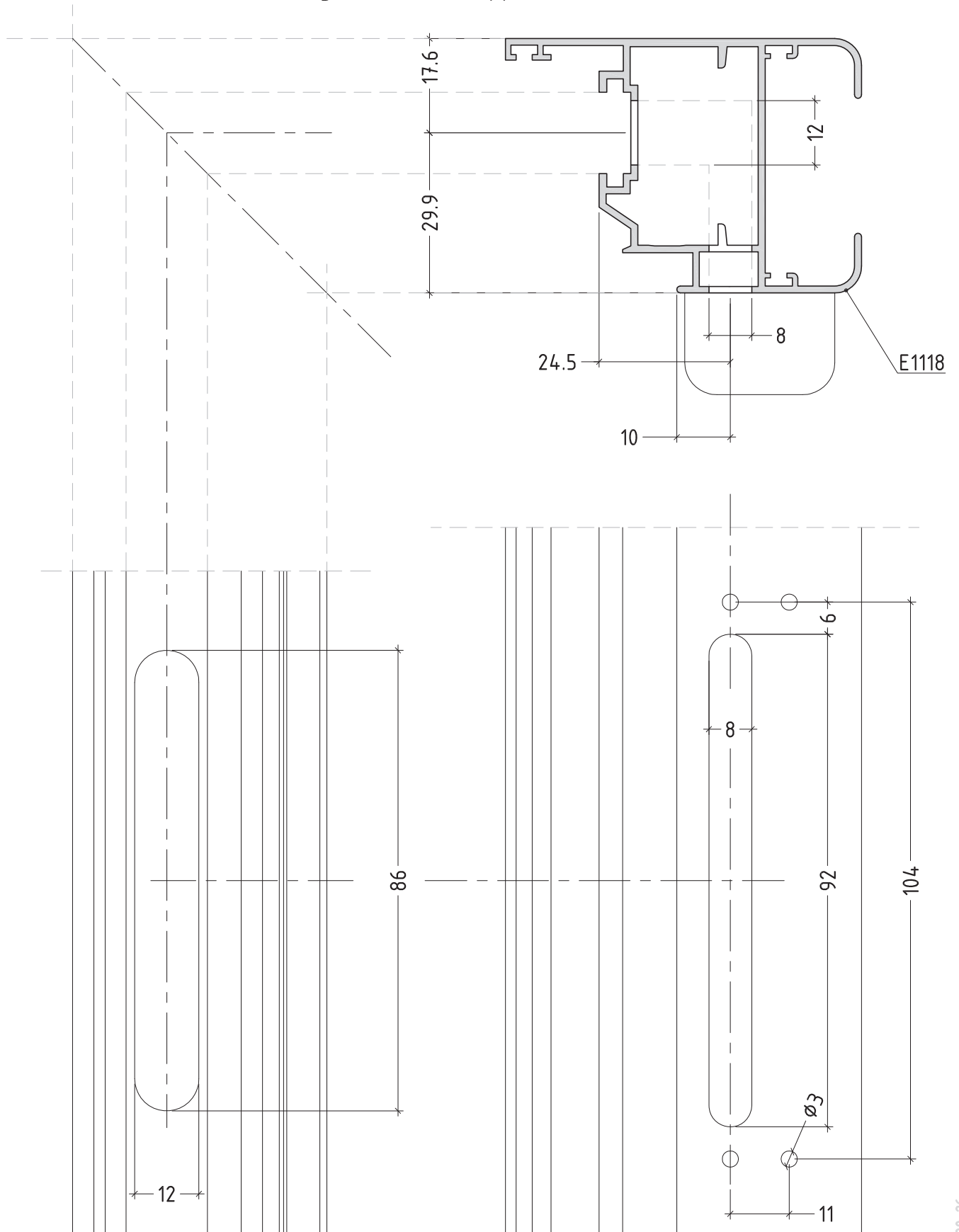
Note:  
The length L of the cylinder depends on the chosen type of decorative rosettes

machining for handle appliance on blinds



D1000-25

machining for handle appliance on blinds



D1000-26





# ACCESSORIES

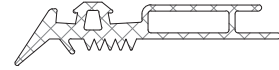


# opening system without thermal break

E1000

code/description	package/pcs	colour
ET 130402.00	60	●

elongated glazing EPDM gasket E40 - E45 3 mm



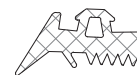
ET 130411.00	150	●
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glazing EPDM gasket for E1000 E40 E45 3 mm



ET 130153.00	150	●
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glazing EPDM gasket 4 mm



ET 130152.00	320	●
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internal seal EPDM gasket



AT1000-01

# opening system without thermal break

E1000

code/description	package/pcs	colour
ET 130174.00	160	●

interior seal EPDM gasket  
top line



ET 130131.00	200	●
--------------	-----	---

interior seal gasket E2300  
E1000 E40 E45



ET 130154.00	200	●
--------------	-----	---

interior seal window EPDM  
gasket - 4 mm



ET 130175.00	250	●
--------------	-----	---

glazing EPDM gasket  
press-in 3-4 mm



A1000-02

# opening system without thermal break

E1000

code/description	package/pcs	colour
ET 130176.00	125	●

glazing EPDM gasket  
press-in 5-6 mm



ET 130177.00	60	●
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glazing EPDM gasket  
press-in 7-8 mm



ET 990619.00	125	●
--------------	-----	---

ET 130205.00	125	●
--------------	-----	---

P5 old code

glazing EPDM gasket  
press-in 5 mm



ET 990620.00	125	●
--------------	-----	---

ET 130206.00	125	●
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P6 old code

glazing EPDM gasket  
press-in 6 mm



code/description	package/pcs	colour
ET 130207.00	75	●

P7 old code

glazing EPDM gasket  
press-in 7 mm



ET 130208.00	40	●
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P8 old code

glazing EPDM gasket  
press-in 8 mm



ET 130210.00	40	●
--------------	----	---

P10 old code

glazing EPDM gasket  
press-in 10 mm



ET 130413.00	200	●
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seal EPDM gasket for  
decorative lattice bar



# opening system without thermal break

E1000

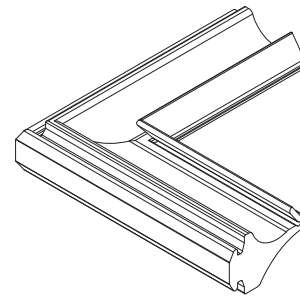
code/description	package/pcs	colour
ET 130128.00	130	●

central seal EPDM gasket



ET 060128.00	40	●
--------------	----	---

vulcanized EPDM corner for 130128



ET 130412.00	240	●
--------------	-----	---

door seal EPDM gasket



ET 130156.00	200	●
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door seal EPDM gasket



attention  
use with profile  
E1123 and E1139

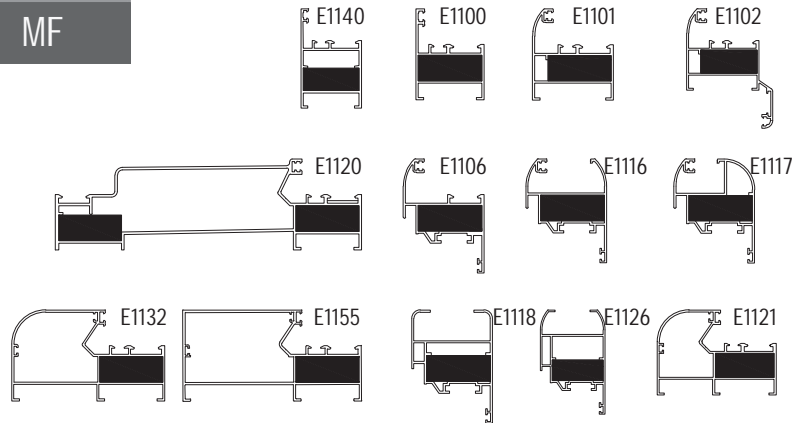
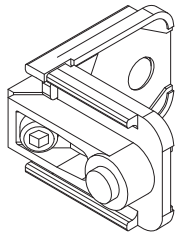
A1000-05

# opening system without thermal break

E1000

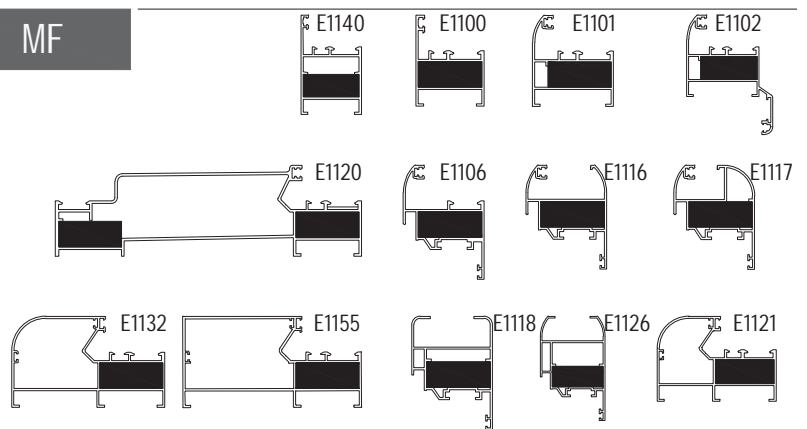
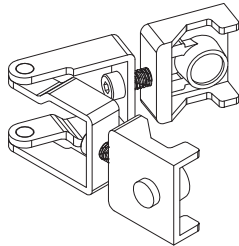
code/description	package/pcs	colour
ET 053302.00	250	MF

die cust al. joint corner bracket



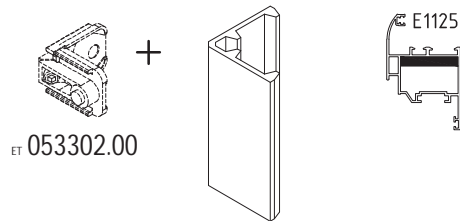
ET 053301.00	20	MF
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die cust al. variable angled joint corner bracket



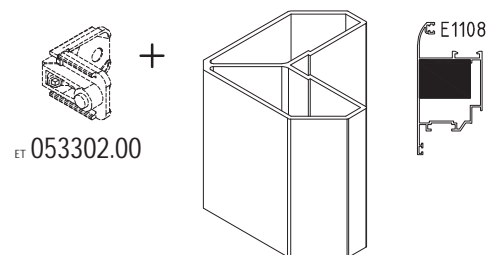
ET 050001.00	100	MF
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extruded al. shimming corner



ET 050005.00	80	MF
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extruded al. shimming corner



A1000-06

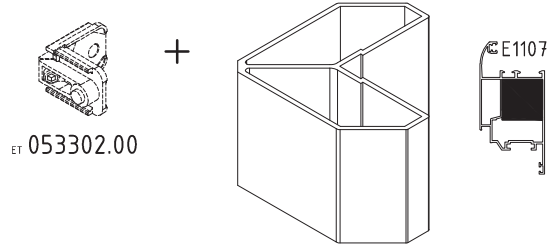


# opening system without thermal break

E1000

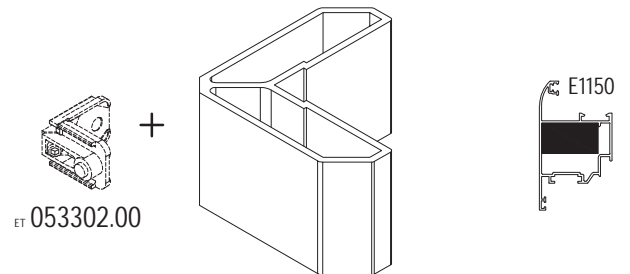
code/description	package/pcs	colour
ET 050008.00	100	MF

extruded al. shimming corner



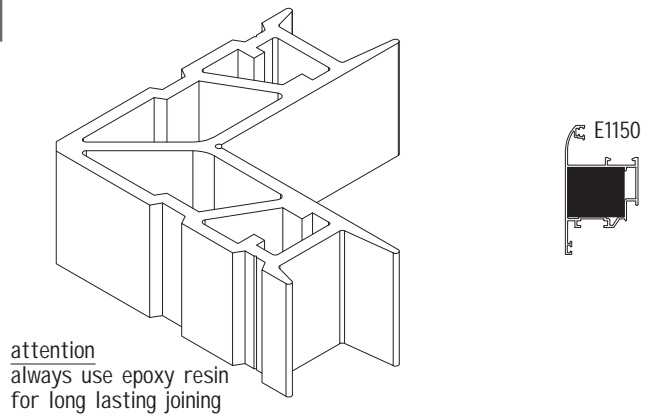
ET 050009.00	70	MF
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extruded al. joint corner bracket



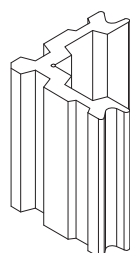
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extruded al. joint corner bracket

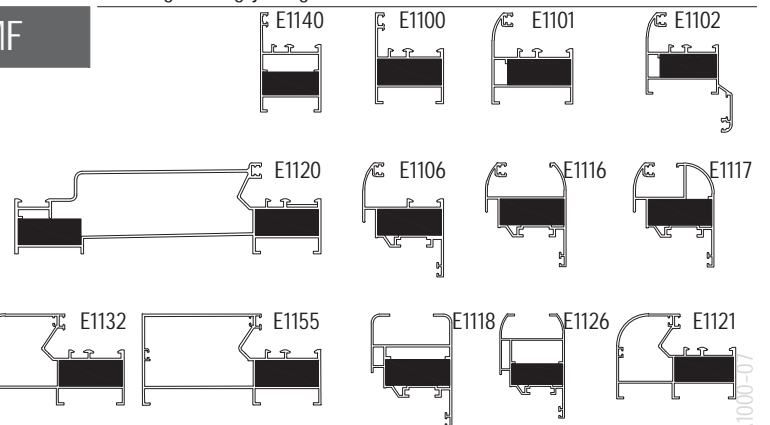
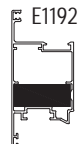
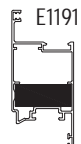


ET 054401.00	100	MF
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extruded al. joint corner bracket



attention  
always use epoxy resin  
for long lasting joining



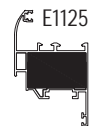
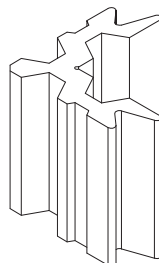
A1000-07

# opening system without thermal break

E1000

code/description	package/pcs	colour
ET 054404.00	100	MF

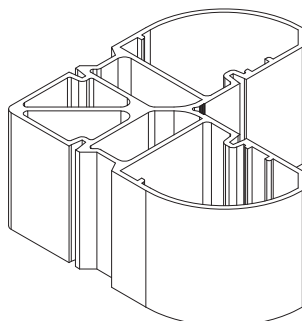
extruded al. joint corner bracket



attention  
always use epoxy resin  
for long lasting joining

ET 990966.00	40	MF
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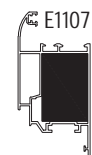
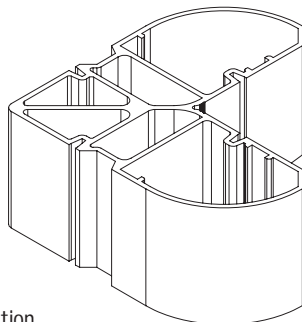
extruded al. joint corner bracket



attention  
always use epoxy resin  
for long lasting joining

ET 991127.00	70	MF
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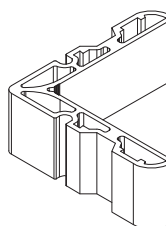
extruded al. joint corner bracket



attention  
always use epoxy resin  
for long lasting joining

ET 054255.00	200	MF
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extruded al. joint corner bracket



attention  
always use epoxy resin  
for long lasting joining

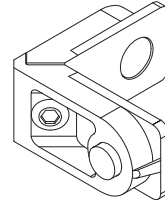
A1000-08

# opening system without thermal break

E1000

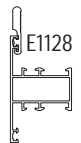
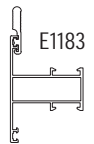
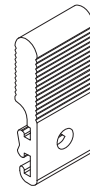
code/description	package/pcs	colour
ET 053305.00	250	MF

die cust al. joint corner bracket



ET 070304.00	10	MF
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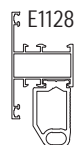
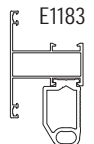
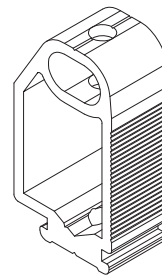
"T" bracket for mullions/transoms external side - 15 mm



attention  
always use epoxy resin  
for long lasting joining

ET 070204.00	10	MF
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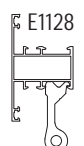
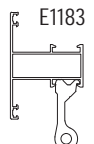
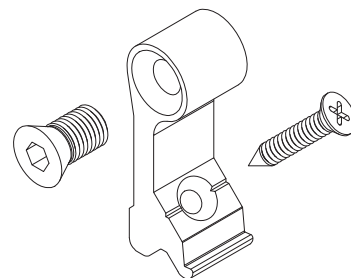
"T" bracket for mullions/transoms (fastened with roll pins) -15 mm



attention  
always use epoxy resin  
for long lasting joining

ET 070203.00	10	MF
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screwing "T" bracket for mullions/transoms - 15 mm



attention  
always use epoxy resin  
for long lasting joining

A1000-09

# opening system without thermal break

E1000

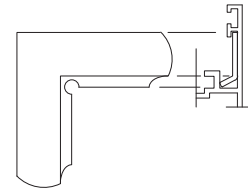
code/description	package/pcs	colour
ET 143901.00	100	MF

roll pin  $\phi 4/8 \times 6.5$  mm



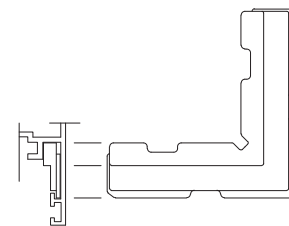
ET 055501.00	100	MF
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alignment square  
(galvanized steel)  
for  
E2004 E1000 E40 E45



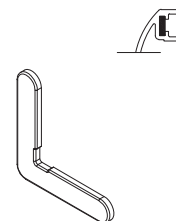
ET 057704.00	100	MF
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alignment square (plastic)  
for E1000 E40 E45



ET 055507.00	200	MF
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alignment square  
(galvanized steel)  
for E1000 E19 E40 E45  
(5x1.25)

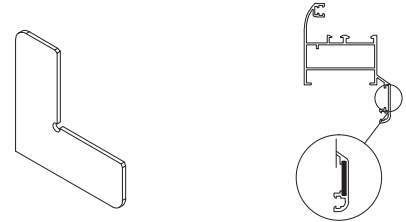


# opening system without thermal break

E1000

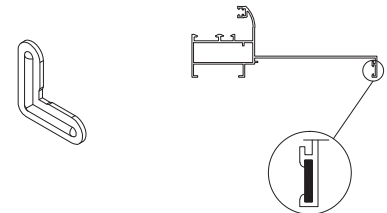
code/description	package/pcs	colour
ET 055505.00	100	MF
ET 056605.00	100	INOX

alignment square



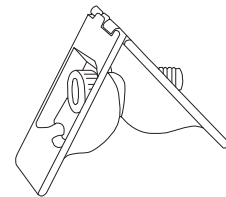
ET 055506.00	100	MF
ET 056606.00	100	INOX

alignment square



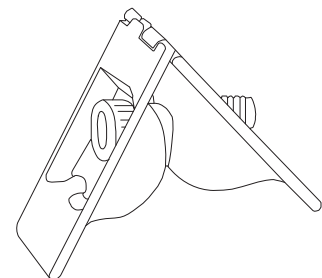
ET 051101.00	200	MF
--------------	-----	----

stainless steel joint corner  
(small)



ET 051102.00	200	MF
--------------	-----	----

stainless steel joint corner  
(large)



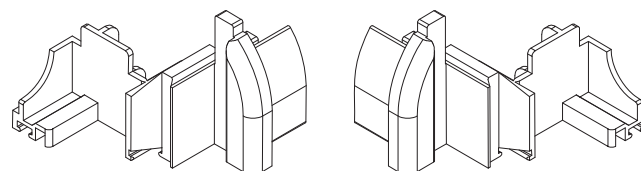
A1000-11

# opening system without thermal break

E1000

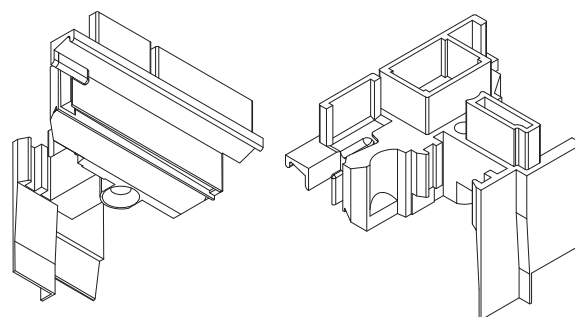
code/description	package/pcs	colour
ET 074633.00	10	●

plastic plug for E1139



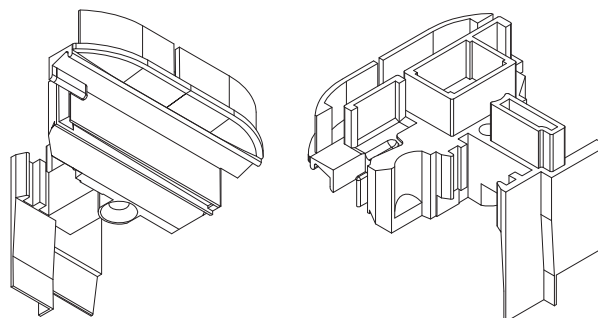
ET 074625.00	5	●
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pair of plastic plugs for straight secondary sash profile E1135



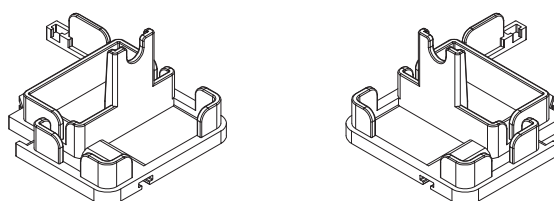
ET 074626.00	5	●
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pair of plastic plugs for round secondary sash profile E1136



ET 074737.00	5	●
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pair of plastic plugs for round secondary sash profile E1118



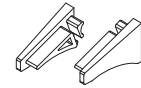
A1000-12

# opening system without thermal break

E1000

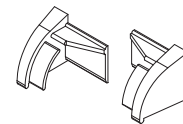
code/description	package/pcs	colour
ET 074629.00	200	●

plastic plug for drip profile  
E 2357



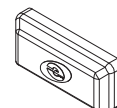
ET 074624.00	200	●
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plastic plug for drip profile  
E 40820



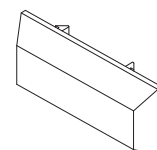
ET 074206.00	100	●
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plastic drain cap 20x6 mm



ET 074605.00	100	●
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plastic drain cap 30x6 mm



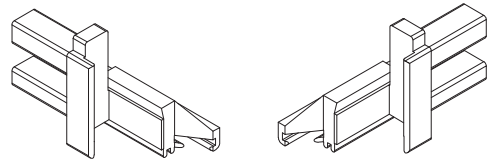
A1000-13

# opening system without thermal break

E1000

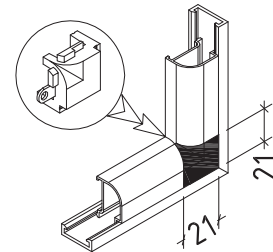
code/description	package/pcs	colour
ET 074628.00	20	●

plastic plug for E1137



ET 059902.00	25	MF
ET 059902.02	25	●
ET 059902.01	25	●

corner for round bead



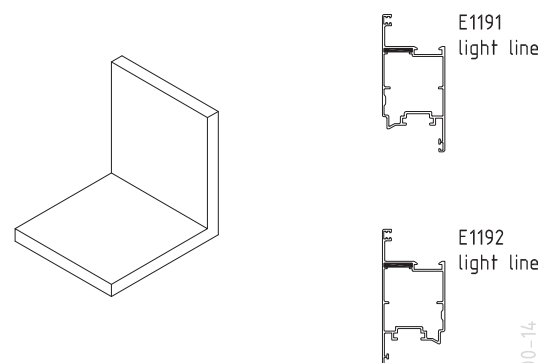
ET 135900.00	200	●
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brush with metallic body



ET 055511.00	100	MF
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alignment square



A 1000-14



# opening system without thermal break

E1000

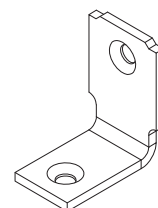
code/description	package/pcs	colour
ET 135412.02	-	●

brush



ET 990898.00	100	MF
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bracket





# CE MARKING

STANDARDS / PERFORMANCE CHARACTERISTICS



# CE MARKING

## WHAT DOES THE SIGN CE MEAN?

It is an abbreviation of the French "Conformite Europeene"- i.e. European Conformity. By placing the CE marking the manufacturer declares that the product complies with the general safety requirements set out in the Construction Product Regulation 305/2011.

## WHAT IS THE PURPOSE OF CE MARKING?

The CE marking represents "the European passport" of the product, its main objectives are:

CE is a declaration by the manufacturer that the product meets the essential requirements of relevant European legislation relating to health, safety and environmental protection;

CE indicates to officials in relevant ministries and departments that the product can be put on the market lawfully in the country;

CE ensures free movement of goods within the EU and the European Free Trade Association (EFTA);

CE permits the withdrawal of products that do not meet the standards by monitoring and custom authorities;  
marking with the CE mark is necessary in cases where the product is distributed within the internal market.

## WHAT ARE THE REQUIREMENTS FOR THE CE MARKING?

Doors, windows and gates (except those intended to be used for internal communication only, for fire/smoke compartmentation and on escape routes) are covered by System 3 of assessment and verification of constancy of performance.

According to the Construction Product Regulation 305/2011, this system sets the following duties:

Tasks to be performed by the manufacturer	Tasks to be performed by Notified testing laboratory	Conformity assessment (the basis for CE marking, which is set by the final producer)
factory production control – FPC	Determination of the product type on the basis of type testing, type calculation, tabulated values, etc.	Declaration of performance issued by the manufacturer or his authorized representative based on test results.

## LEGAL ACTS

- Construction Products Regulation (305/2011/EU – CPR) – replacing the Construction Products Directive (89/106/EEC – CPD)
- EN 14351-1:2006+A1:2010 – Windows and doors – Product standard, performance characteristics – Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics

# MAIN METHODS FOR OBTAINING TEST RESULTS BY THE MANUFACTURER

According to the Construction Product Regulation 305/2011 there are three main options for the manufacturers of windows and doors to obtain test results.

1

---

THE MANUFACTURER SELECTS A SAMPLE FOR TESTING AND CARRIES OUT FACTORY PRODUCTION CONTROL



NOTIFIED TESTING LABORATORY TESTS THE SAMPLE



THE MANUFACTURER OWNS THE TEST REPORT



MANUFACTURER ISSUES DECLARATION OF PERFORMANCE AND AFFIXES CE MARKING

2

---

PARTNER (SECOND MANUFACTURER PRODUCING PRODUCT WITH CORRESPONDING PRODUCT-TYPE) SELECTS A SAMPLE FOR TESTING AND CARRIES OUT FACTORY PRODUCTION CONTROL



NOTIFIED TESTING LABORATORY TESTS THE SAMPLE



THE PARTNER OWNS THE TEST REPORT



THE MANUFACTURER CARRIES OUT FACTORY PRODUCTION CONTROL AND IS ALLOWED TO USE THE TEST RESULTS OF HIS PARTNER AFTER OBTAINING PARTNER'S AUTHORIZATION



MANUFACTURER ISSUES DECLARATION OF PERFORMANCE AND AFFIXES CE MARKING

3

---

THE SYSTEM PROVIDER SELECTS SAMPLES FOR TESTING



NOTIFIED TESTING LABORATORY TESTS THE SAMPLE



THE SYSTEM PROVIDER OWNS THE TEST REPORT



THE MANUFACTURER CARRIES OUT FACTORY PRODUCTION CONTROL AND IS ALLOWED TO USE THE TEST RESULTS OF THE SYSTEM PROVIDER AFTER OBTAINING SYSTEM PROVIDER'S AUTHORIZATION



AGREEMENT BETWEEN THE MANUFACTURER AND THE SYSTEM PROVIDER

- INSTRUCTIONS FOR ASSEMBLING AND INSTALLATION OF THE SYSTEM PROVIDER RELEVANT FOR FPC OF THE MANUFACTURER
- NO REDUCTION OF PERFORMANCE LEVEL OF THE PRODUCT



MANUFACTURER ISSUES DECLARATION OF PERFORMANCE AND AFFIXES CE MARKING

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# STANDARDS

## GENERAL

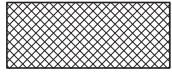
- EN 12020 (1÷2) - ALUMINIUM AND ALUMINIUM ALLOYS - EXTRUDED PRECISION PROFILES IN ALLOYS EN AW-6060 AND EN AW-6063
- EN 755 (1÷9)- ALUMINIUM AND ALUMINIUM ALLOYS - EXTRUDED ROD/BAR, TUBE AND PROFILES
- EN 573 (1÷3) - ALUMINIUM AND ALUMINIUM ALLOYS - CHEMICAL COMPOSITION AND FORM OF WROUGHT PRODUCTS
- EN 1990 EUROCODE - BASIS OF STRUCTURAL DESIGN
- EN 1991 EUROCODE 1 - ACTIONS ON STRUCTURES
- EN 1998 EUROCODE 8 - DESIGN OF STRUCTURES FOR EARTHQUAKE RESISTANCE
- EN 1999 EUROCODE 9 - DESIGN OF ALUMINIUM STRUCTURES

## WINDOWS AND DOORS

1. EN 14351 - WINDOWS AND DOORS - PRODUCT STANDARD, PERFORMANCE CHARACTERISTICS
2. EN 12519 - WINDOWS AND PEDESTRIAN DOORS - TERMINOLOGY
3. EN 12207 - WINDOWS AND DOORS - AIR PERMEABILITY - CLASSIFICATION
4. EN 1026 - WINDOWS AND DOORS - AIR PERMEABILITY - TEST METHOD
5. EN 12208 - WINDOWS AND DOORS - WATERTIGHTNESS - CLASSIFICATION
6. EN 1027 - WINDOWS AND DOORS - WATERTIGHTNESS - TEST METHOD
7. EN 12210 - WINDOWS AND DOORS - RESISTANCE TO WIND LOAD - CLASSIFICATION
8. EN 12211 - WINDOWS AND DOORS - RESISTANCE TO WIND LOAD - TEST METHOD
9. EN 1191 - WINDOWS AND DOORS - RESISTANCE TO REPEATED OPENING AND CLOSING - TEST METHOD
10. EN ISO 10077 (1÷2) - THERMAL PERFORMANCE OF WINDOWS, DOORS AND SHUTTERS - CALCULATION OF THERMAL TRANSMITTANCE
11. EN 12412-2 - THERMAL PERFORMANCE OF WINDOWS, DOORS AND SHUTTERS - DETERMINATION OF THERMAL TRANSMITTANCE BY HOT BOX METHOD - PART 2: FRAMES
12. EN 13115 - WINDOWS - CLASSIFICATION OF MECHANICAL PROPERTIES - RACKING, TORSION AND OPERATING FORCES
13. EN 1627 - WINDOWS, DOORS, SHUTTERS - BURGLAR RESISTANCE - REQUIREMENTS AND CLASSIFICATION
14. EN 1628 - WINDOWS, DOORS, SHUTTERS - BURGLAR RESISTANCE - TEST METHOD FOR THE DETERMINATION OF RESISTANCE UNDER STATIC LOADING
15. EN 1629 - WINDOWS, DOORS, SHUTTERS - BURGLAR RESISTANCE - TEST METHOD FOR THE DETERMINATION OF RESISTANCE UNDER DYNAMIC LOADING
16. EN 1630 - WINDOWS, DOORS, SHUTTERS - BURGLAR RESISTANCE - TEST METHOD FOR THE DETERMINATION OF RESISTANCE TO MANUAL BURGLARY ATTEMPTS
17. EN ISO 717-1 - ACOUSTICS - RATING OF SOUND INSULATION IN BUILDINGS AND OF BUILDING ELEMENTS - PART 1: AIRBORNE SOUND INSULATION
18. EN ISO 10140 - ACOUSTICS - LABORATORY MEASUREMENT OF SOUND INSULATION OF BUILDING ELEMENTS

# HATCHES

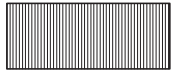
Hatches for different materials



EPDM



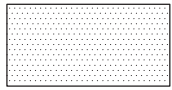
butyl seal



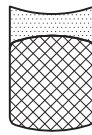
PVC



membrane



gypsum board



silicone seal

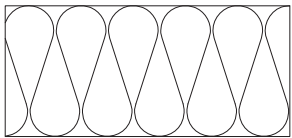
backer rod



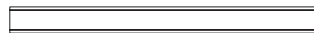
silicone seal



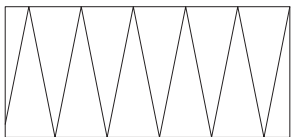
PVC spacer



Insulation soft



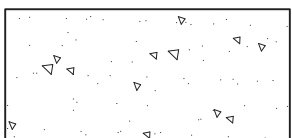
etalbond



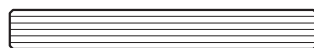
Insulation hard



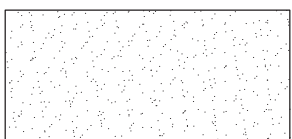
sheet aluminium



concrete wall



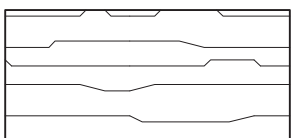
glass



plaster



aluminium profile



wood



steel



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The specific conditions and technical details of every particular project have to be taken into consideration.

The right choice of all elements as well as any special requirements regarding stability of the structure must always be considered by the structural/façade engineer, responsible for the project.

The solutions presented in these pages are indicative and can not cover all possible project cases. Because of that every single project has to be evaluated by the structural/facade engineer in charge taking into consideration the specific features, such as climate conditions, location, orientation, etc.

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