TECHNICAL CATALOGUE

OPENING WINDOW SYSTEM
WITH THERMAL BREAK

Q60 E85 E70 E52 E75 E68 EF50 EP30 ES70 Q72 E45 E2300

ETEM

ETEM HISTORY

ETEM is a leading aluminium extrusion company. It was founded in 1971 as a part of the largest metal manufacturing holding on 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.

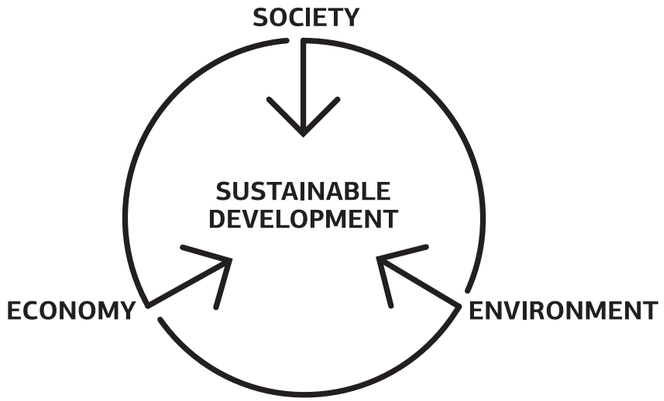
For us meeting this objective translates into the challenge of satisfying market demands at the lowest economic, social and environmental cost possible.

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



* Extract from Brundtland Report, from the United Nations World Commission on Environment and Development WCED

BUILDING PHYSICS

DIMENSIONING / FORMULAS / EXAMPLES

ALUMINIUM AS MATERIAL

ALUMINIUM IS A VERY YOUNG METAL, EXTRACTED FOR THE FIRST TIME IN 1854. COMMERCIALLY 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 650°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	
Aluminium alloy	EN AW 6063 F22
Ultimate tensile strength	Rm = 210 N/mm^2
Yield strength	$R_{p0.2}$ = 160 N/mm^2
Modulus of elasticity	Eal=70 000 N/mm^2 = 7.10^9 kg/m^2
Coefficient of thermal expansion	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.

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 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.

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.

WIND LOAD

Wind action

The main influence over the facade is wind action, which depends mainly on the heigh of the curtain wall and location.

As a guideline, the wind pressure values with respect to the structure height are given in the table below:

Building Height	Wind Velocity	Wind Load		Wind Pressure		Wind Suction in a middle zone		Wind Suction in a middle zone		Wind Suction in an edge zone	
h	v	$q = \frac{V^2}{16}$		Wp* = 1,,25 x cp x q c_p = 0,8		h/b ≤ 0,25 $W_s = c_p$ x q c_p = 0,5		h/b ≥ 0,5 $W_s = c_p$ x q c_p = 0,7		b/8 ≤ 2 m $W_s = c_p$ x q c_p = 2,0	
m	m/s	kg/m2	kg/m2	kg/m2	kg/m2	kg/m2	kg/m2	kg/m2	kg/m2	kg/m2	kg/m2
0 - 8	28,3	50	0,5	50	0,5	25	0,25	35	0,35	100	1,0
8 - 20	35,8	80	0,8	80	0,8	40	0,40	56	0,56	160	1,6
20 - 100	42,0	110	1,1	110	1,1	55	0,55	77	0,77	220	2,2
> 100	45,6	130	1,3	130	1,3	65	0,65	91	0,91	260	2,6

where:

h - building height, m
b - building width, m
v - wind velocity, m/s
q - wind load, kg/m2 and kN/m^2
$w_{p/s}$ - wind pressure / suction ,kN/m^2
c_p - correction factor

*Note: When calculating wind pressure w_p the load is increased with 25%

UNITS CONVERTER

1m = 100cm = 1000mm

1kg = 10N
1kN = 100kg = 1000N

1kg/m^2 = 0,01kN/m^2
1Pa = 1N/m^2 = 0,1kg/m^2
1kPa = 1000Pa = 1kN/m^2 =100kg/m^2
1MPa = 1000kPa = 1 000 000 Pa
1MPa = 1N/mm^2 = 0,1kN/cm^2 =100 000kg/m^2

MULLION SELECTION

*Wind load actions:

The required moment of inertia of a mullion due to the wind action is given by:

a) triangle load

$$\text{If } \frac{H}{c} \le 1,\ I_{yc} \ge \frac{w \cdot (H/2) \cdot H^4 \cdot 10^8}{120 \cdot E_{al} \cdot f_{max}}\ ,cm^4$$

or

b) trapezoid load

$$\text{If } \frac{H}{c} > 1,\ I_{yc} \ge \frac{w \cdot (C/2) \cdot H^4}{1920 \cdot E_{al} \cdot f_{max}} \cdot 10^8 \cdot \left[25 - 40 \cdot \frac{(C/2)^2}{H^2} + 16 \cdot \frac{(C/2)^4}{H^4}\right],cm^4$$

Use the same method to calculate I_{yd}

Total of required moment of inertia:
$I_y = I_{yc} + I_{yd}$, cm^4

Where:
I_y – Moment of inertia of a transom, cm^4
w – Wind pressure, kg/m^2
E_{al} – Modulus of Elasticity of aluminium, kg/m^2
f_{max} – Maximum transom deflection, m
H – Length of a mullion, m
a,b – Distance between mullions, m

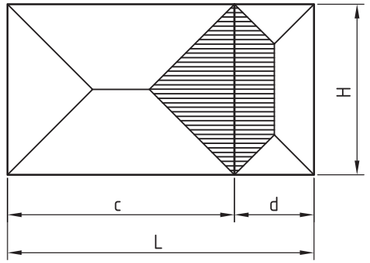
Maximum transom deflection f_{max} by wind load:

$$f = \frac{H}{200},m \quad \text{or 0,015 m – whichever is less (EN 14351-1)}$$

Use ETEM Catalogue to choose the appropriate mullion with I_y exceeding or equal to the required I_y.

Use ETEM Catalogue to choose the appropriate profile which characteristics exceed or are equal to both calculated values I_x and I_y.

Example:



Initial data:
H = 2,2 m w = 60 kg/m^2
c = 2,4 m E_{al} = 7.10^9 kg/m^2
d = 0,8 m

$$f = \frac{H}{200} = \frac{2,2}{200} = 0,011m \quad \text{or 0,015 m (EN 14351-1)}$$

$\Longrightarrow f_{max}$ = 0,011m in the following formulas:

$$\frac{H}{c} = \frac{2,2}{2,4} = 0,91 < 1$$

$$I_{yc} \ge \frac{w \cdot (H/2) \cdot H^4 \cdot 10^8}{120 \cdot E_{al} \cdot f_{max}},cm^4$$

$$I_{yc} \ge \frac{60 \cdot (2,2/2) \cdot 2,2^4 \cdot 10^8}{120 \cdot 7 \cdot 10^9 \cdot 0,011},cm^4 \Longrightarrow I_{yc} \ge 16,73\ cm^4$$

$$\frac{H}{d} = \frac{2,2}{0,8} = 2,75 > 1$$

$$I_{yd} \ge \frac{w \cdot (d/2) \cdot H^4}{1920 \cdot E_{al} \cdot f_{max}} \cdot 10^8 \cdot \left[25 - 40 \cdot \frac{(d/2)^2}{H^2} + 16 \cdot \frac{(d/2)^4}{H^4}\right],cm^4$$

$$I_{yd} \ge \frac{60 \cdot (0,8/2) \cdot 2,2^4}{1920 \cdot 7 \cdot 10^9 \cdot 0,011} \cdot 10^8 \cdot \left[25 - 40 \cdot \frac{(0,8/2)^2}{2,2^2} + 16 \cdot \frac{(0,8/2)^4}{2,2^4}\right],cm^4$$

$I_{yd} \ge 9,01\ cm^4$

$I_y = I_{yc} + I_{yd}$, cm^4 $\Longrightarrow I_y = 16,73 + 9,01 = 25,74\ cm^4$

Use ETEM Catalodue to choose the appropriate mullion with $I_y \ge 25,74\ cm^4$
We choose mullion E75300S with I_x = 13,91 cm^4
and I_y = 41,75 cm^4

TRANSOM SELECTION

*Dead load actions:

*Glass pane self weight:

Weight of the glass pane G is calculated as follows:

The required moment of inertia of a transom due to the weight of the glazing is given by:

$$I_{x1} \ge \frac{G \cdot a \cdot 10^8}{48 \cdot E_{al} \cdot f_{max}} \cdot (3 \cdot L^2 - 4 \cdot a^2),cm^4$$

Where:
G – Weight of glass pane, kg
t – Glass pane thickness, mm
ϱ_{glass} – Density of glass material, $kg/m^2/mm$
l_g – Horizontal dimension of the glass pane, m
h_g – Vertical dimension of the glass pane, m

*Transom self weight:

The required moment of inertia of a transom due to its self weight is given by:

$$I_{x2} \ge \frac{5 \cdot q \cdot L^4 \cdot 10^8}{384 \cdot E_{al} \cdot f_{max}},cm^4$$

Total of required moment of inertia:
$I_x = I_{x1} + I_{x2}$,cm^4

Where:
a=0,15 – Distance of a glazing supports of the glass pane, m
I_x – Moment of inertia of a transom, cm^4
q – Self weight of a transom per linear meter, kg/m
E_{al} – Modulus of Elasticity of aluminium, kg/m^2
f_{max} – Maximum transom deflection, m
L – Length of a transom, m

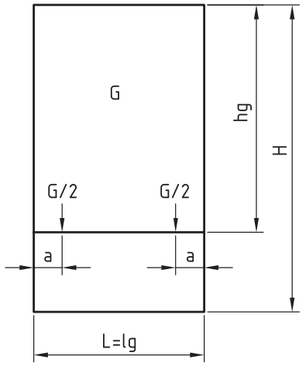
Maximum transom deflection f max by dead load:

$$f = \frac{L}{500},m \quad \text{or 0,003m – whichever is less (EN 14351-1)}$$

Use ETEM Catalogue to choose the appropriate transom with I_y exceeding or equal to the required I_y.

Use ETEM Catalogue to choose the appropriate profile which characteristics exceed or are equal to both calculated values I_x and I_y.

Example: $G = t \cdot \varrho_{glass} \cdot l_g \cdot h_g$



Initial data:
t = 12 mm E_{al} = 7.10^9 kg/m^2
l_g = 1,5 m ϱ_{glass} = 2,5 $kg/m^2/mm$
h_g = 2,0 m q = 2 kg/m
a = 0,15 m

$G = t \cdot \varrho_{glass} \cdot l_g \cdot h_g = 10 \cdot 2,5 \cdot 1,5 \cdot 2,0 = 75$ kg

$$\Longrightarrow f_{max} = \frac{L}{500} = \frac{1,5}{500} = 0,003m \quad \text{or 0,003m (EN 14351-1)}$$

$\Longrightarrow f_{max}$ = 0,003m in the following formulas:

$$I_{x1} \ge \frac{G \cdot a \cdot 10^8}{48 \cdot E_{al} \cdot f_{max}} \cdot (3 \cdot L^2 - 4 \cdot a^2),cm^4$$

$$I_{x1} \ge \frac{75 \cdot 0,15 \cdot 10^8}{48 \cdot 7 \cdot 10^9 \cdot 0,003} \cdot (3 \cdot 1,5^2 - 4 \cdot 0,15^2),cm^4$$

$$I_{x1} \ge \frac{75 \cdot 0,15 \cdot 10^8}{48 \cdot 7 \cdot 10^9 \cdot 0,003} \cdot (3 \cdot 1,5^2 - 4 \cdot 0,15^2),\ cm^4 \Longrightarrow I_{x1} \ge 7,43cm^4$$

$$I_{x2} \ge \frac{5 \cdot q \cdot L^4 \cdot 10^8}{384 \cdot E_{al} \cdot f_{max}},cm^4\ J_{x2} \ge \frac{5 \cdot 2 \cdot 1,5^4 \cdot 10^8}{384 \cdot 7 \cdot 10^9 \cdot 0,003},cm^4 \Longrightarrow I_{x1} \ge 0,63cm^4$$

$I_x = I_{x1} + I_{x2}$,cm^4

I_x = 7,43 + 0,63 = 8,06 cm^4

Use ETEM Catalodue to choose the appropriate transom with $I_x \ge 8,06\ cm^4$
We choose transom E75300S with I_x = 13,91 cm^4
and I_y = 41,75 cm^4

TRANSOM SELECTION

*Wind load actions:

The required moment of inertia of a transom due to the wind action is given by:

a) triangle load

$$\text{If } \frac{L}{a} \le 1,\ I_{ya} \ge \frac{w \cdot (L/2) \cdot L^4 \cdot 10^8}{120 \cdot E_{al} \cdot f_{max}},\ cm^4$$

or

b) trapezoid load

$$\text{If } \frac{L}{a} > 1,\ I_{ya} \ge \frac{w \cdot (a/2) \cdot L^4}{1920 \cdot E_{al} \cdot f_{max}} \cdot 10^8 \cdot \left[25 - 40 \cdot \frac{(a/2)^2}{L^2} + 16 \cdot \frac{(a/2)^4}{L^4}\right],\ cm^4$$

Use the same method to calculate I_{xb}

Total of required moment of inertia:
$I_y = I_{ya} + I_{yb}$, cm^4

Where:
I_y – Moment of inertia of a transom, cm^4
w – Wind pressure, kg/m^2
E_{al} – Modulus of Elasticity of aluminium, kg/m^2
f_{max} – Maximum transom deflection, m
L – Length of a transom, m
a,b – Distance between transoms, m

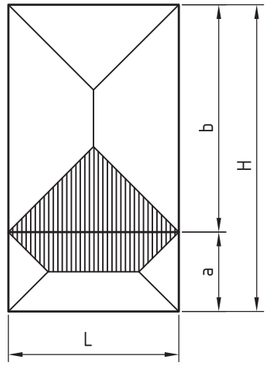
Maximum transom deflection f_{max} by wind load:

$$f = \frac{L}{200},m \quad \text{or } 0{,}015 \text{ m – whichever is less (EN 14351-1)}$$

Use ETEM Catalogue to choose the appropriate transom with I_x exceeding or equal to the required I_x.

Use ETEM Catalogue to choose the appropriate profile which characteristics exceed or are equal to both calculated values I_x and I_y.

Example:



Initial data:
L = 1,5 m
a = 0,7 m
b = 2,0 m
w = 60 kg/m^2
E_{al} = 7.10 kg/m^2

$$f = \frac{L}{200} = \frac{1{,}5}{200} = 0{,}0075m \text{ or } 0{,}015 \text{ m (EN 14351-1)}$$

$\Rightarrow f_{max}$ = 0,0075m in the following formulas:

$$\frac{L}{a} = \frac{1{,}5}{0{,}7} = 2{,}14 > 1$$

$$I_{ya} \ge \frac{w \cdot (a/2) \cdot L^4}{1920 \cdot E_{al} \cdot f_{max}} \cdot 10^8 \cdot \left[25 - 40 \cdot \frac{(a/2)^2}{L^2} + 16 \cdot \frac{(a/2)^4}{L^4}\right],cm^4$$

$$I_{ya} \ge \frac{60 \cdot (0{,}7/2) \cdot 1{,}5^4}{1920 \cdot 7 \cdot 10^9 \cdot 0{,}0075} \cdot 10^8 \cdot \left[25 - 40 \cdot \frac{(0{,}7/2)^2}{1{,}5^2} + 16 \cdot \frac{(0{,}7/2)^4}{1{,}5^4}\right],cm^4$$

$I_{ya} \ge 2{,}41\ cm^4$

$$\frac{L}{b} = \frac{1{,}5}{2{,}0}, = 0{,}75 < 1$$

$$I_{yb} \ge \frac{w \cdot (L/2) \cdot L^4 \cdot 10^8}{120 \cdot E_{al} \cdot f_{max}},cm^4 \quad \Rightarrow I_{yb} \ge \frac{60 \cdot (1{,}5/2) \cdot 1{,}5^4 \cdot 10^8}{120 \cdot 7 \cdot 10^9 \cdot 0{,}0075},cm^4$$

$\Rightarrow I_{yb} \ge 3{,}62\ cm^4$

$I_y = I_{ya} + I_{yb}$, cm^4

$\Rightarrow I_y = 2{,}41 + 3{,}62 = 6{,}03\ cm^4$

Use ETEM Catalodue to choose the appropriate mullion with $I_y \ge 6{,}03\ cm^4$
We choose mullion E75300S with I_x = 13,91 cm^4
and I_y = 41,75 cm^4

CALCULATION OF GLASS PANE THICKNESS

*Glazing thickness:

For single glazing the minimum thickness is given by the following equations:

a) $\text{If } \frac{h_g}{l_g} \le 3, \quad t = \sqrt{\frac{10 \cdot l_g \cdot h_g \cdot w}{72}},mm$

or

b) $\text{If } \frac{h_g}{l_g} > 3, \quad t = \frac{l_g \cdot \sqrt{10 \cdot w}}{72},mm$

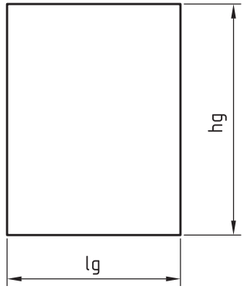
Where:
t – Minimum theoretical glass thickness, mm
w – Wind pressure, kg/m^2
l_g – The smallest dimension of the glass pane, m
h_g – The largest dimension of the glass pane, m

For double glazing, the total thickness of both glasses in the panel is equal to the thickness of a single glass pane (evaluated using the above equations) multiplied by 1.5

For triple glazing, the total thickness of all glasses in the panel is equal to the thickness of a single glass pane (evaluated using the above equations) multiplied by 1.7

Always consult facade engineer or glazing manufacturer when calculating for required glazing thickness and maximum allowable dimensions.

Example:



Initial data:
l_g = 1,5 m
h_g = 2,0 m
w = 60 kg/m^2

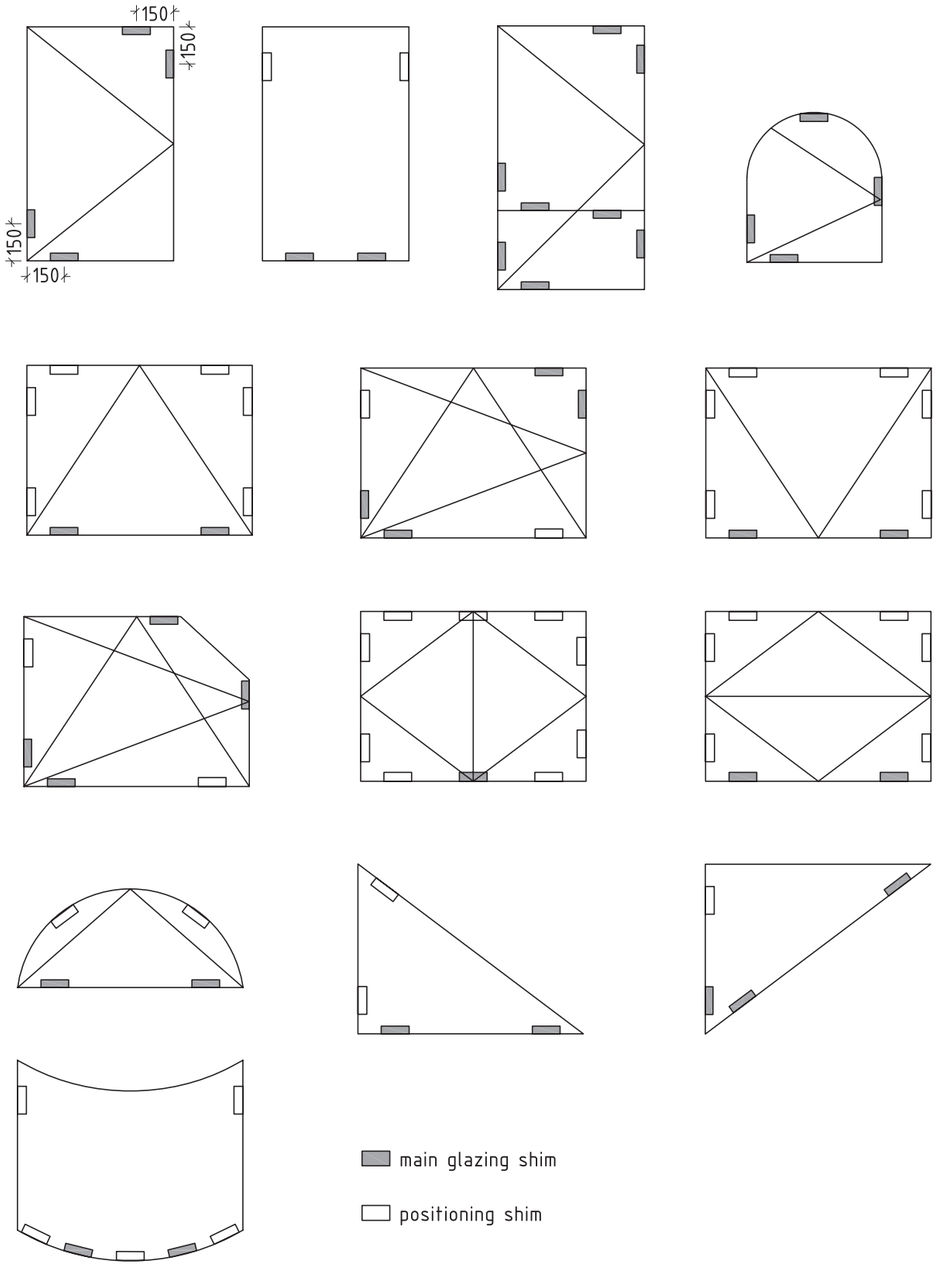
$$\frac{h_g}{l_g} = \frac{2}{1{,}5} = 1{,}33 \le 3$$

$$t = \sqrt{\frac{10 \cdot l_g \cdot h_g \cdot w}{72}} = \sqrt{\frac{10 \cdot 1{,}5 \cdot 2 \cdot 60}{72}} = \sqrt{\frac{1800}{72}} = 5mm$$

For double glazing t_{req} = 1,5 . 5 = 7,5 mm

We choose double glazing 5/14/5

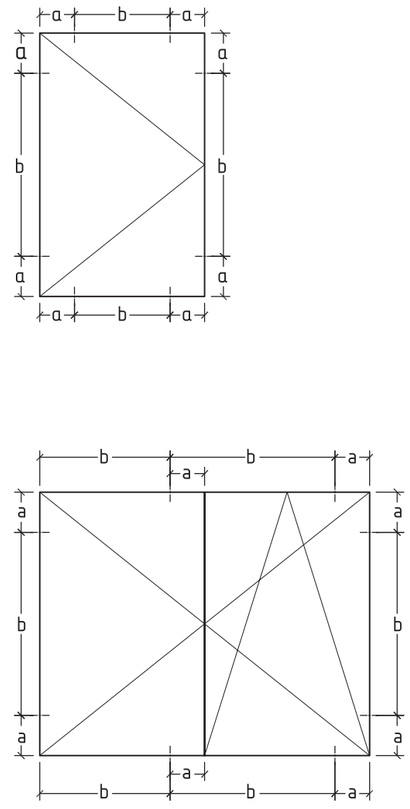
GLAZING SHIMS

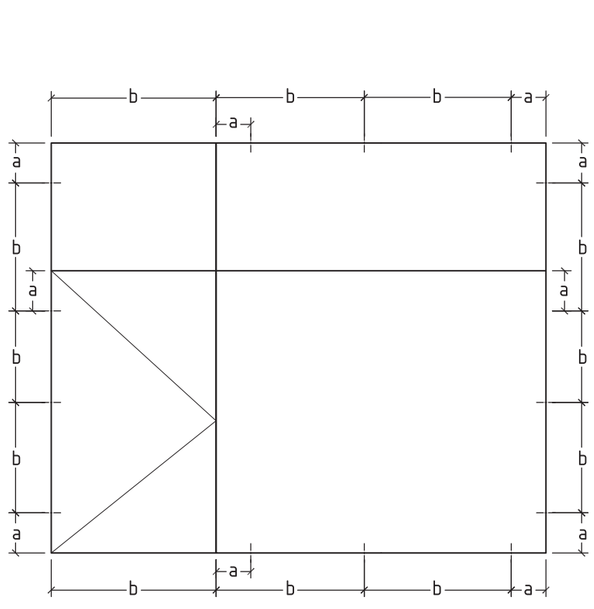


Note:
Main glazing shims should be positioned on 150 mm distance from the glazing edge.
Positioning shims do not have exactly defined position.

POSITION OF ANCHORS

a = 150 ÷ 200 mm
b ≤ 800 mm



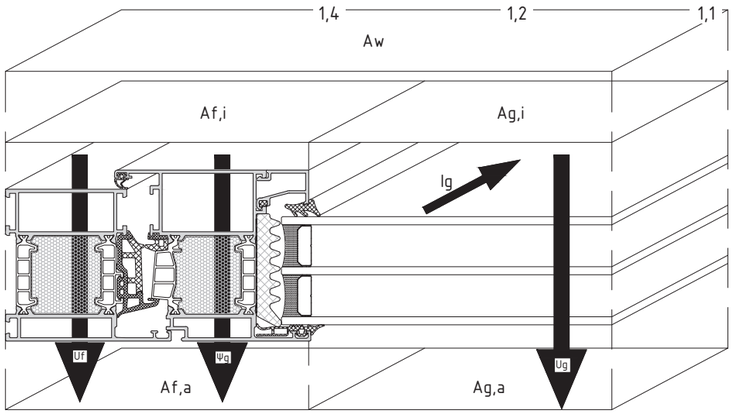


METHOD FOR CALCULATION OF THERMAL TRANSMITTANCE ACCORDING to EN ISO 10077-2

$$U_w = \frac{A_g \times U_g + A_f \times U_f + l_g \times \Psi_g}{A_g + A_f} \qquad (1)$$

U_w – thermo-transmittance coefficient of the whole structure
U_g – glass thermal transmittance coefficient
U_f – thermo-transmittance coefficient of the aluminium frame (frame and sash)
Ψ_g – spacer linear thermal transmittance
l_g – total length of the spacer
A_g – glass area
A_f – aluminium frame area (frame and sash)

U_w – is calculated by formula (1)
U_g – is given by the glass manufacturer
U_f – is given by the manufacturer of the aluminium profiles

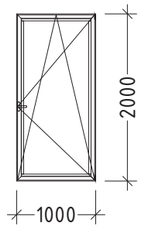


EXAMPLE FOR CALCULATING THERMAL TRANSMITTANCE COEFFICIENT

frame:	E75	U_f	1.34	$W/(m^2K)$
spacer:	warm edge	Ψ_g	0.051	$W/(m^2K)$
glass:	triple glazing	U_g	1.00	$W/(m^2K)$

window width: 1.00 m
window height: 2.00 m
length of glass edge lg: 4,89 m

$A_g = 1.24\ m^2$; $A_f = 0.76\ m^2$



$$U_w = \frac{1.24 \times 1 + 0.76 \times 1.34 + 4.89 \times 0.051}{1.24 + 0.76}$$

$U_w \simeq 1{,}3\ W/(m^2K)$

E75

WINDOW SYSTEM WITH THERMAL BREAK

E75

WINDOW AND FLAT DOOR SYSTEM
WITH THERMAL BREAK

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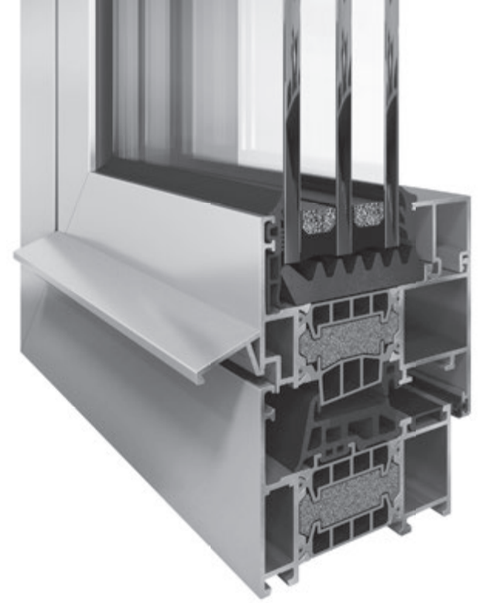
GENERAL INFORMATION

CONCEPT / ADVANTAGES / CERTIFICATES

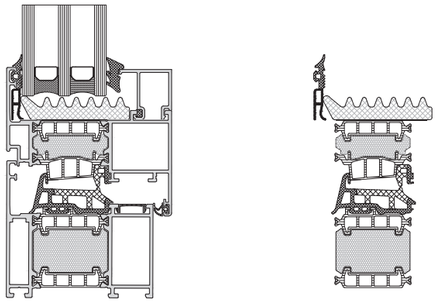


E75 WINDOW CONCEPT

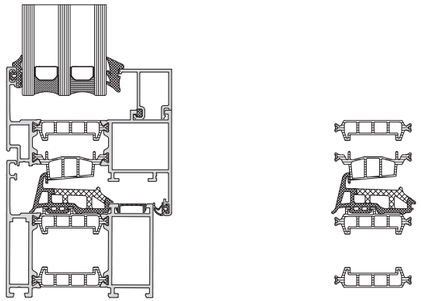
E75 WINDOW IS A SYSTEM CORRESPONDING TO THE MOST STRINGENT REQUIREMENTS FOR THERMAL INSULATION, FUNCTIONALITY AND AESTHETICS.

- Elegant straight design
- 75 mm system width allowing usage of triple glazing
- Wide polyamide bars
- Excellent thermal insulation from 1,1 $W/m^2.K$
- Additional insulator in the thermo-break area
- Additional insulator under the glass
- Effective drainage
- Excellent water-tightness and air-permeability
- Co-extruded central gasket
- Possibility for mounting anti-burglar hardware for good security performance
- Extruded corners for crimping machine with glue allowing greater connections

ADVANCED SYSTEM



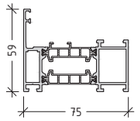
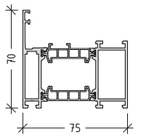
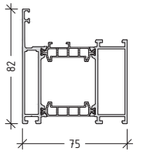
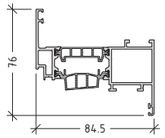
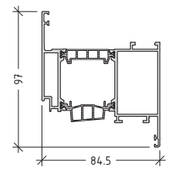
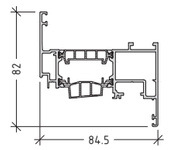
BASIC SYSTEM

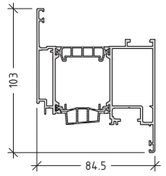
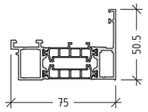
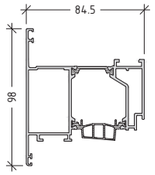
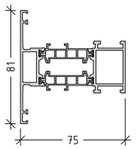
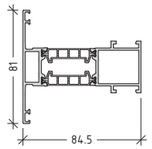
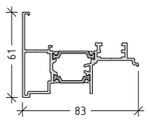


TABLES

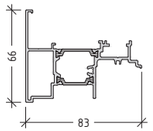
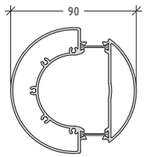
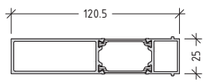
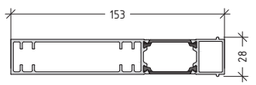
TYPOLOGIES / LIST OF PROFILES / CHARACTERISTICS

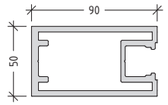
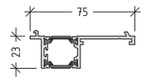
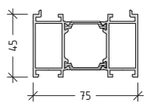
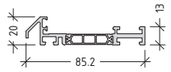
window system with thermal break

code	profile	weight length moment of inertia
E75100 frame		1560 g/m L=6.01 m Ix=9.68 cm^4 Iy=38.61 cm^4
E75101 frame		1762 g/m L=6.01 m Ix=17.48 cm^4 Iy=45.08 cm^4
E75102 frame		1983 g/m L=6.01 m Ix=29.79 cm^4 Iy=52.1 cm^4
E75200 casement EURO groove		1651 g/m L=6.01 m Ix=11.8 cm^4 Iy=51.36 cm^4
E75201 casement EURO groove		2036 g/m L=6.01 m Ix=31.19 cm^4 Iy=66.94 cm^4
E75220 casement PVC groove		1806 g/m L=6.01 m Ix=14.83 cm^4 Iy=56.28 cm^4

code	profile	weight length moment of inertia
E75221 casement PVC groove		2186 g/m L=6.01 m Ix=37.2 cm^4 Iy=71.8 cm^4
E75140 reverse profile		1325 g/m L=6.01 m Ix=5.85 cm^4 Iy=29.83 cm^4
E75241		2068 g/m L=6.01 m Ix=33.1 cm^4 Iy=66.68 cm^4
E75300 T profile for frame		1660 g/m L=6.01 m Ix=13.91 cm^4 Iy=41.75 cm^4
E75340 T profile for casement		1718 g/m L=6.01 m Ix=14.39 cm^4 Iy=54.44 cm^4
E75500 overhung EURO groove		1408 g/m L=6.01 m

L75-01

code	profile	weight length moment of inertia
E75540 overhung PVC groove		1488 g/m L=6.01 m
E75603 round column		2232 g/m L=6.01 m Ix=56.34 cm^4 Iy=55.75 cm^4
E75602 adapter		216 g/m L=6.01 m
E50690 Intermediate profile		1550 g/m L=6.01 m Ix=5.03 cm^4 Iy=79.15 cm^4
E50691 Intermediate profile		2046 g/m L=6.01 m Ix=7.09 cm^4 Iy=161.25 cm^4

code	profile	weight length moment of inertia
E62050 reinforce profile		3555 g/m L=6.01 m Ix=47.52 cm^4 Iy=129.45 cm^4
E22616 cap		105 g/m L=6.01 m
E75601 adapter for facade		899 g/m L=6.01 m
E75610 frame extension		1600 g/m L=6.01 m
E4275606 alignment profile		120 g/m L=6.01 m
E75851 threshold		916 g/m L=6.01 m

code	profile	weight length moment of inertia
E75850 application profile		467 g/m L=6.01 m
E4275851 threshold		173 g/m L=6.01 m
E2308 operating rod		159 g/m L=4.4 m
E62600		85 g/m L=6.01 m
E2357 drip profile		144 g/m L=6.01 m
E4275607 dilatation profile		257 g/m L=6.01 m

code	profile	weight length moment of inertia
E4060307 glazing bead		267 g/m L=6.01 m
E4060310 glazing bead		277 g/m L=6.01 m
E4060312 glazing bead		287 g/m L=6.01 m
E4060315 glazing bead		287 g/m L=6.01 m
E4060317 glazing bead		297 g/m L=6.01 m
E4060320 glazing bead		305 g/m L=6.01 m

code	profile	weight length moment of inertia
E4060322 glazing bead		314 g/m L=6.01 m
E4060325 glazing bead		324 g/m L=6.01 m
E4060327 glazing bead		335 g/m L=6.01 m
E4060330 glazing bead		345 g/m L=6.01 m
E4060332 glazing bead		355 g/m L=6.01 m
E4060335 glazing bead		385 g/m L=6.01 m

code	profile	weight length moment of inertia
E4060337 glazing bead		395 g/m L=6.01 m
E4060340 glazing bead		405 g/m L=6.01 m
E4060342 glazing bead		415 g/m L=6.01 m
E4060345 glazing bead		426 g/m L=6.01 m
E4060307 glazing bead		262 g/m L=6.01 m
E4060310 glazing bead		277 g/m L=6.01 m

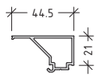
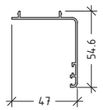
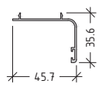
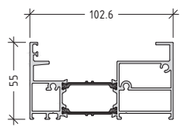
L75-04

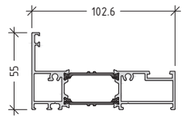
code	profile	weight length moment of inertia
E4060312 glazing bead		287 g/m L=6.01 m
E4060815 glazing bead		337 g/m L=6.01 m
E4060817 glazing bead		347 g/m L=6.01 m
E4060820 glazing bead		357 g/m L=6.01 m
E4060822 glazing bead		356 g/m L=6.01 m
E4060825 glazing bead		366 g/m L=6.01 m

code	profile	weight length moment of inertia
E4060827 glazing bead		376 g/m L=6.01 m
E4060830 glazing bead		386 g/m L=6.01 m
E4060832 glazing bead		396 g/m L=6.01 m
E4060835 glazing bead		430 g/m L=6.01 m
E4060837 glazing bead		440 g/m L=6.01 m
E4060840 glazing bead		450 g/m L=6.01 m

L75-05

window system with thermal break E75

code	profile	weight length moment of inertia
E4060842 glazing bead		460 g/m L=6.01 m
E4060845 glazing bead		470 g/m L=6.01 m
E1115 wall joining profile		408 g/m L=6.01 m
E1127 wall joining profile		288 g/m L=6.01 m
E5366 wall joining profile		269 g/m L=6.01 m
E4275610 top receptor		2256 g/m L=6.01 m

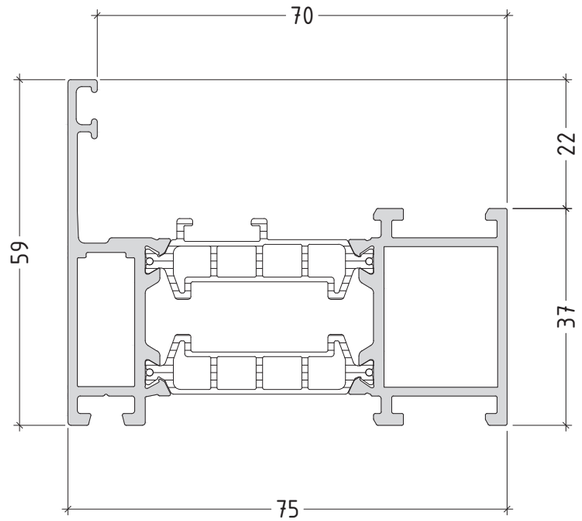
code	profile	weight length moment of inertia
E4275611 bottom receptor		1746 g/m L=6.01 m
E4260613 glazing bead		343 g/m L=6.01 m
E4260612 glazing bead		362 g/m L=6.01 m

L75-06

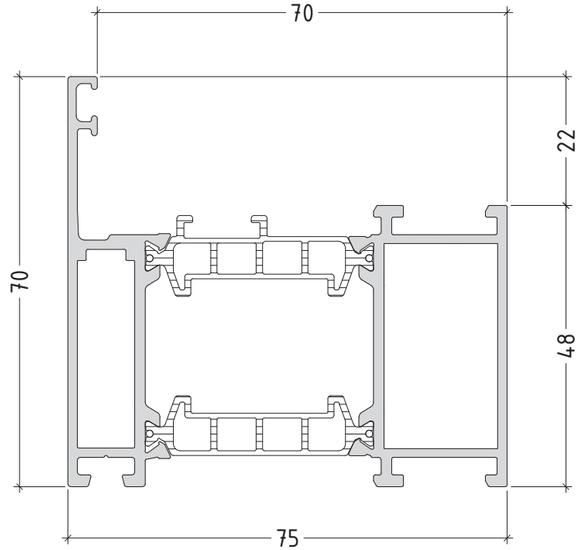
PROFILES

DRAWINGS

E75100
1560 g/m



E75101
1762 g/m



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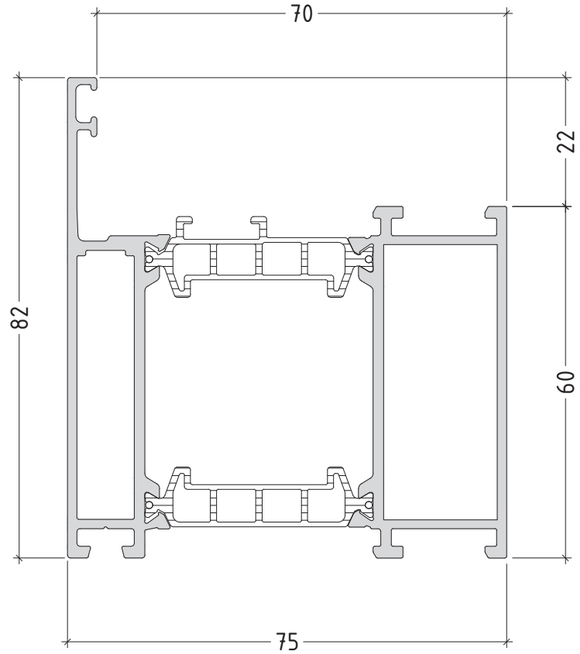
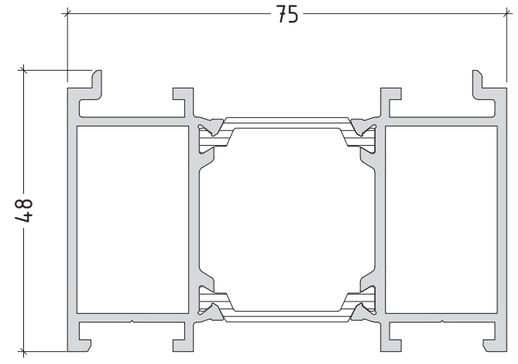
P75_01

E75102
1983 g/m



E75610
1600 g/m



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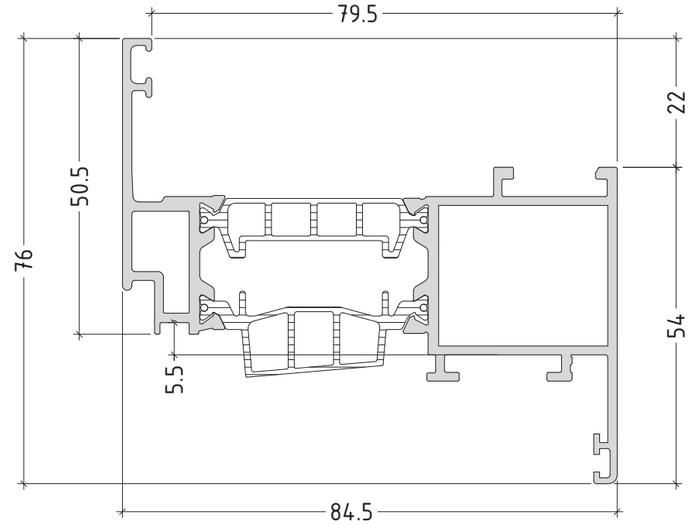
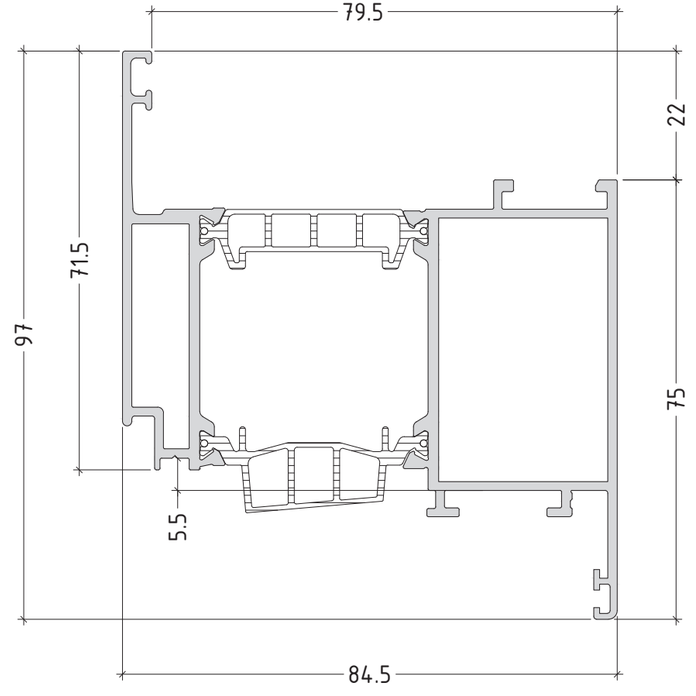
P75-02

E75200
1651 g/m



E75201
2036 g/m



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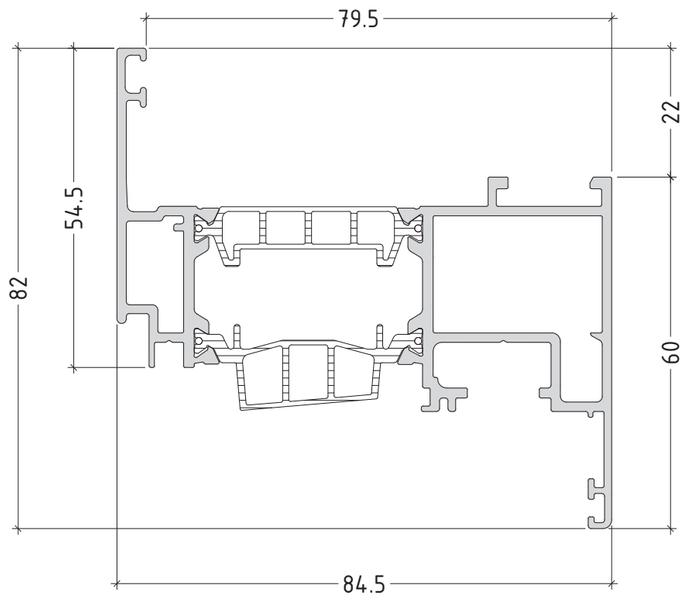
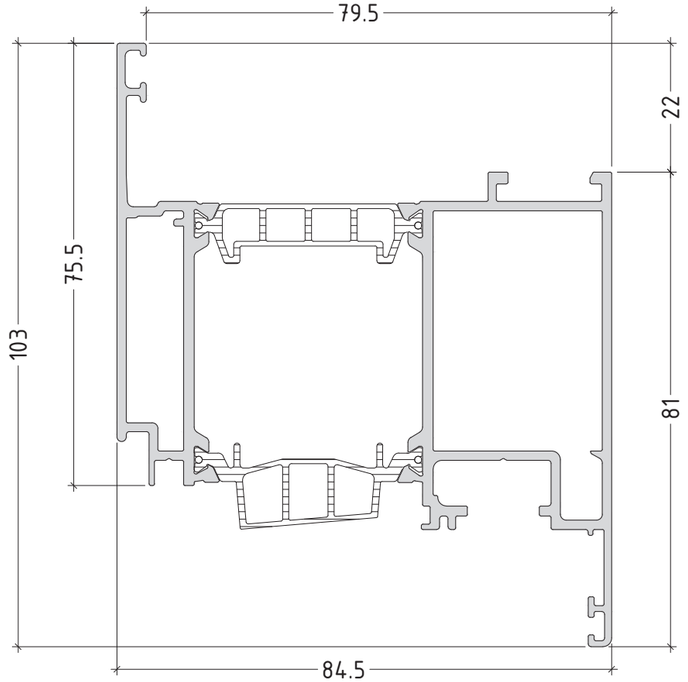
P75-03

E75220
1806 g/m



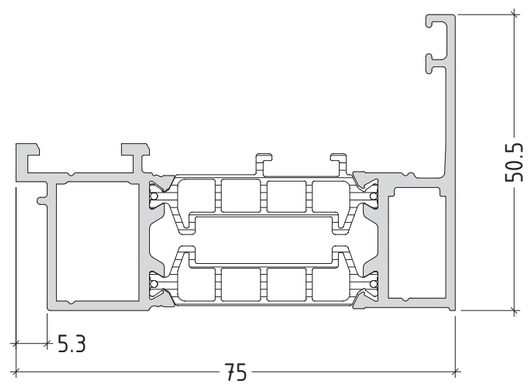
E75221
2186 g/m



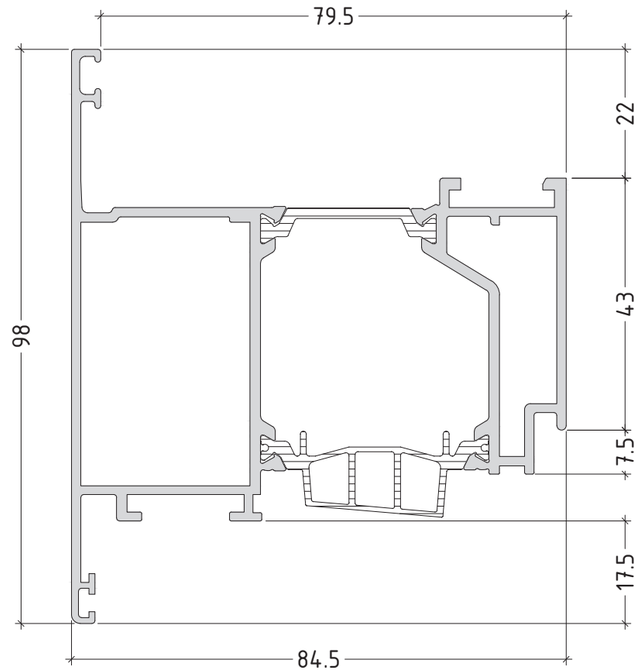
scale : 1:1

P75-04

E75140
1325 g/m



E75241
2068 g/m



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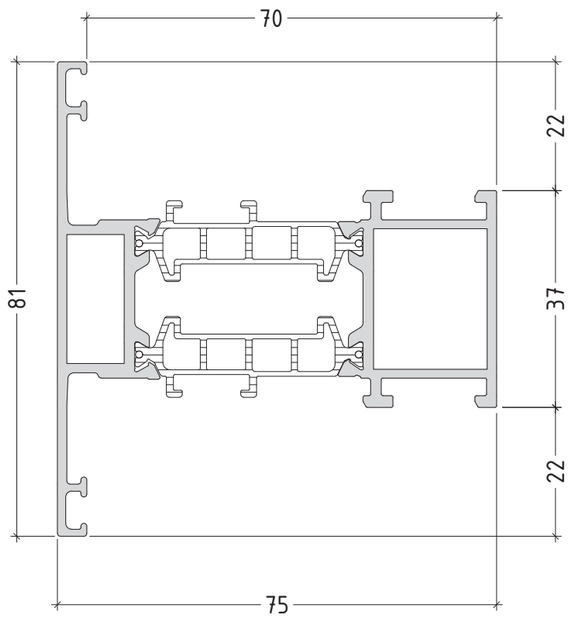
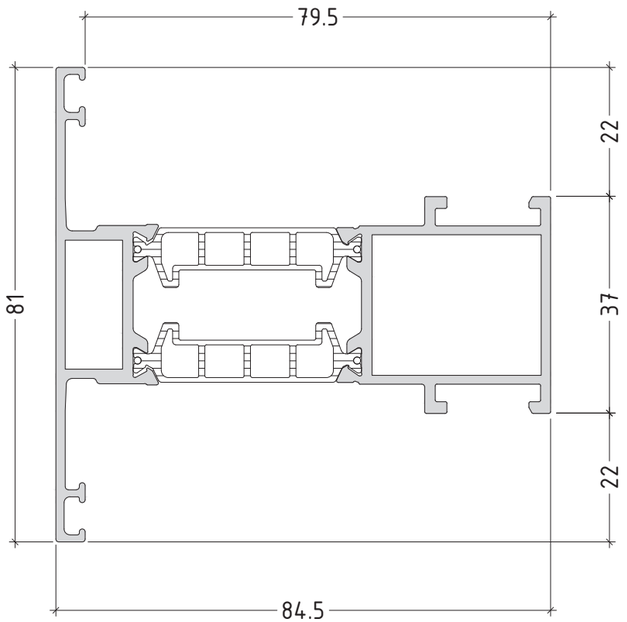
P75-05

E75300
1660 g/m



E75340
1718 g/m



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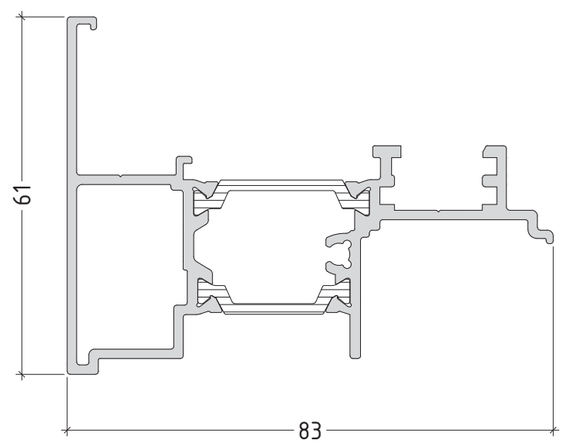
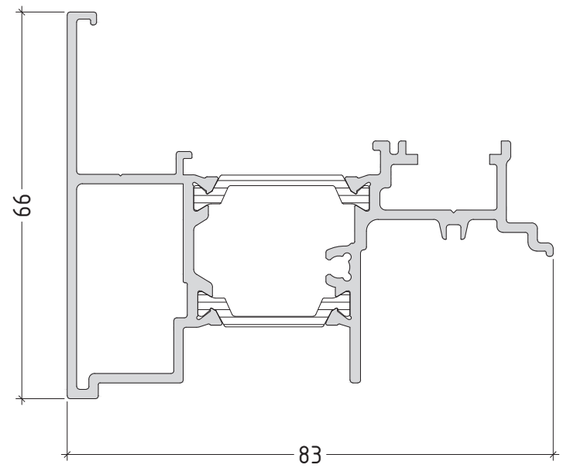
P75_06

E75500
1408 g/m



E75540
1488 g/m



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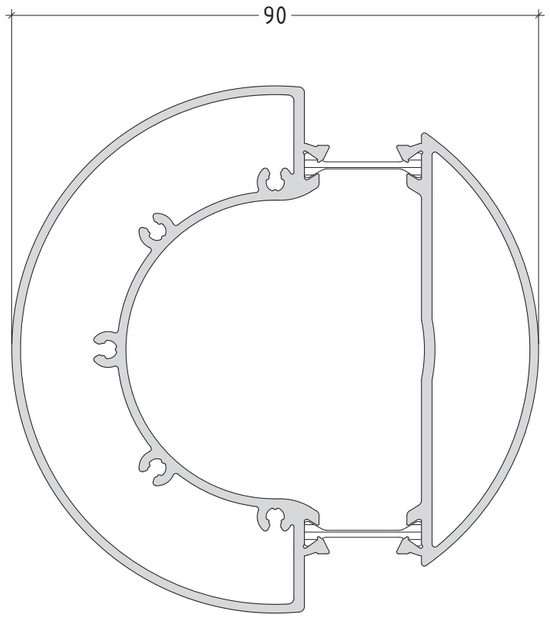
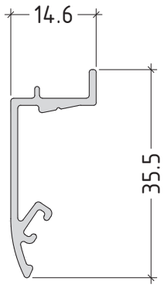
P75_07

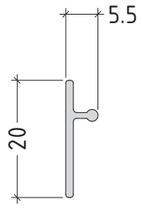
E75603
2232 g/m



E75602
216 g/m



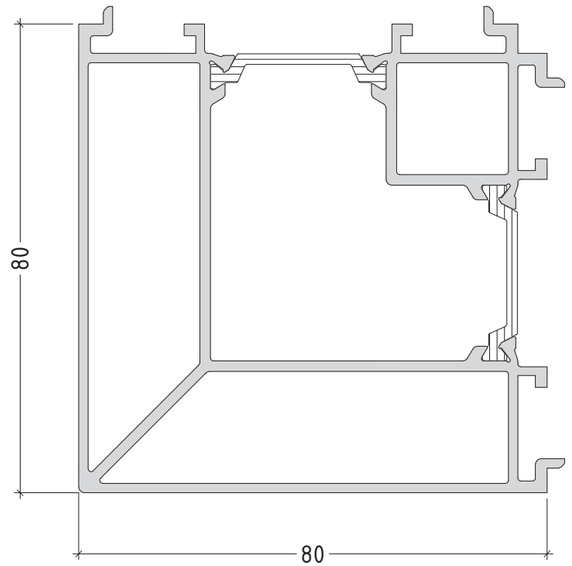
E62600
85 g/m



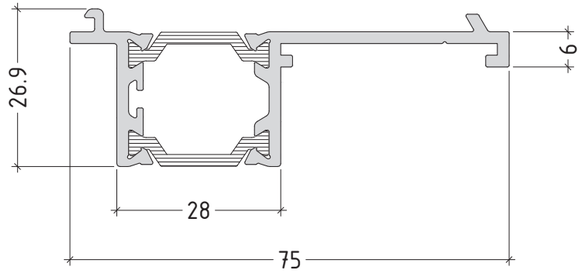
scale : 1:1

P75_08

E75600
2533 g/m



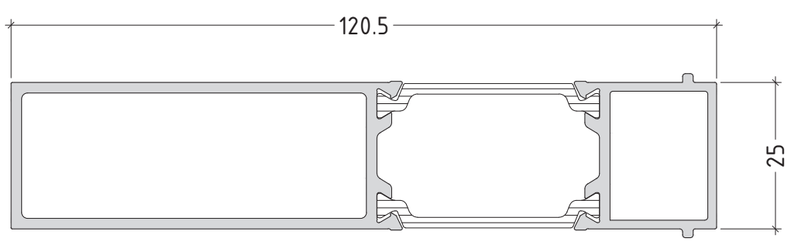
E75601
899 g/m



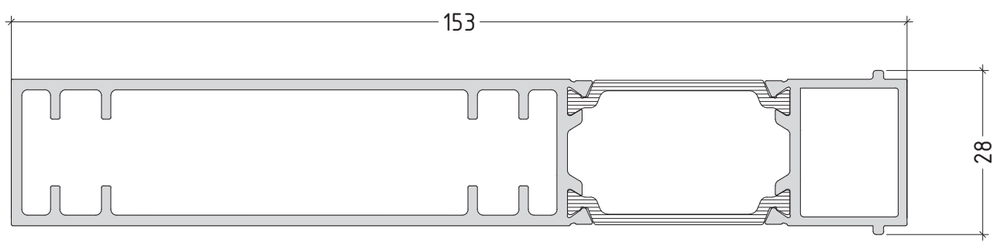
scale : 1:1

P75_09

E50690
1550 g/m



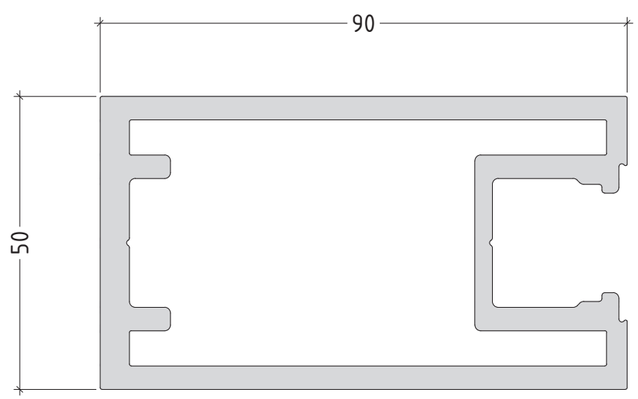
E50691
2046 g/m



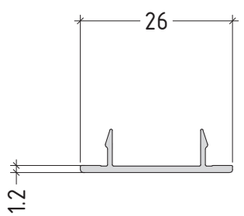
scale : 1:1

P75-10

E6205
3555 g/m



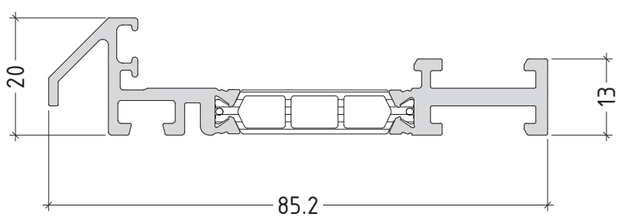
E22616
105 g/m



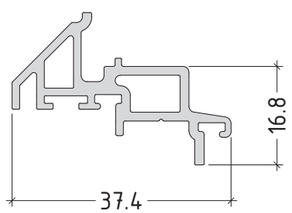
scale : 1:1

P75-11

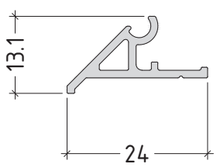
E75851
916 g/m



E75850
467 g/m



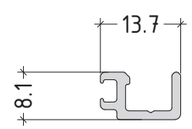
E4275851
173 g/m



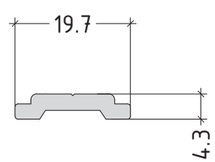
scale : 1:1

P75-12

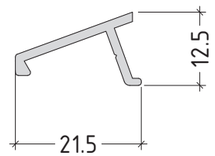
E4275606
120 g/m



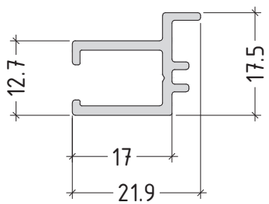
E2308
159 g/m



E2357
144 g/m

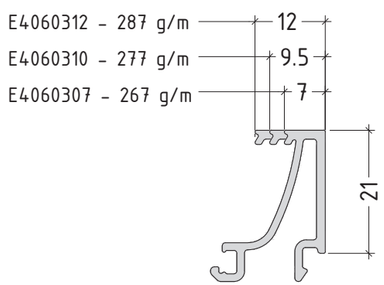


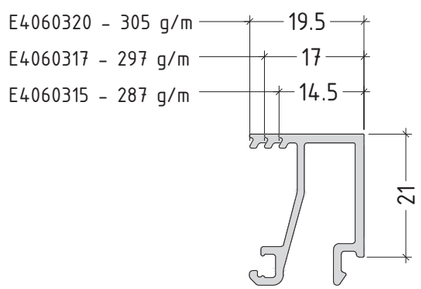
E4275607
257 g/m

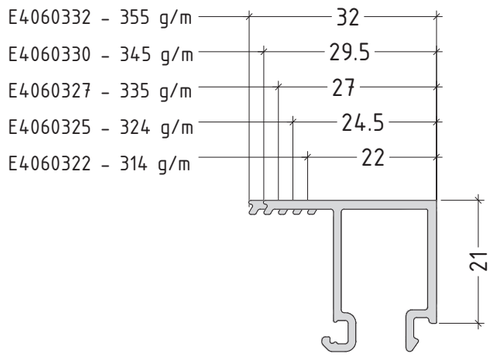


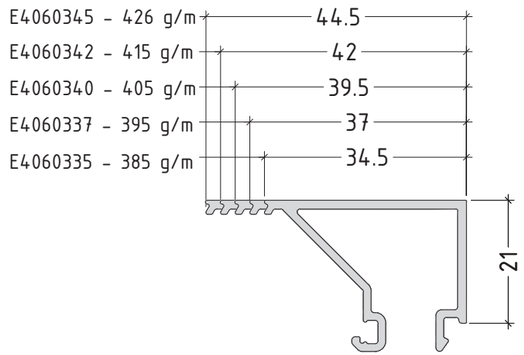
scale : 1:1

P75-13



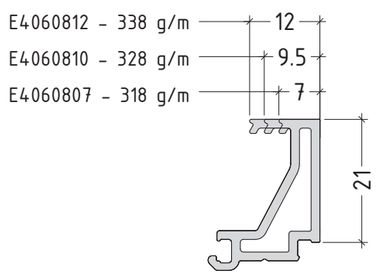


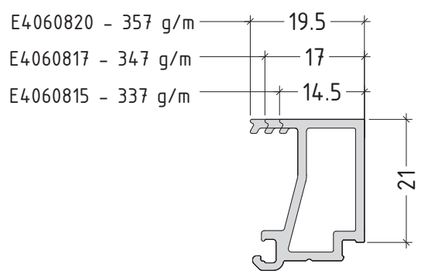


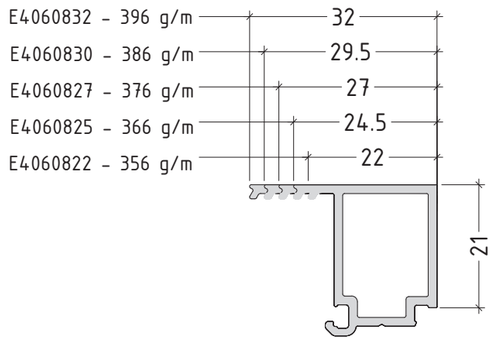


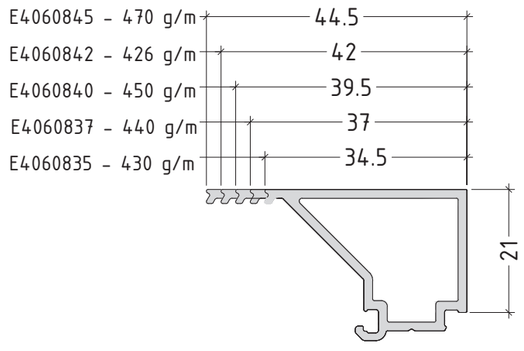
scale : 1:1

P75-14





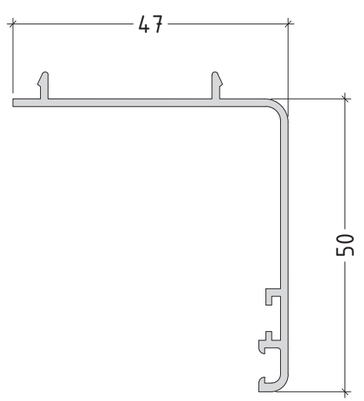




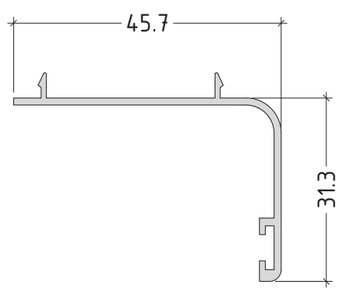
scale : 1:1

P75-15

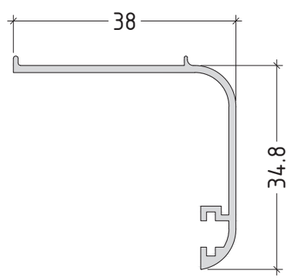
E1115
408 g/m



E1127
288 g/m



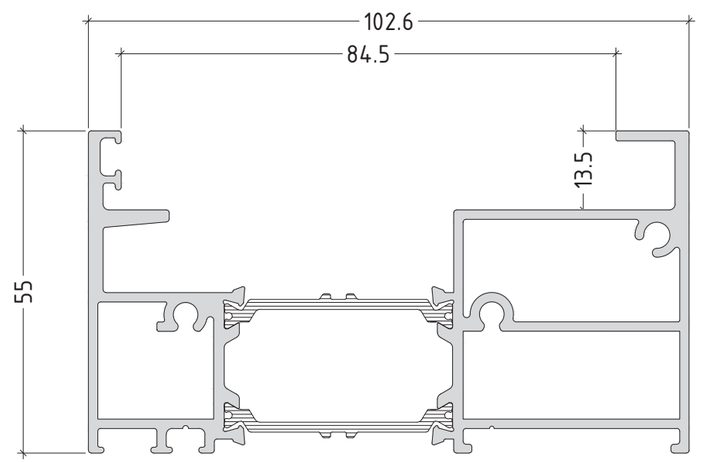
E5366
269 g/m



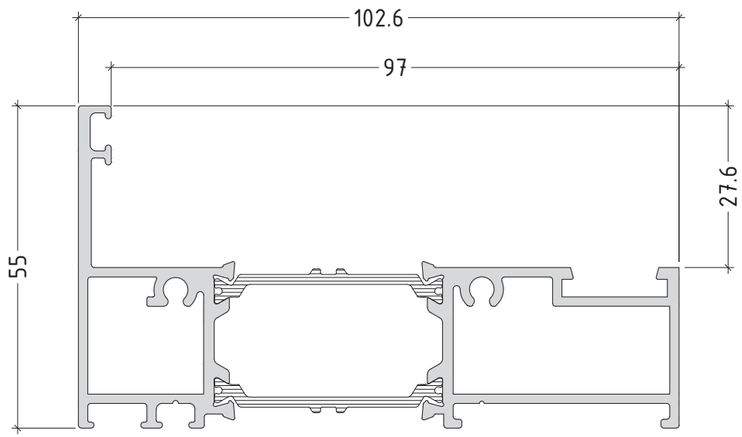
scale : 1:1

P75-16

E4275610
2256 g/m



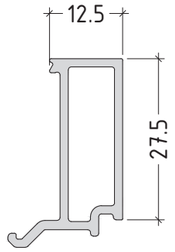
E4275611
1746 g/m



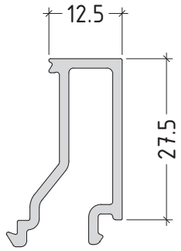
scale : 1:1

P75-17

E4260613
343 g/m



E4260612
362 g/m

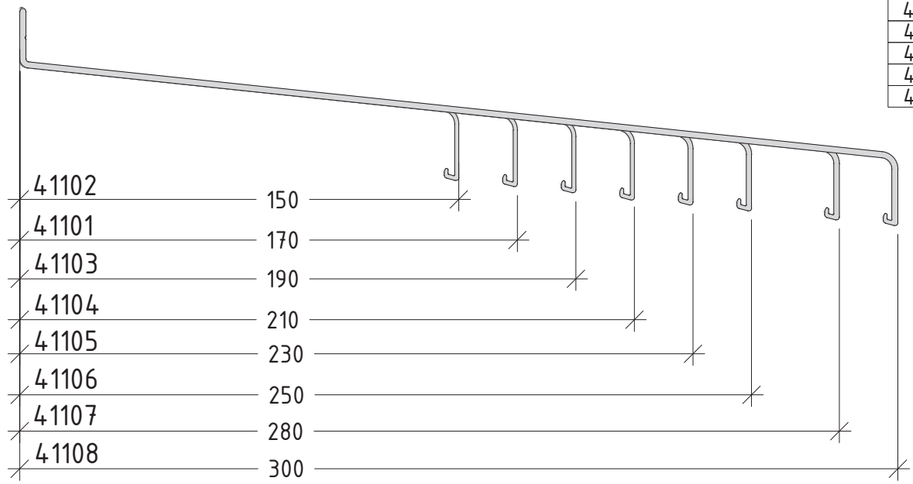


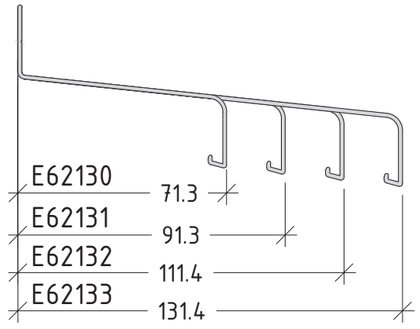
scale : 1:1

P75-18

LIST OF DRIP SILLS

CODE	g/m	length
41101	738	6.30m
41102	813	6.30m
41103	890	6.30m
41104	1099	6.30m
41105	1257	6.30m
41106	1427	6.30m
41107	1658	6.30m
41108	1941	6.30m





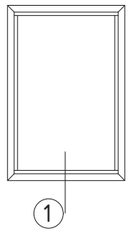
CODE	g/m	length
E62130	431	6.30m
E62131	501	6.30m
E62132	615	6.30m
E62133	690	6.30m

scale : 1:2

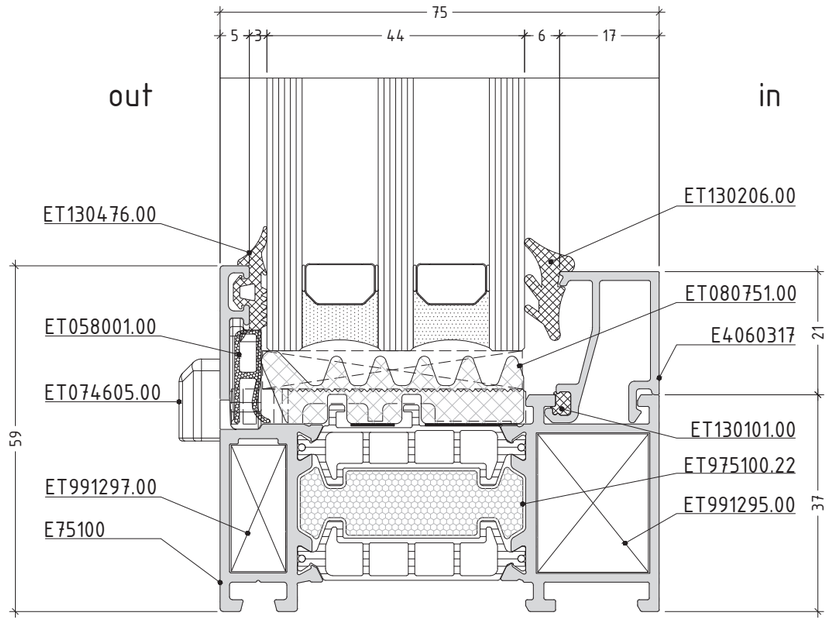
P75-17

SECTIONS

SECTIONS / DETAILS

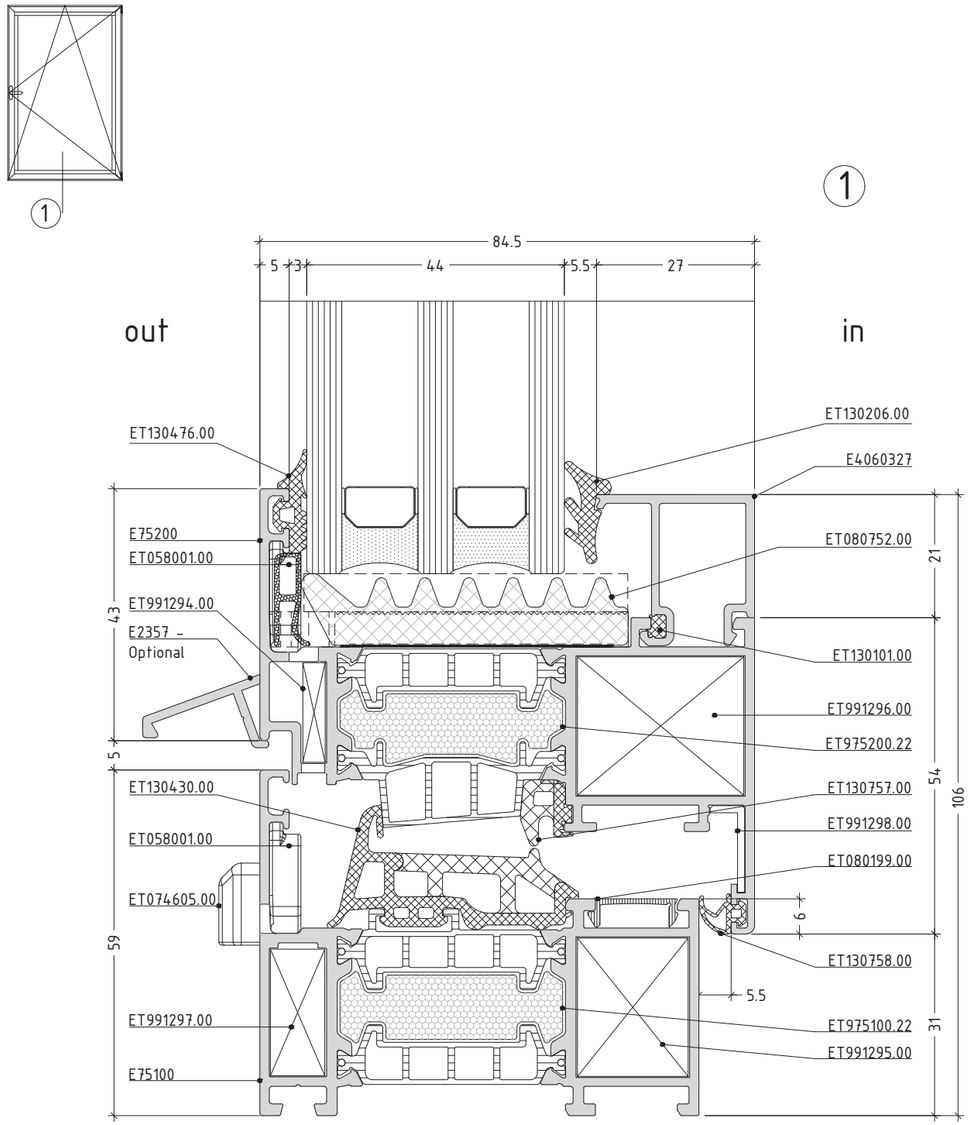


1



scale : 1:1

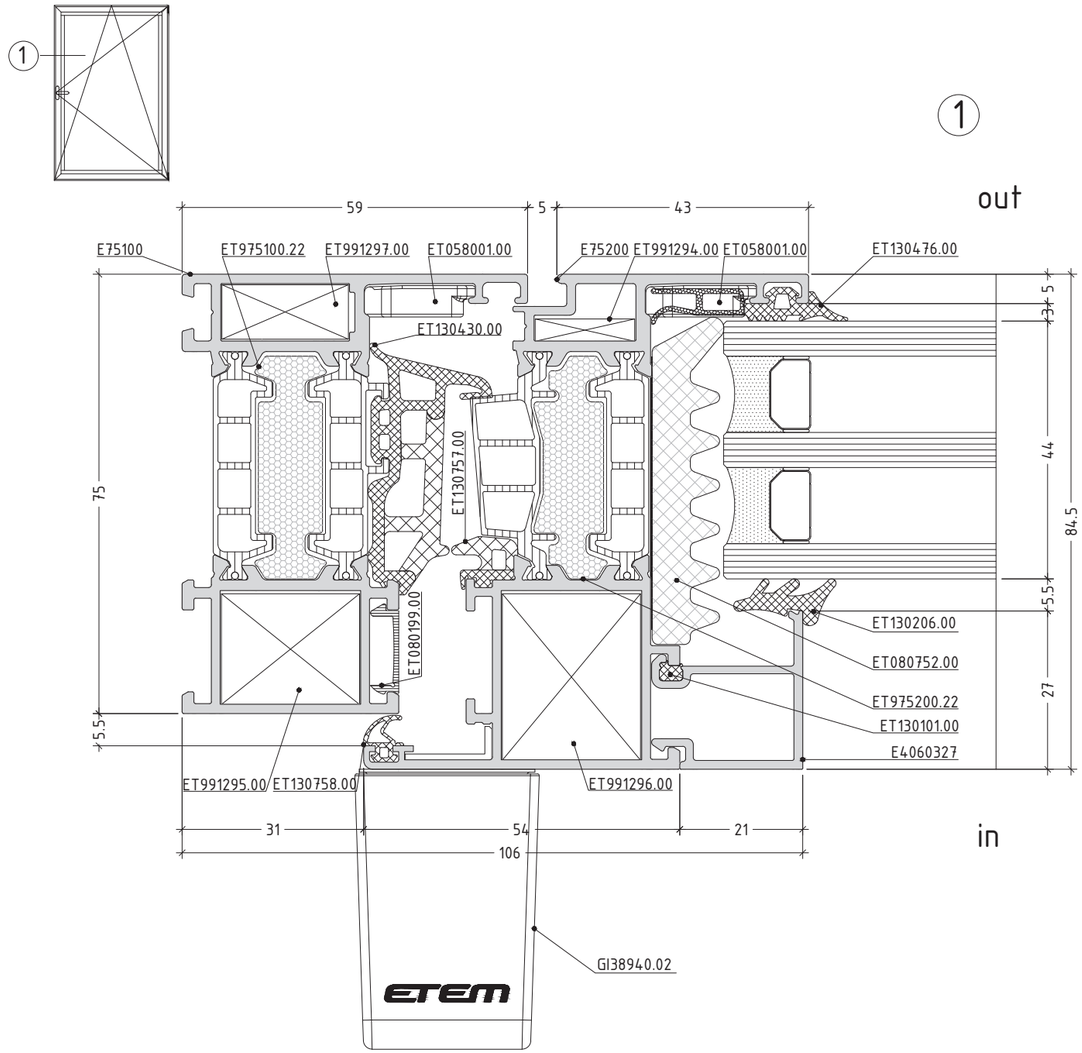
075-1



scale : 1:1

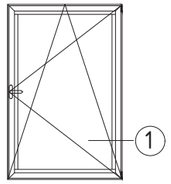
D75-2

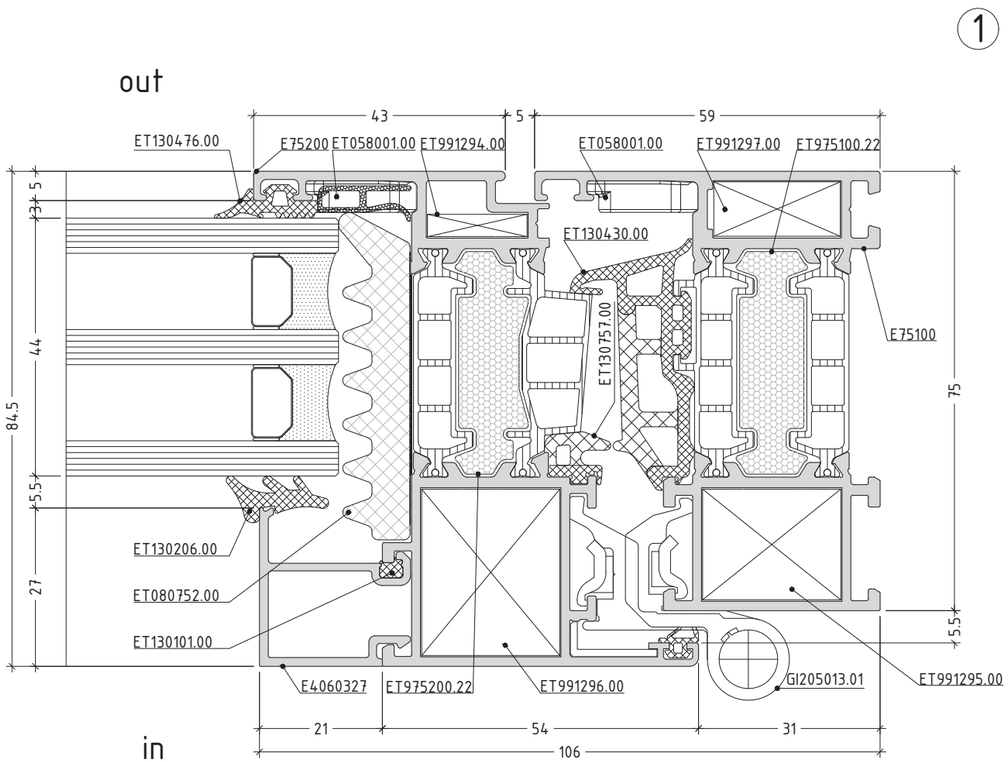
opening system with thermal break E75



scale : 1:1

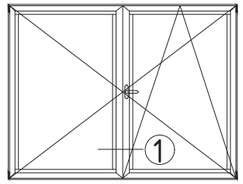
D75-3

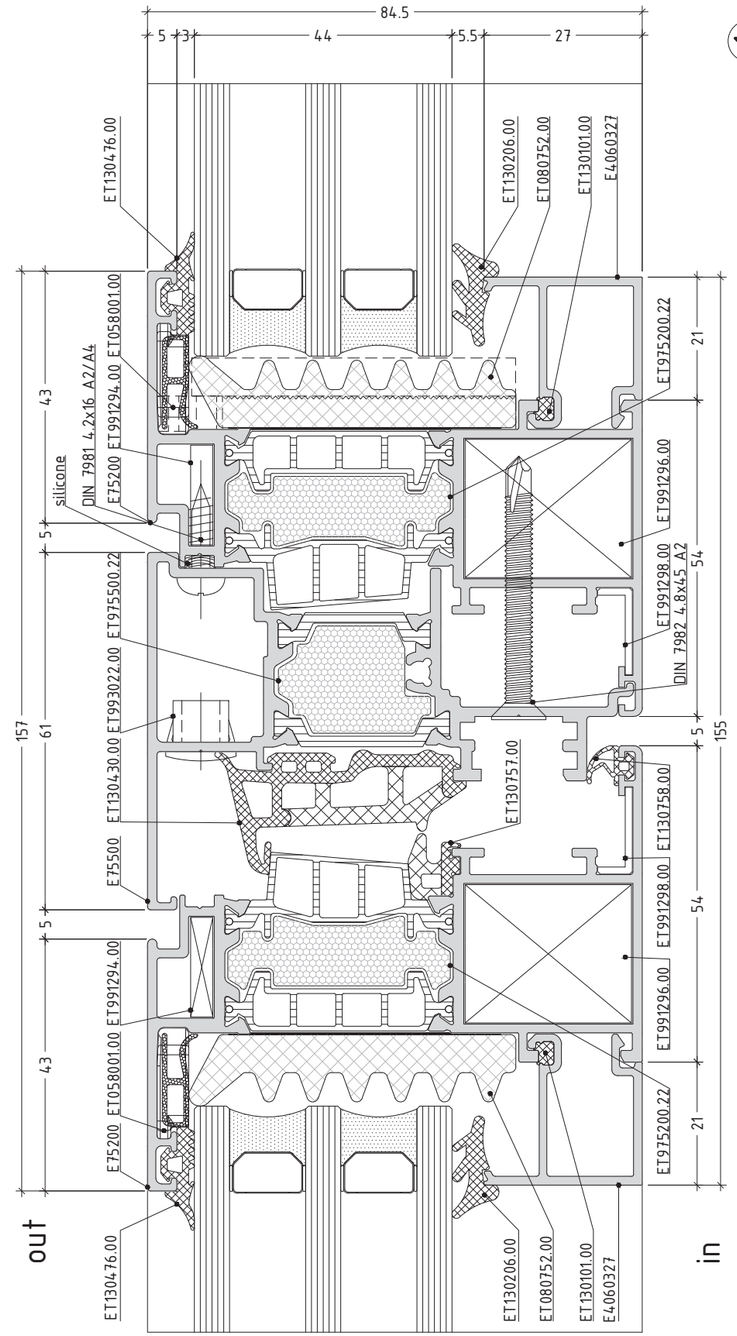




scale : 1:1

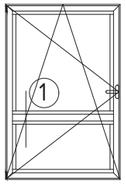
D75-4



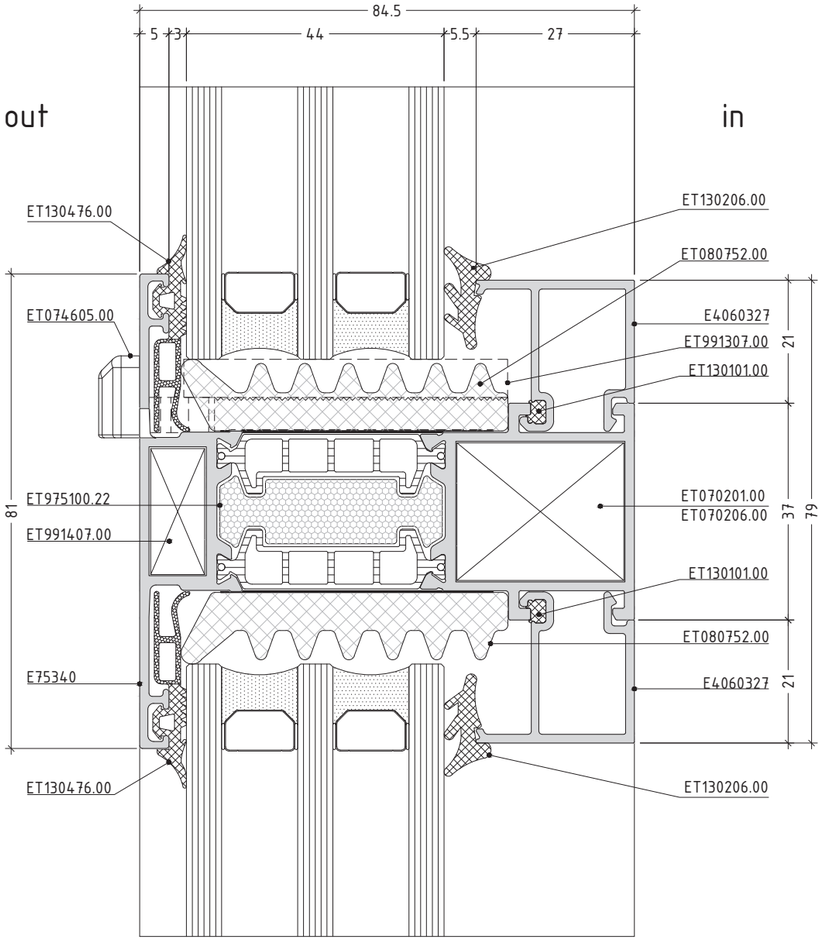


scale : 1:1

D68-5



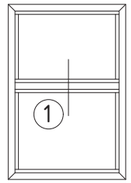
1



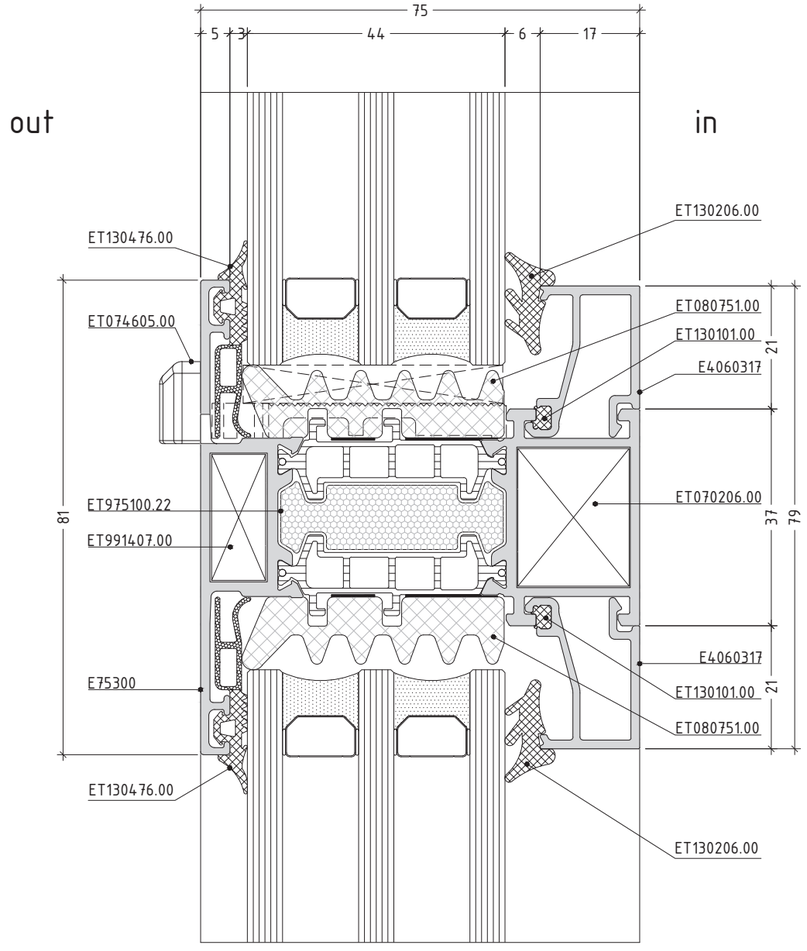
scale : 1:1

D75-6

opening system with thermal break E75

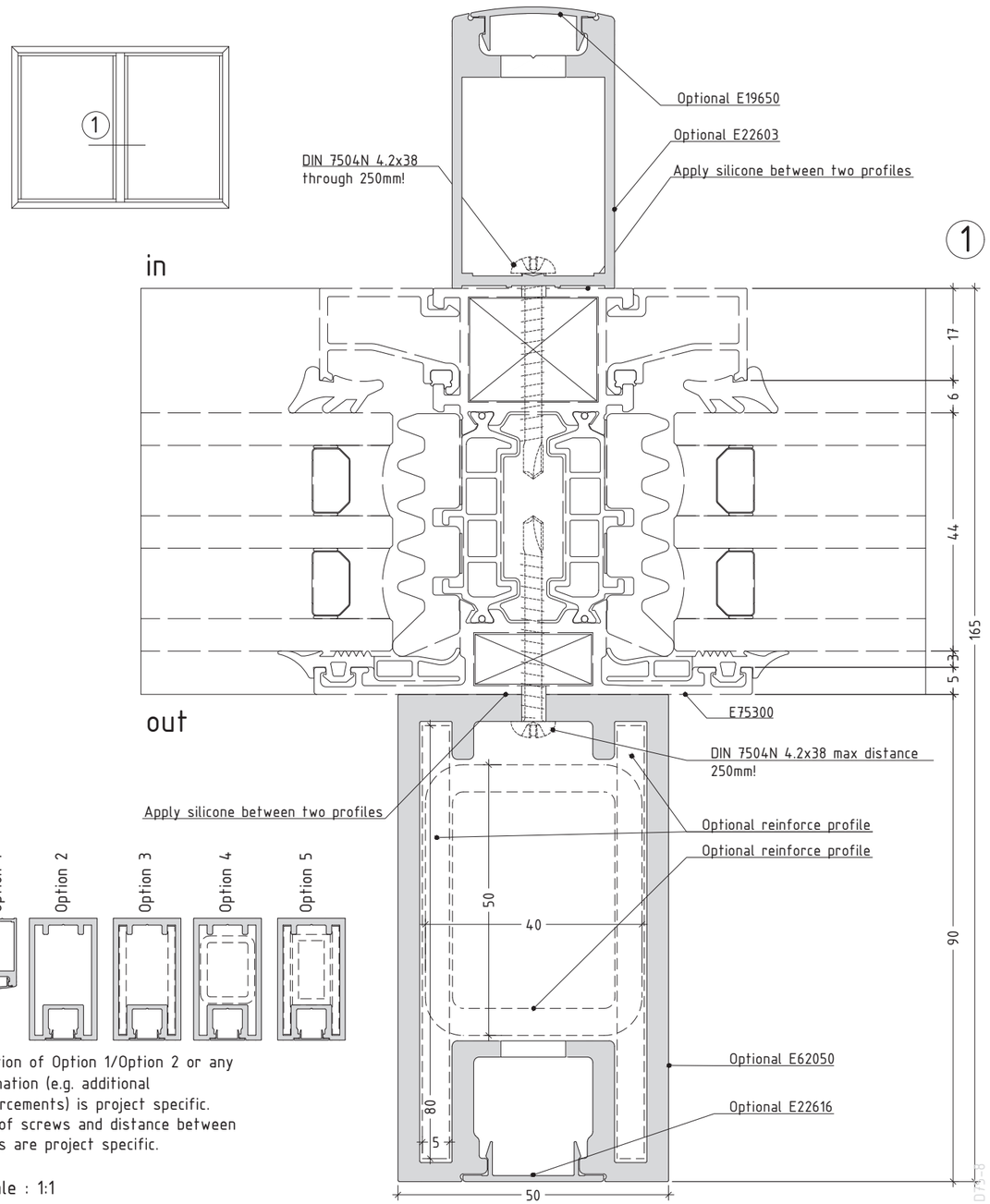


1



scale : 1:1

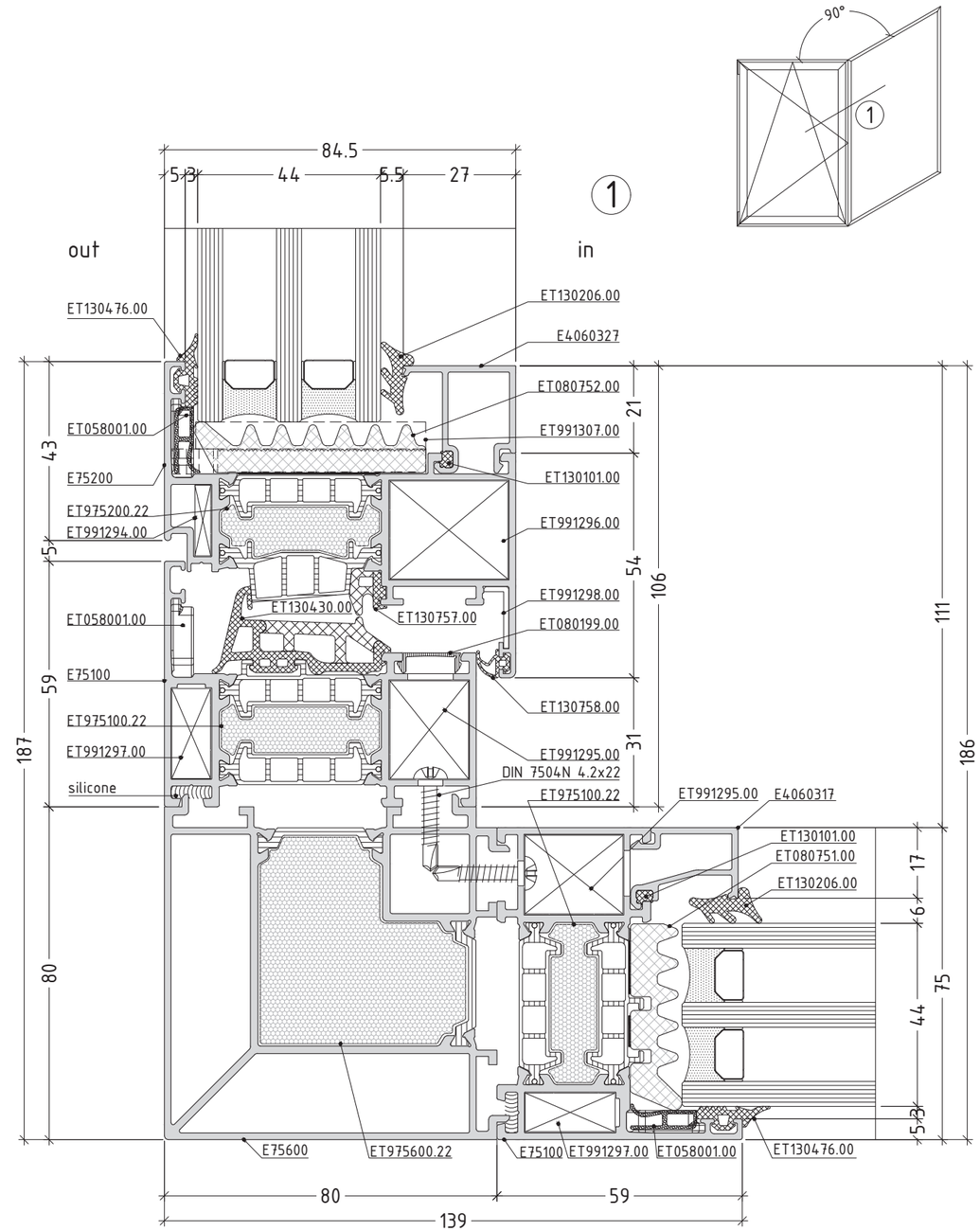
D75-7



Selection of Option 1/Option 2 or any combination (e.g. additional reinforcements) is project specific. Type of screws and distance between screws are project specific.

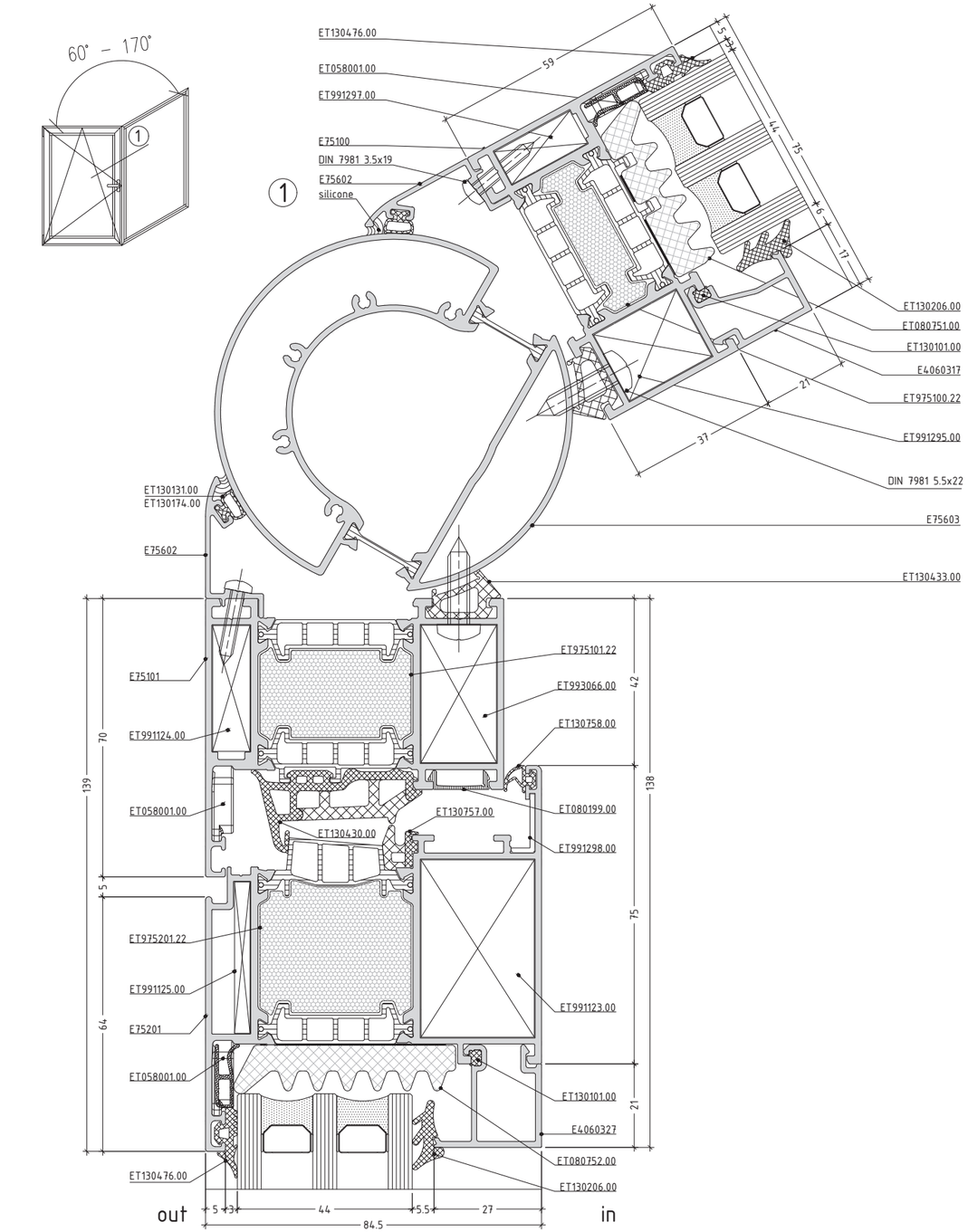
scale : 1:1

D75-8



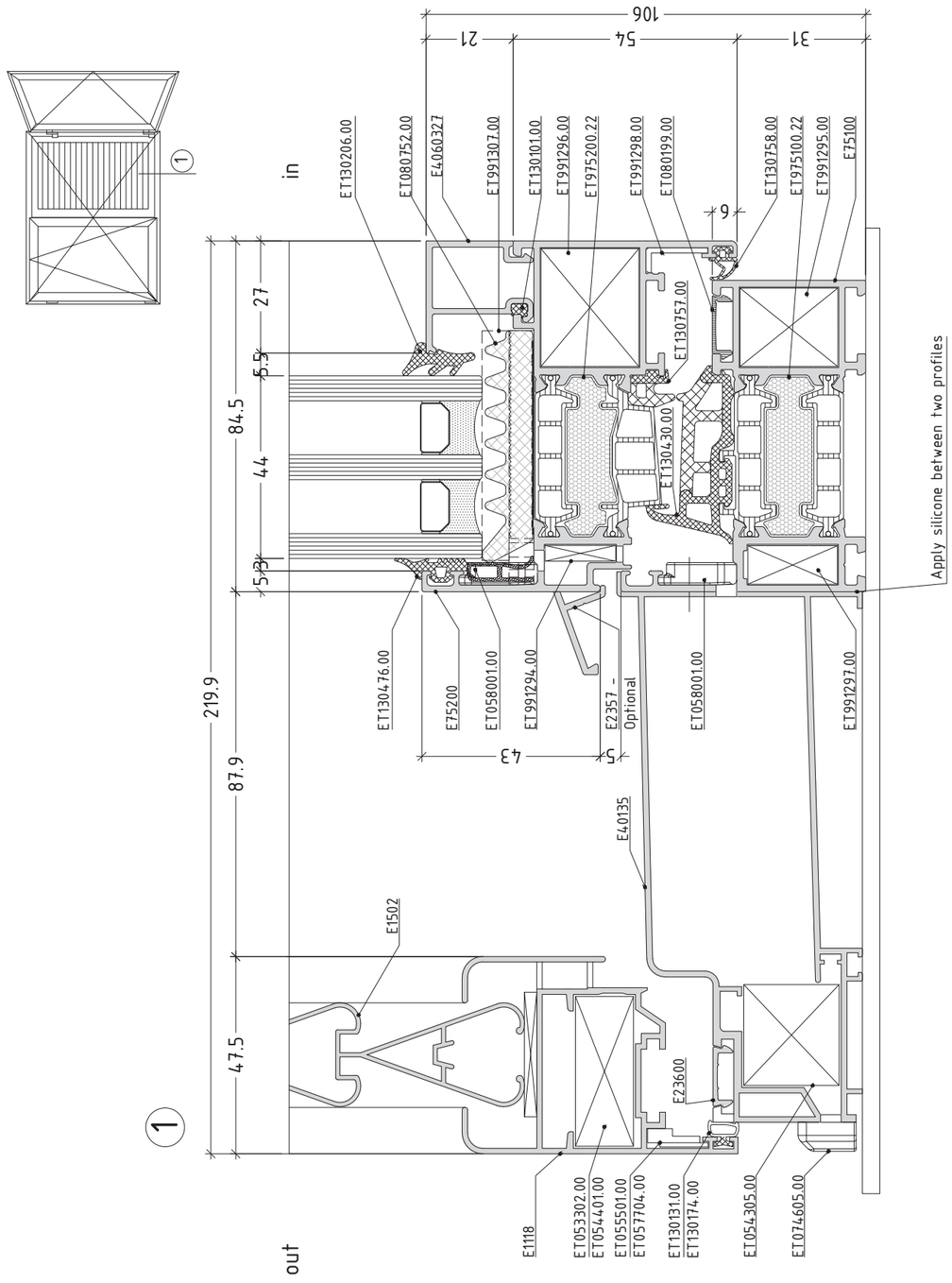
scale : 3/4

D75-9



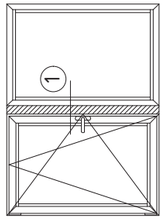
scale : 3/4

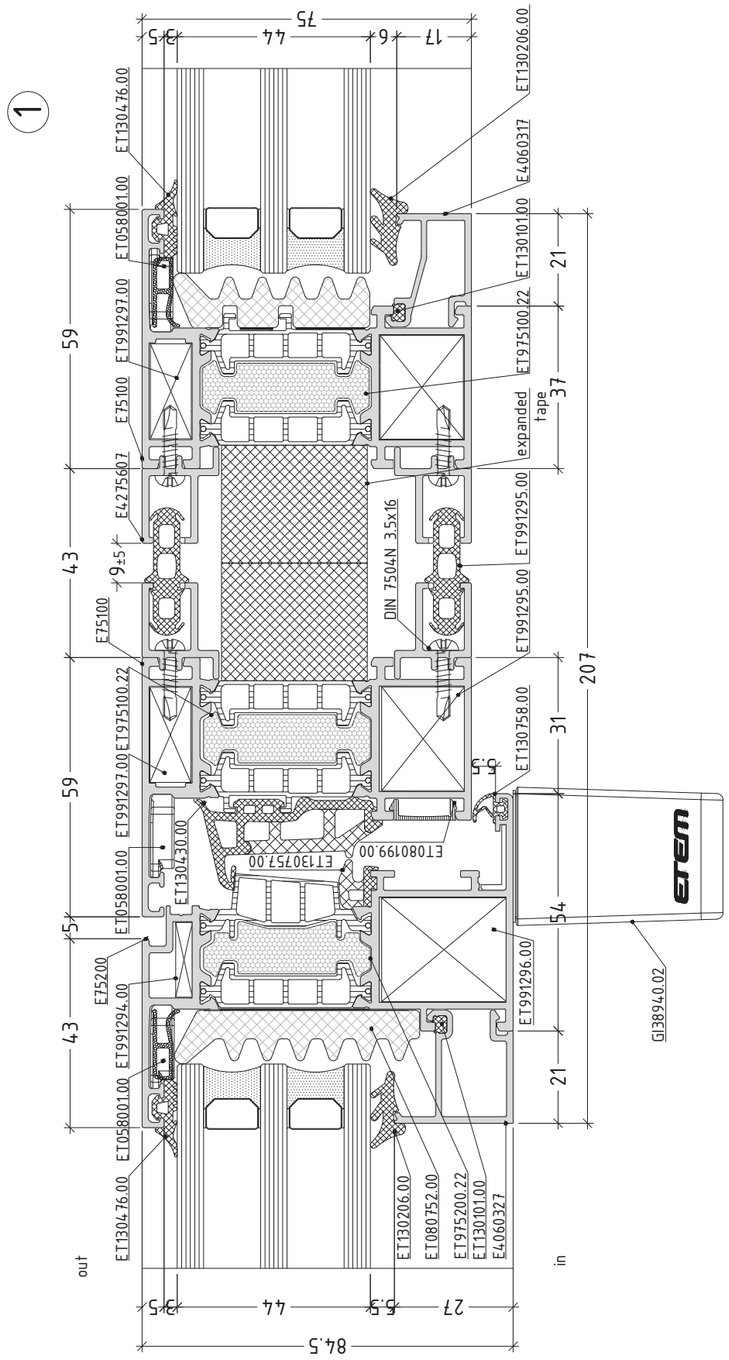
D75-10

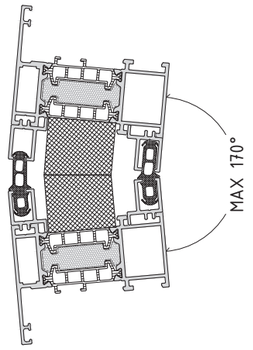


scale : 3/4

D75-11

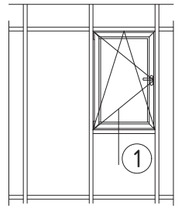




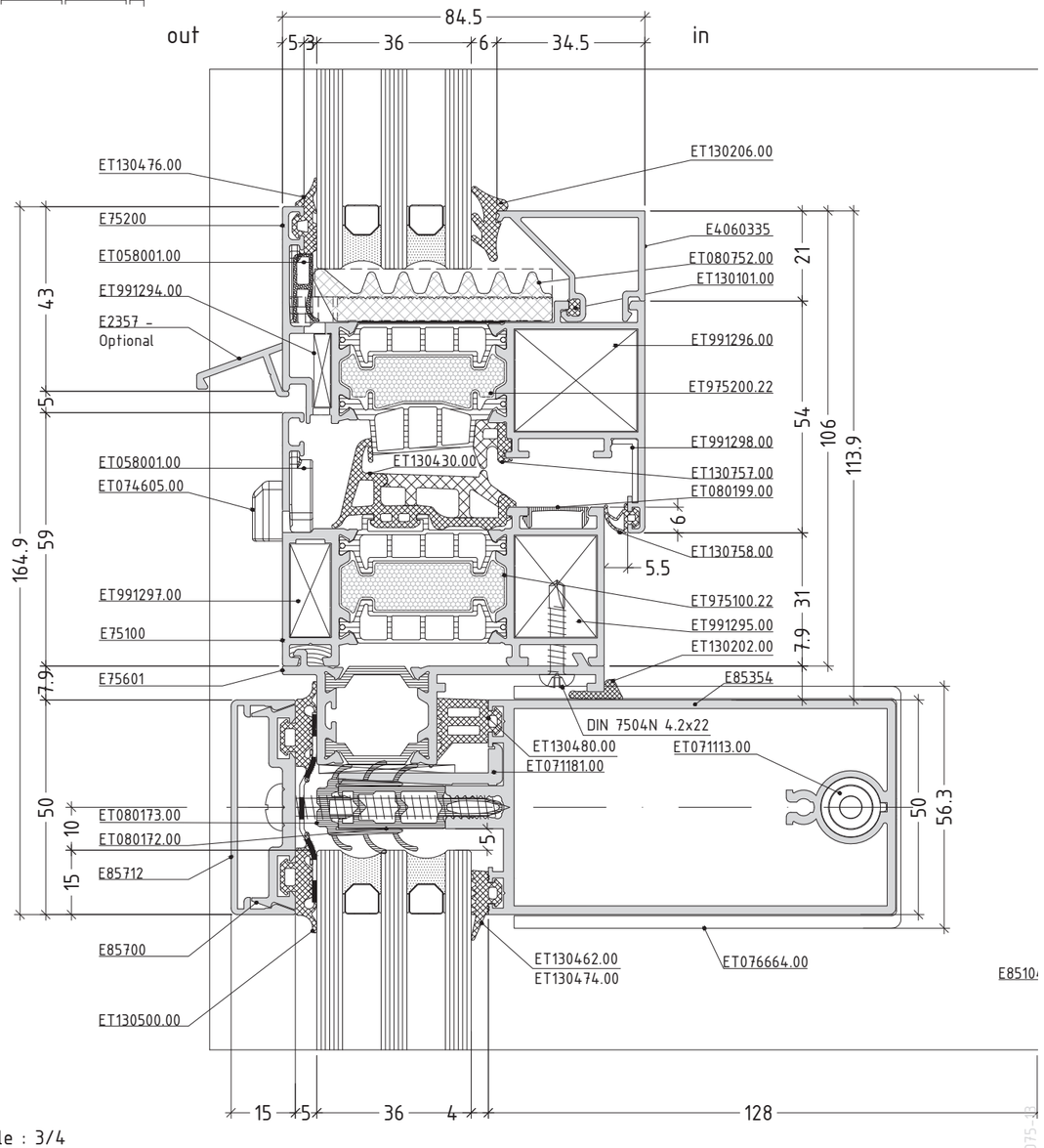


scale : 3/4

D75-12

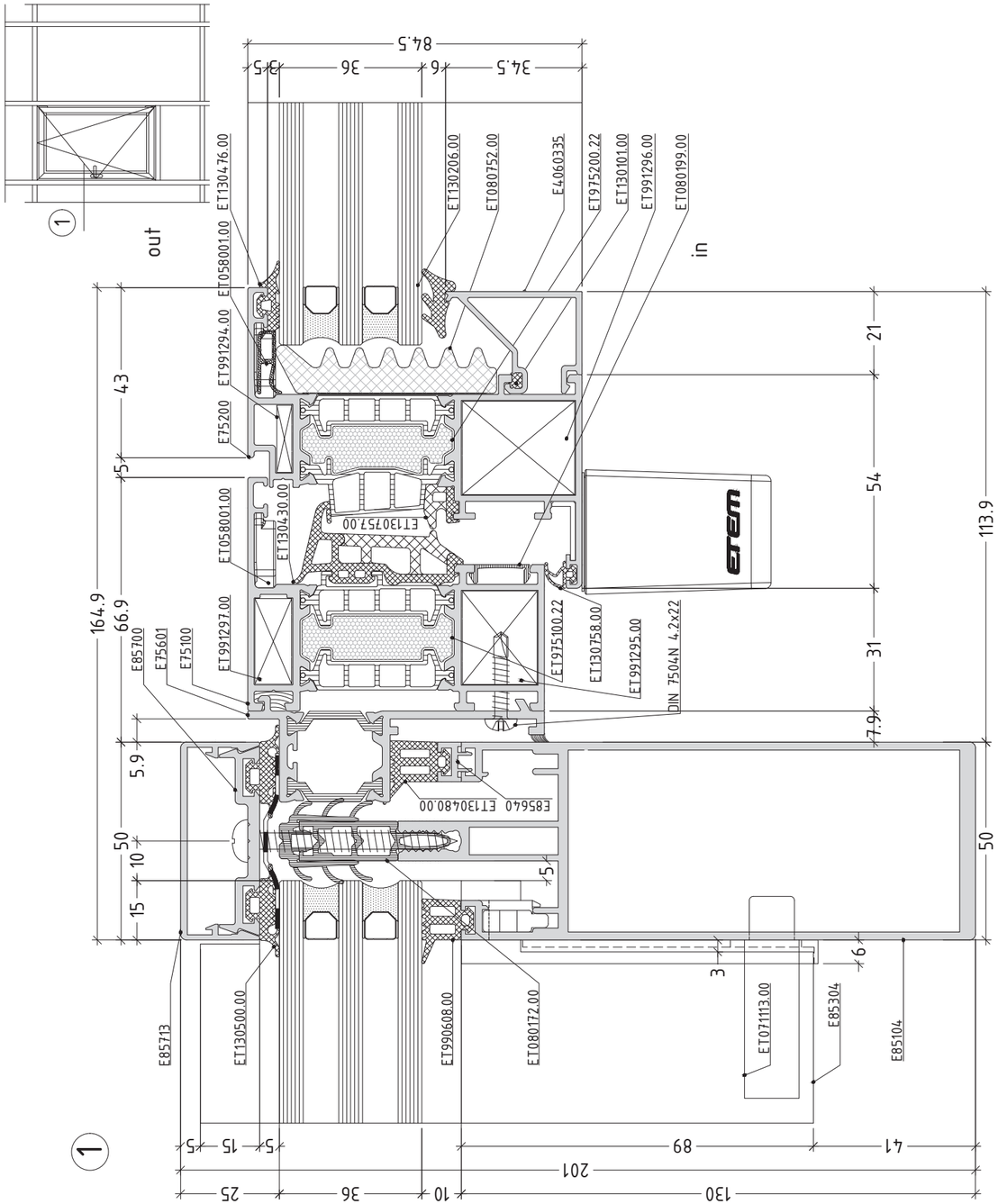


1



scale : 3/4

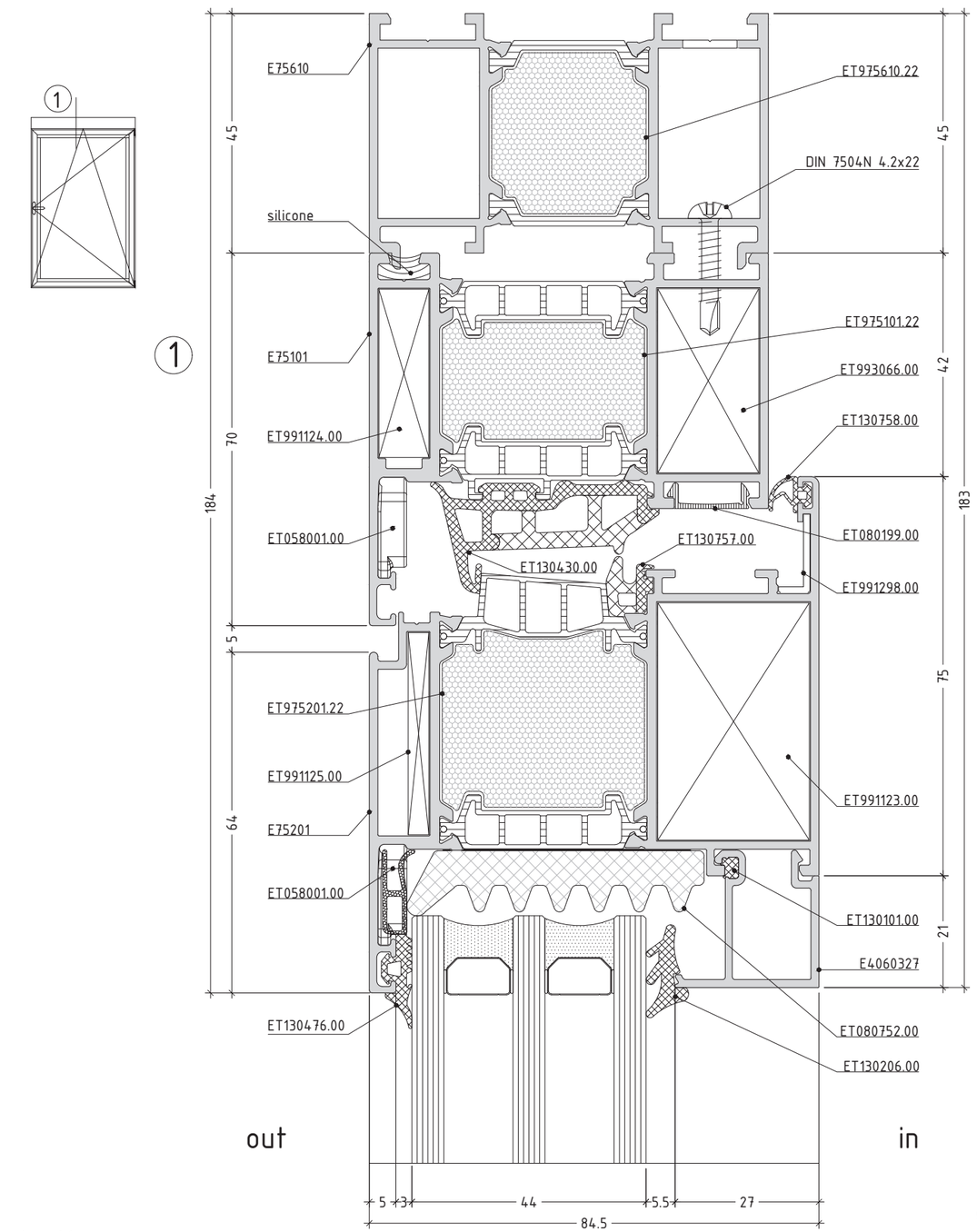
D75-12



scale : 3/4

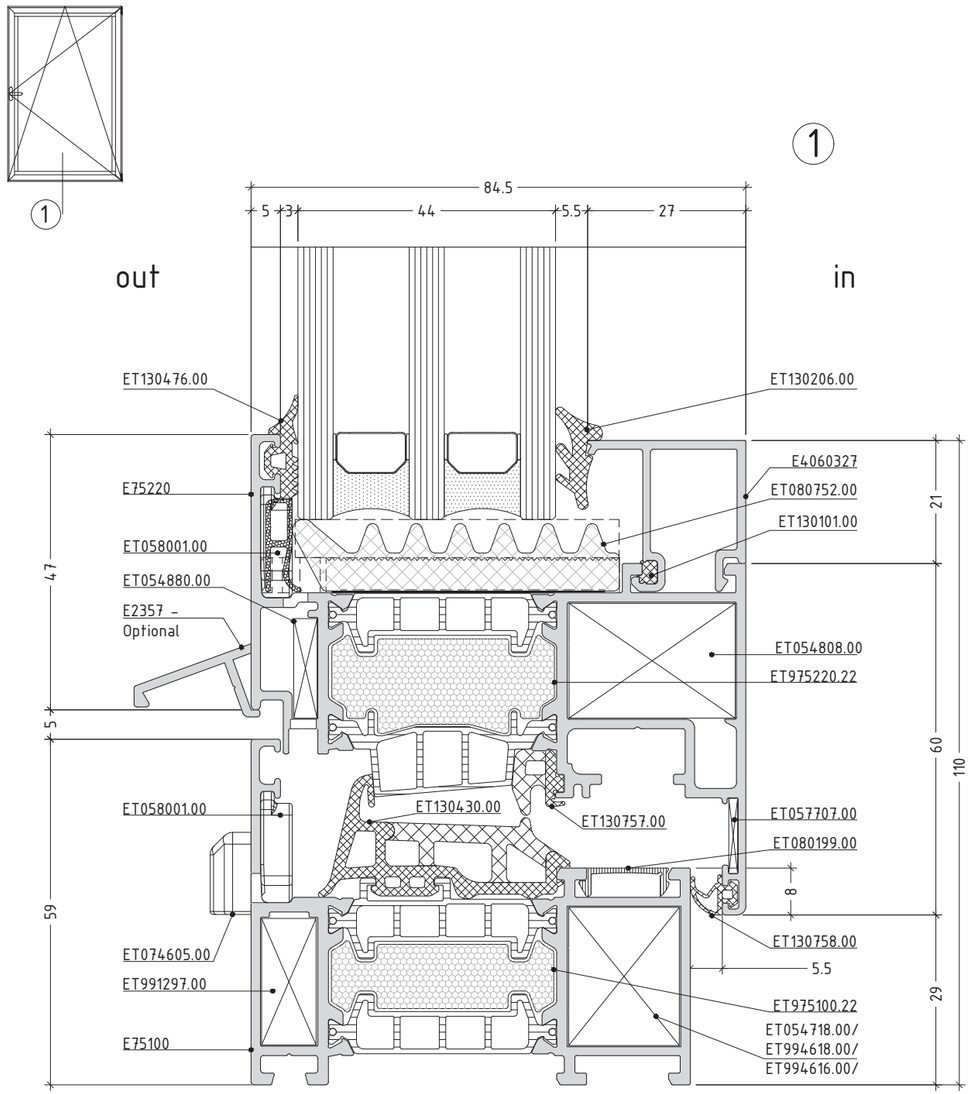
D75-14

opening system with thermal break E75



scale : 1:1

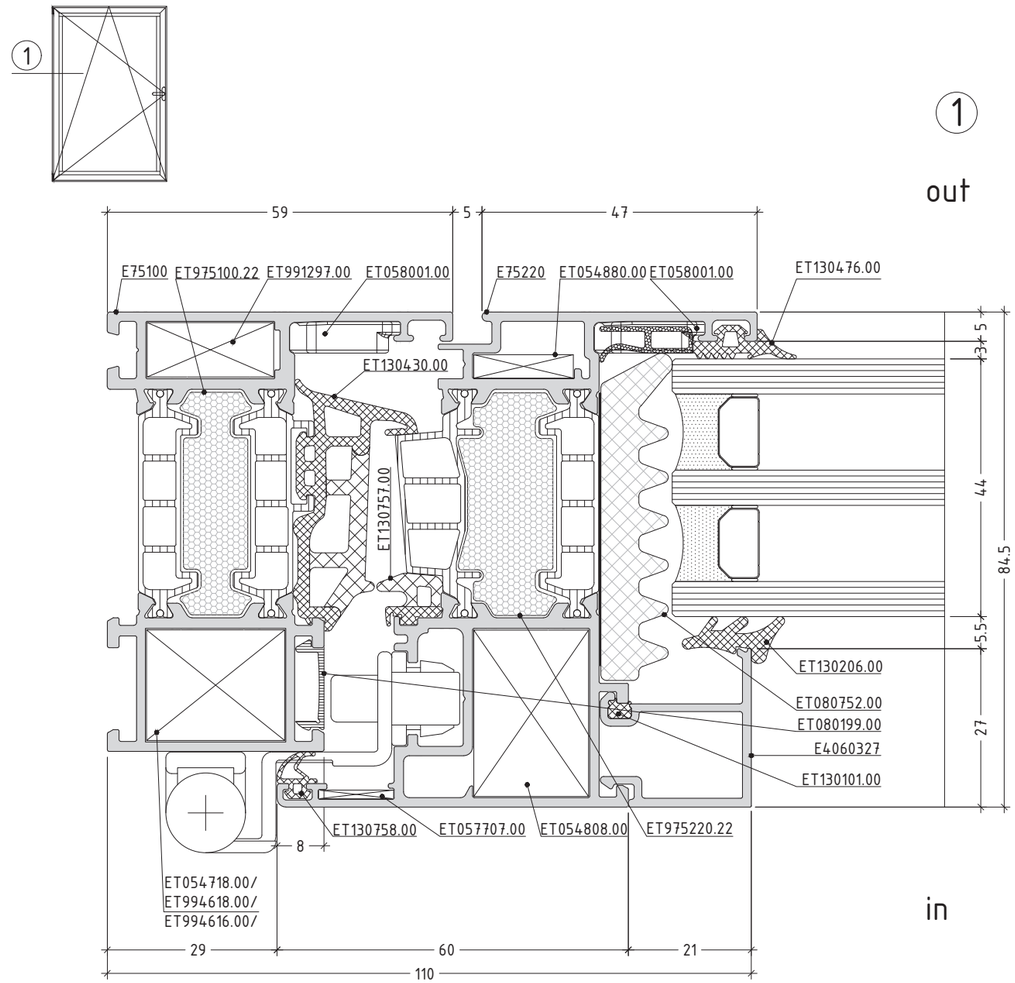
D75-15



scale : 1:1

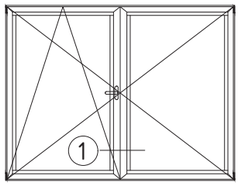
D75-16

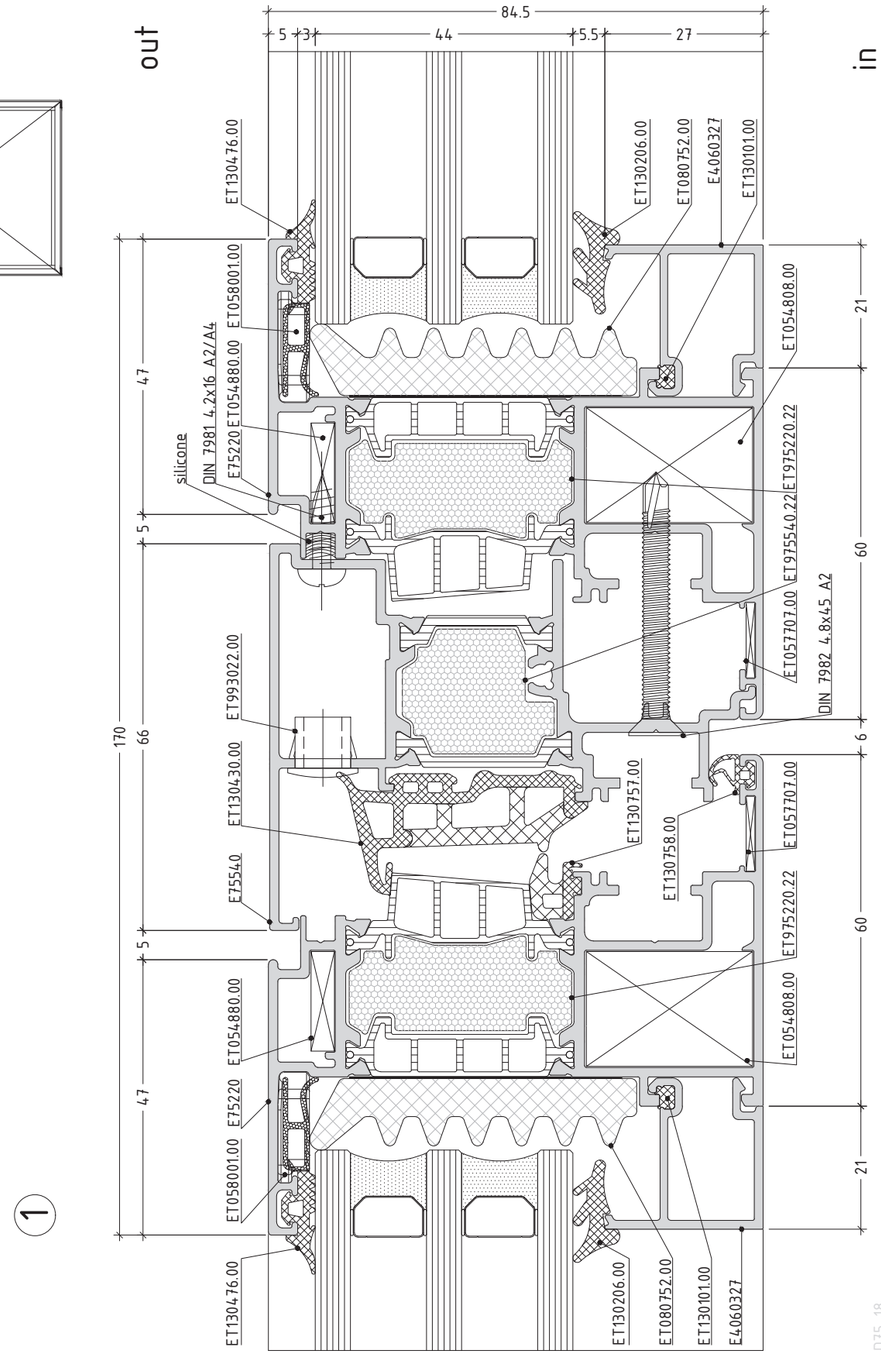
opening system with thermal break E75



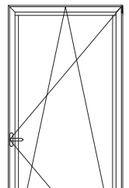
scale : 1:1

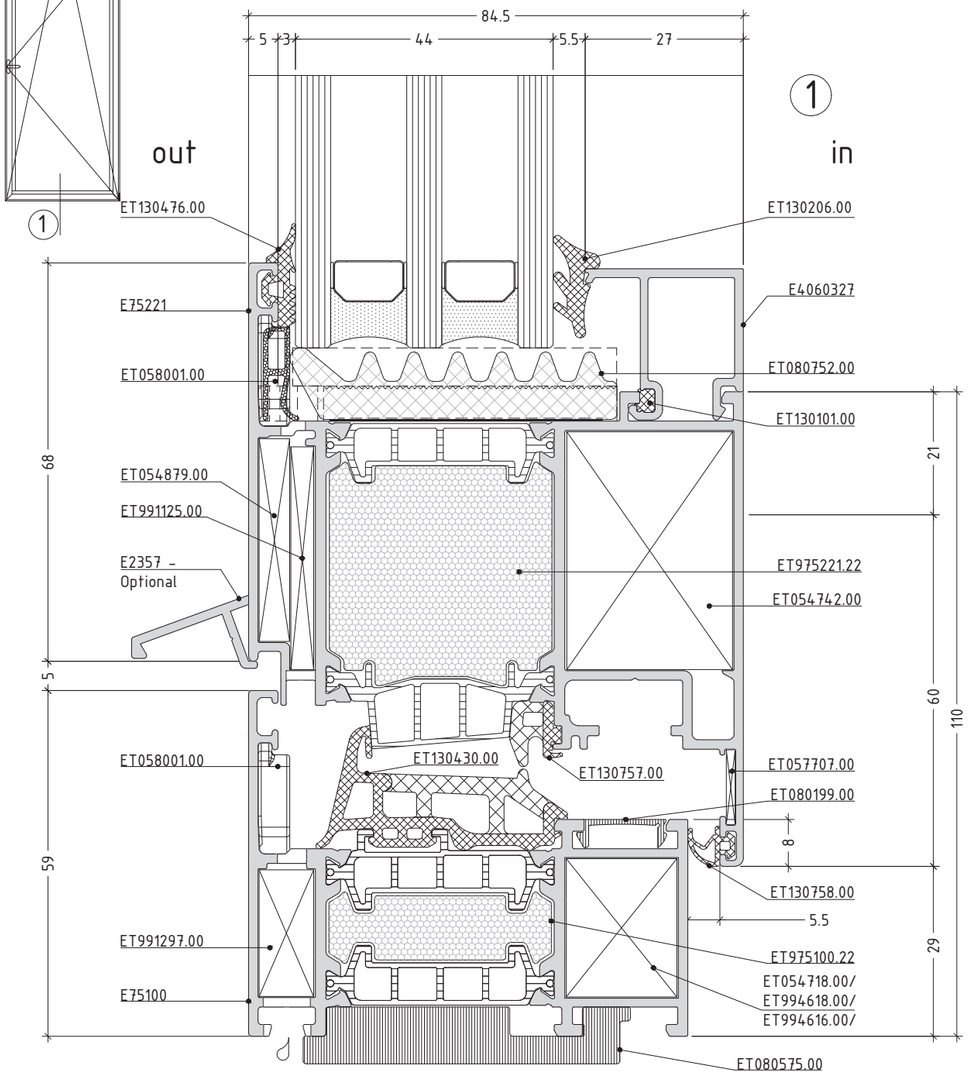
D75-17



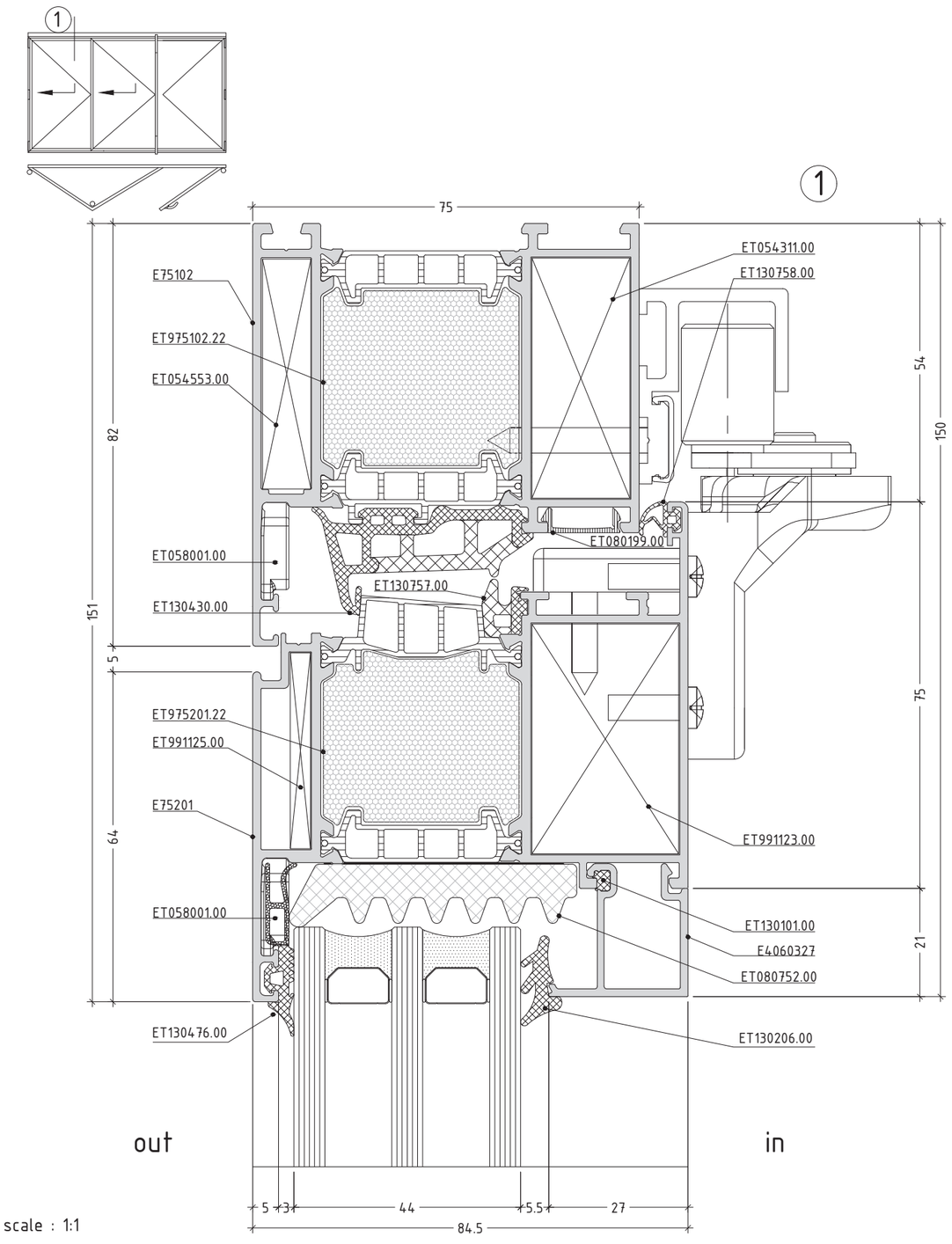


scale : 1:1



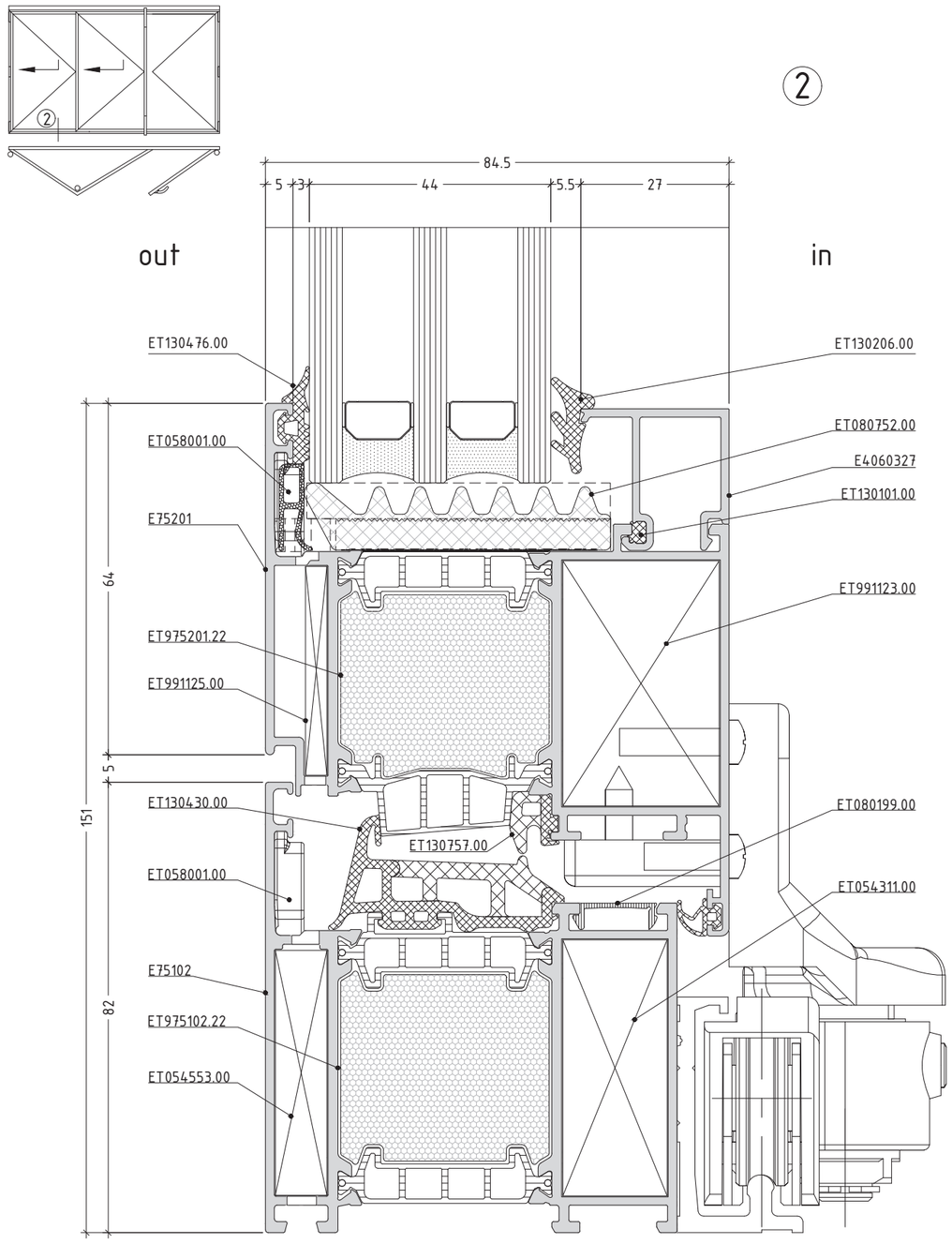


scale : 1:1



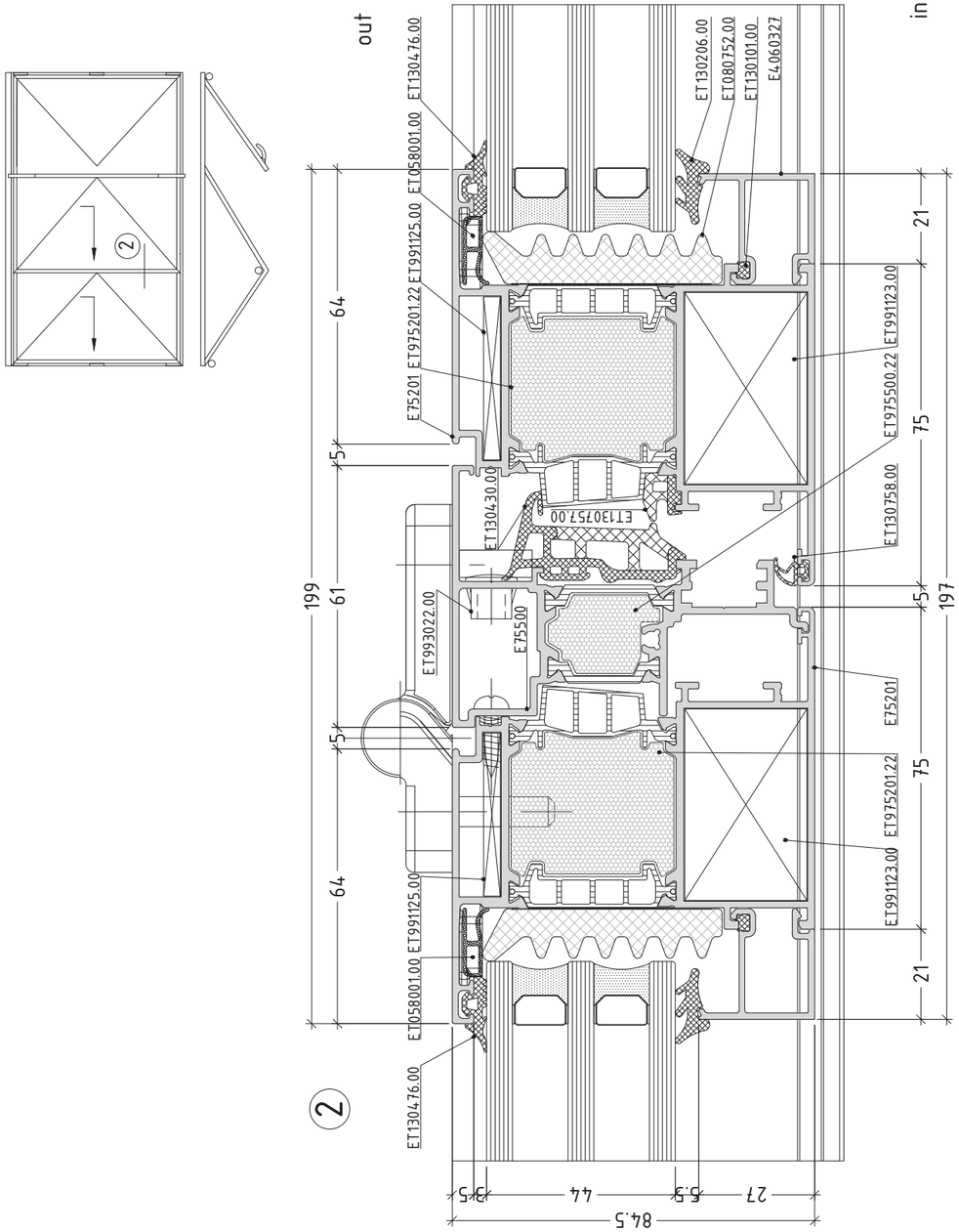
scale : 1:1

D75-20



scale : 1:1

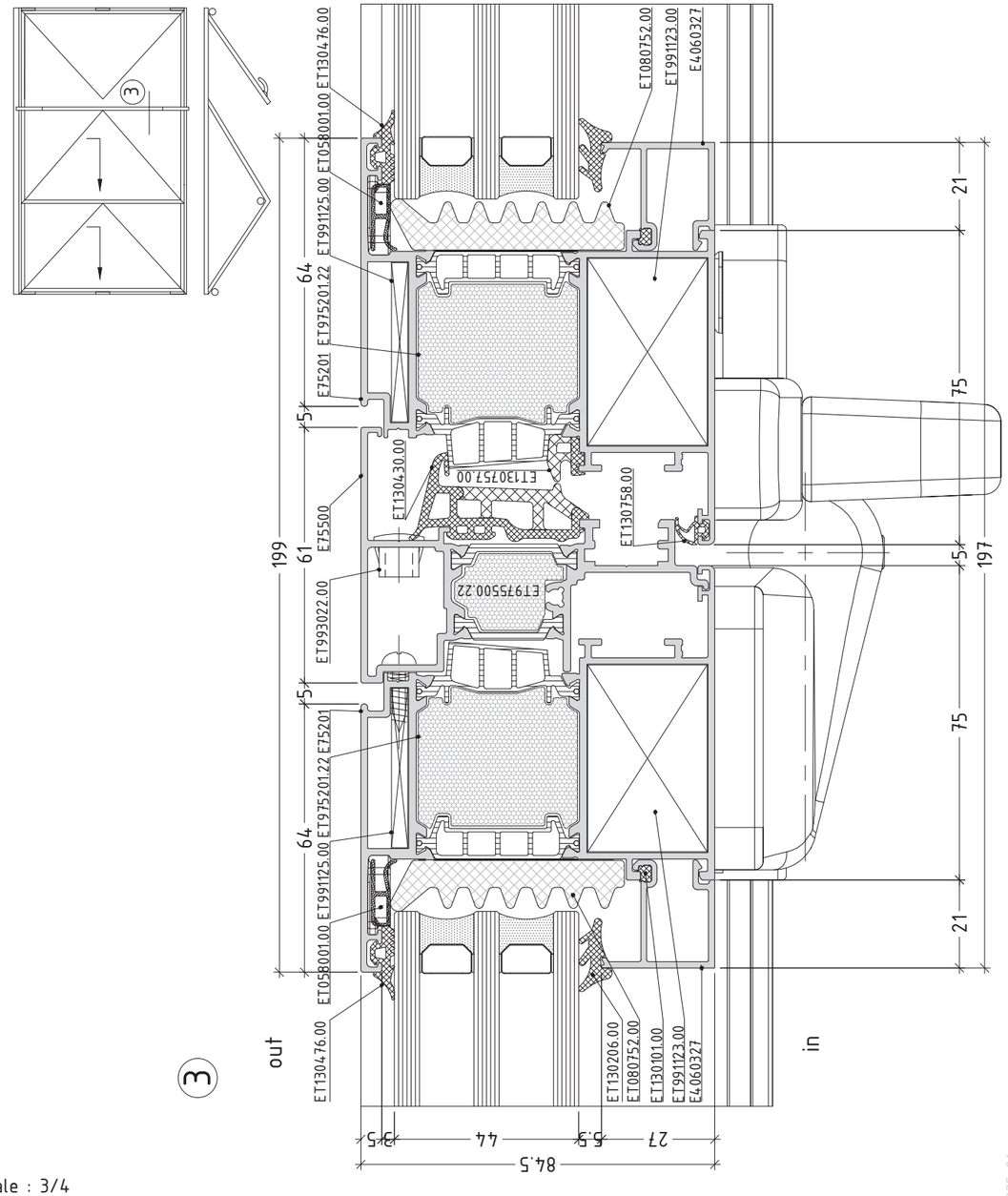
D75-21



Note:
Profile selection may be different, for specific hardware!

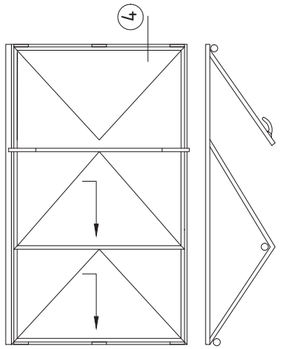
scale : 3/4

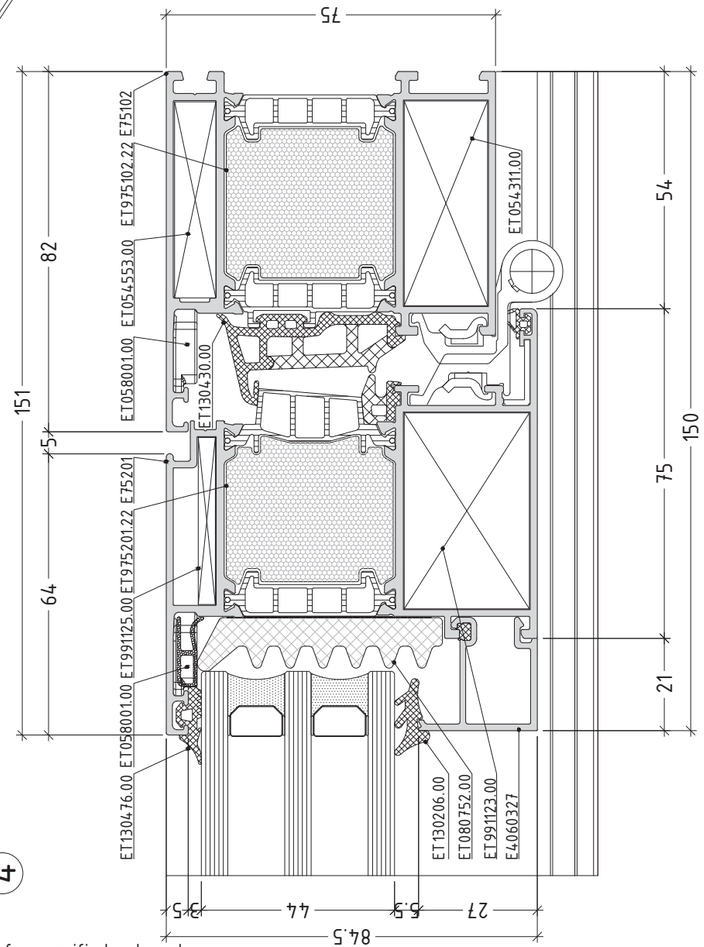
D75-25



scale : 3/4

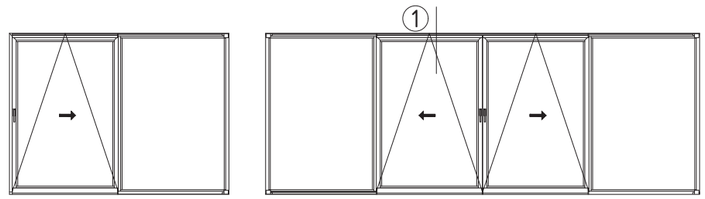
D75-26

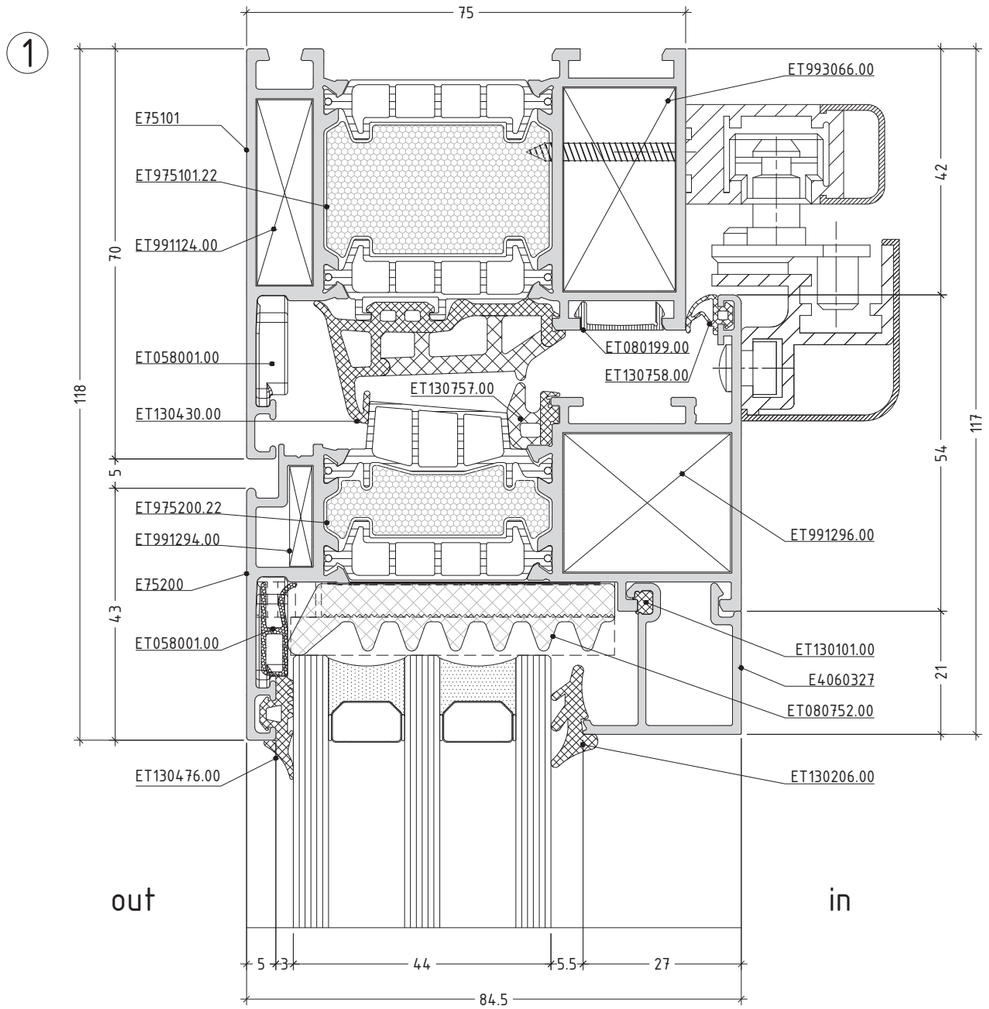




Note:
Profile selection may be different, for specific hardware!

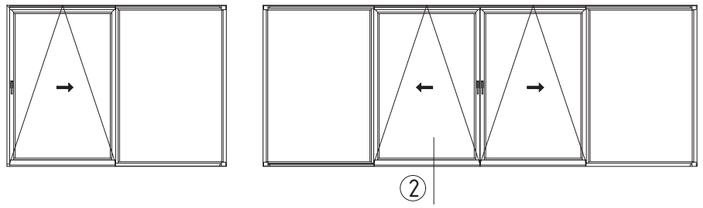
scale : 3/4

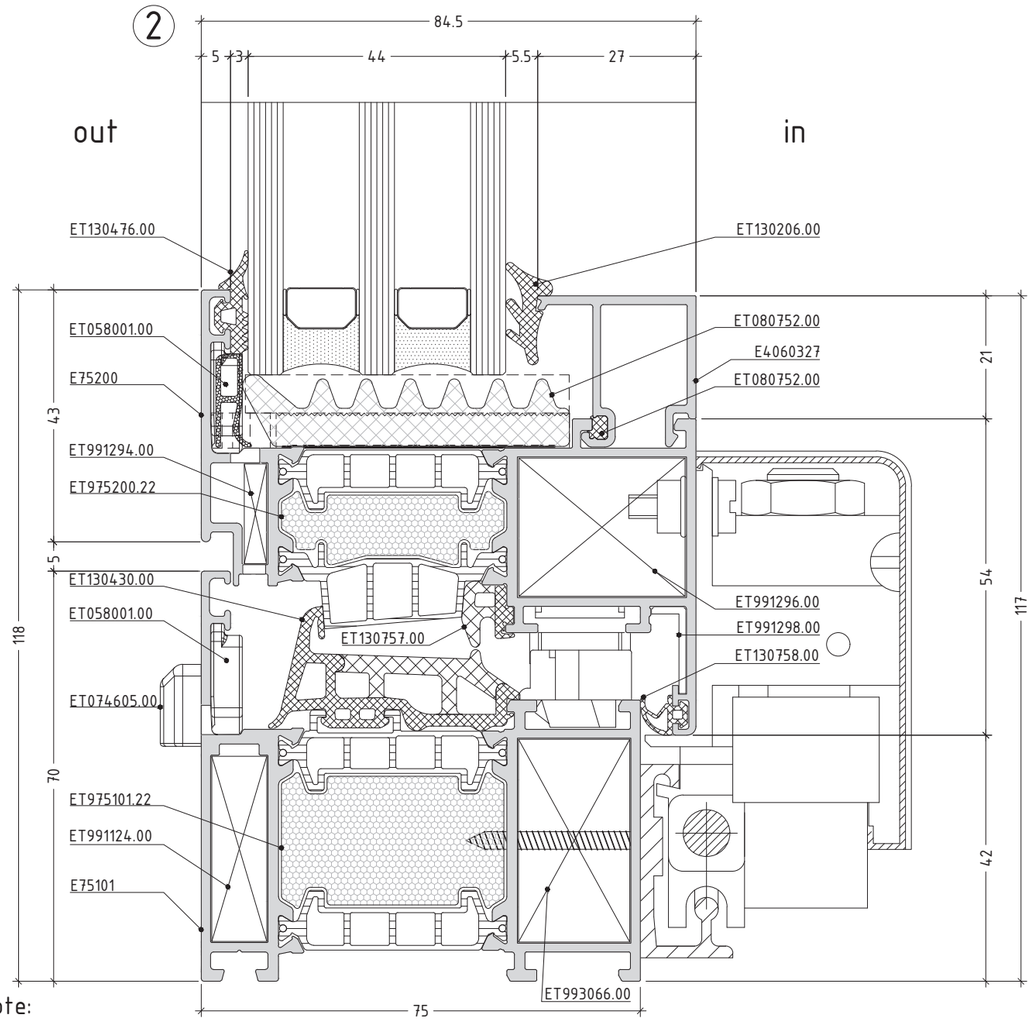




Note:
Profile selection may be different, for specific hardware!

scale : 1:1

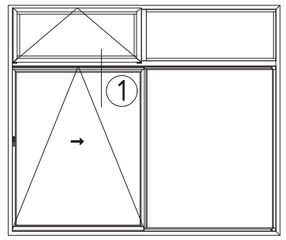


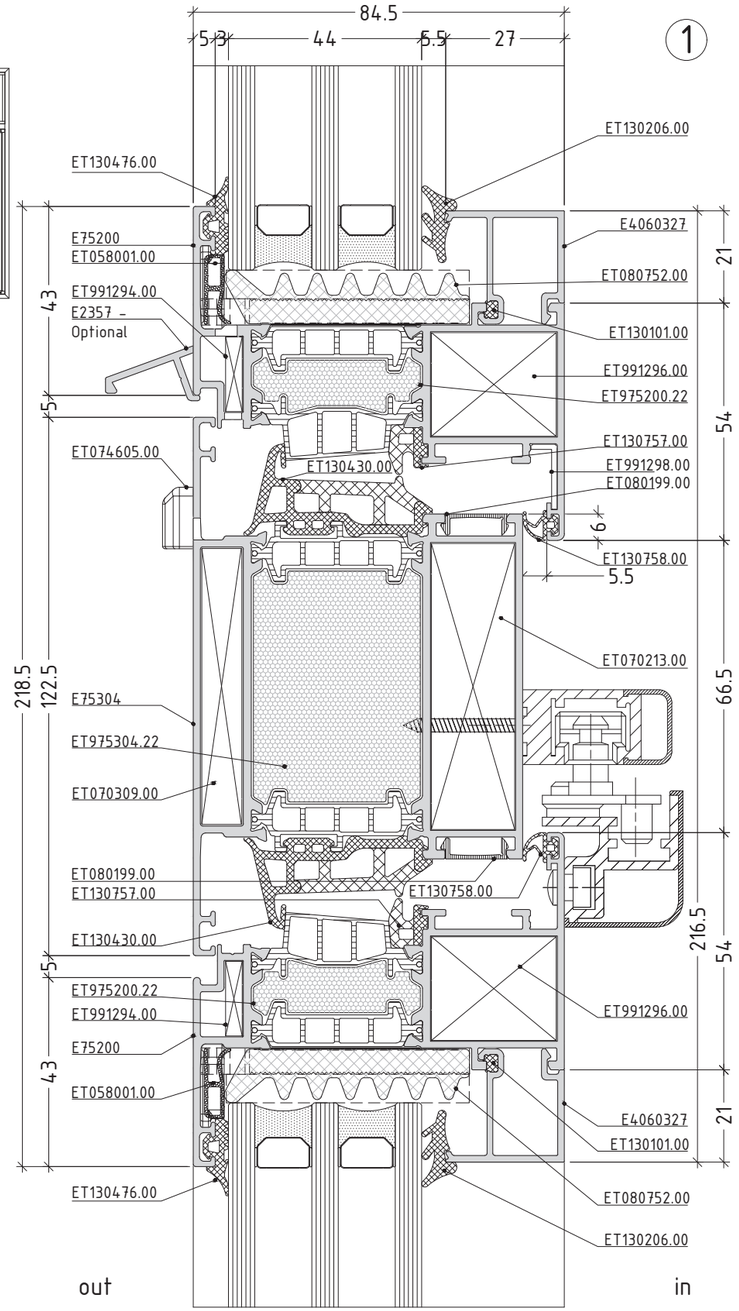


Note:
Profile selection may be different, for specific hardware!

scale : 1:1

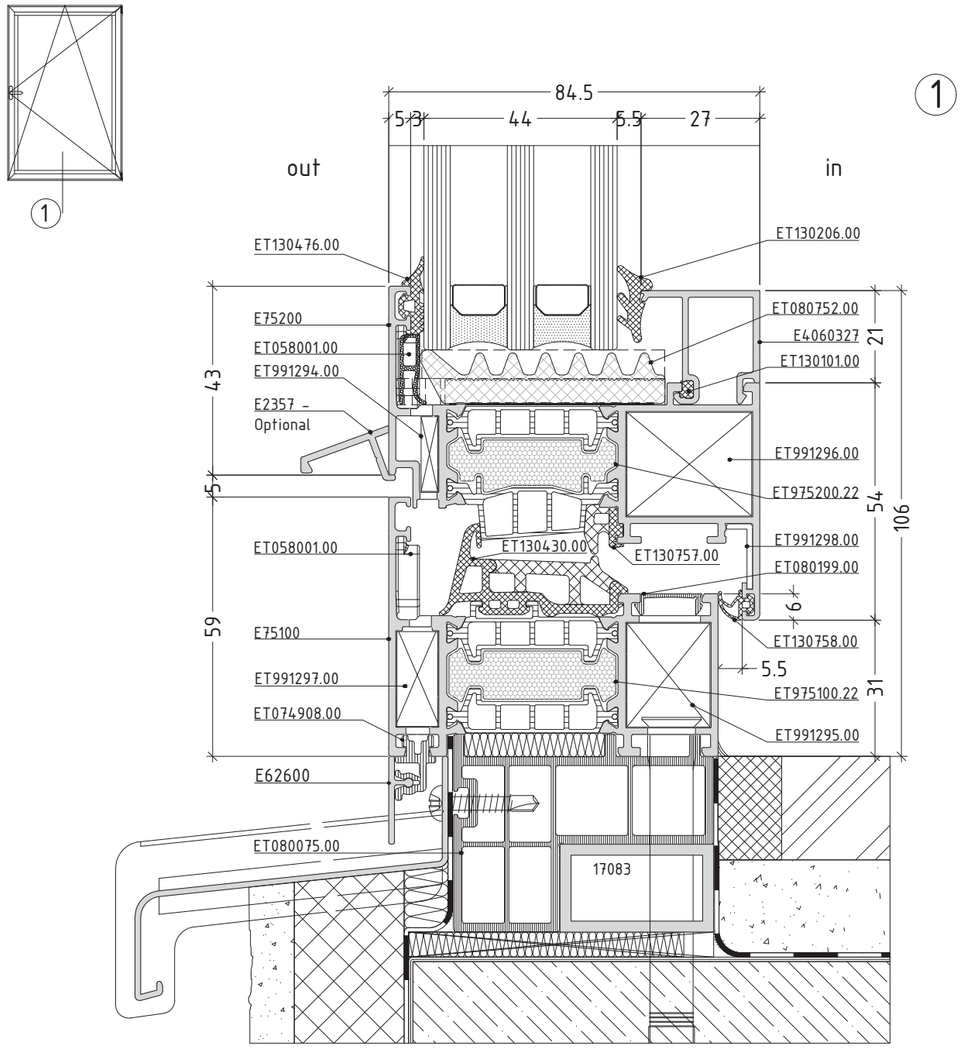
D75-28





scale : 3/4

D75-30

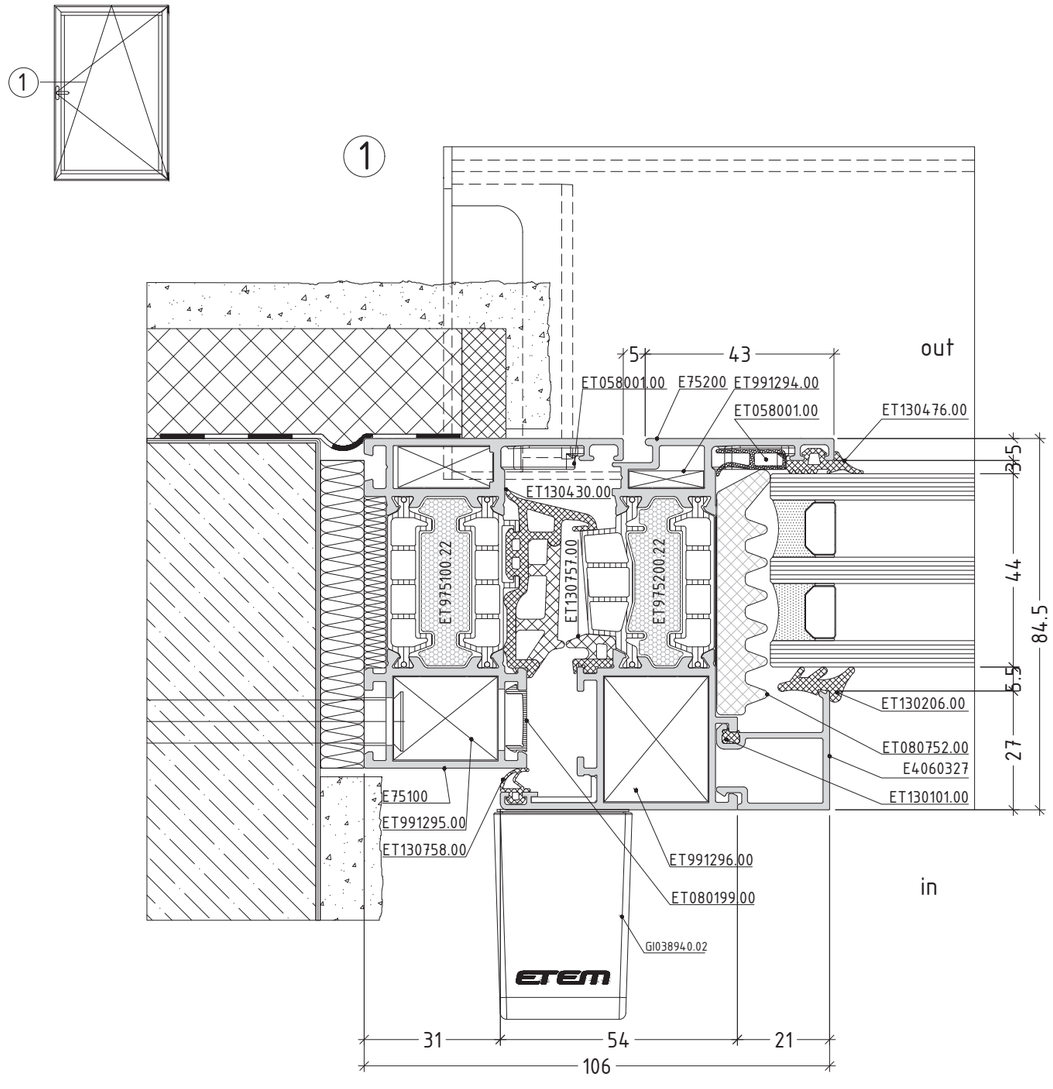


Interface shown on the drawing is an example ONLY!
Connection between backing wall and frame is specific for each single project. It is obligatory to observe different projects' features. All final decisions about materials used, interface finishing, etc. should be approved by the structural / façade engineer responsible for the specific project.

scale : 3/4

D75-31

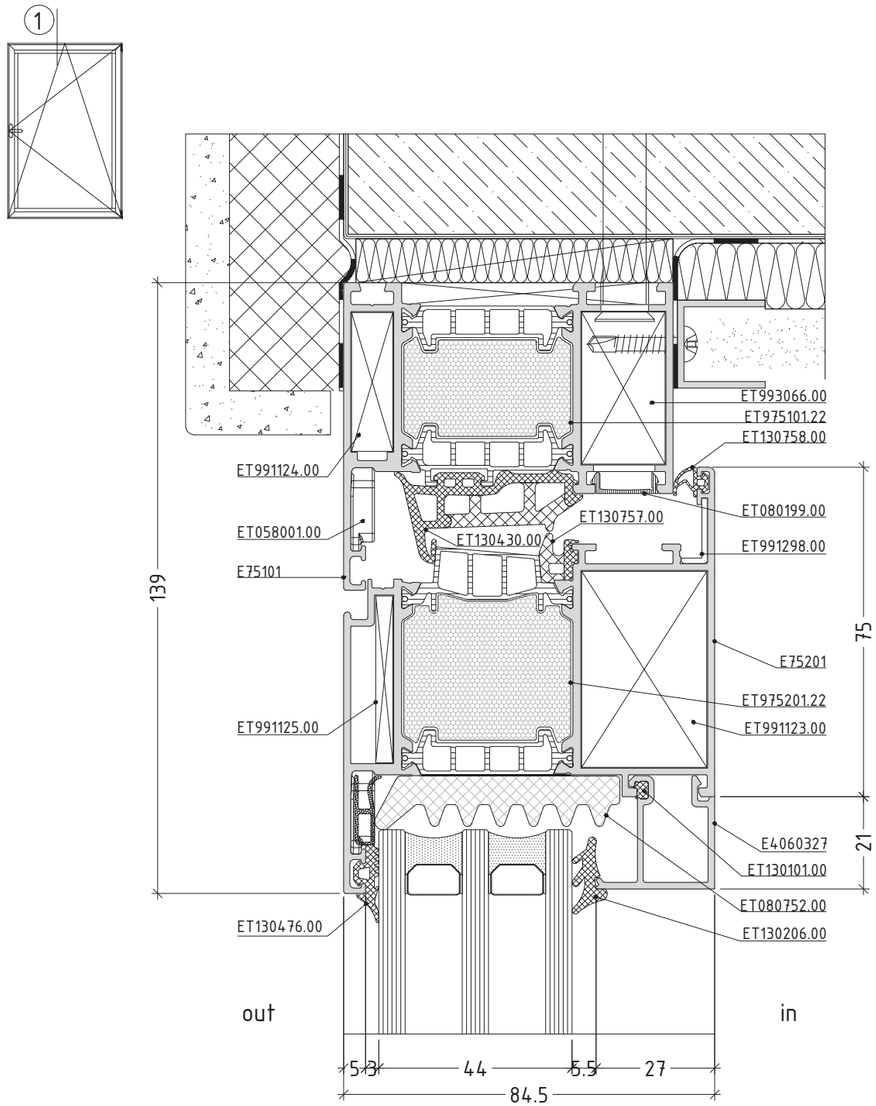
opening system with thermal break E75



Interface shown on the drawing is an example ONLY!
Connection between backing wall and frame is specific for each single project. It is obligatory to observe different projects' features. All final decisions about materials used, interface finishing, etc. should be approved by the structural / façade engineer responsible for the specific project.

scale : 3/4

D75-32

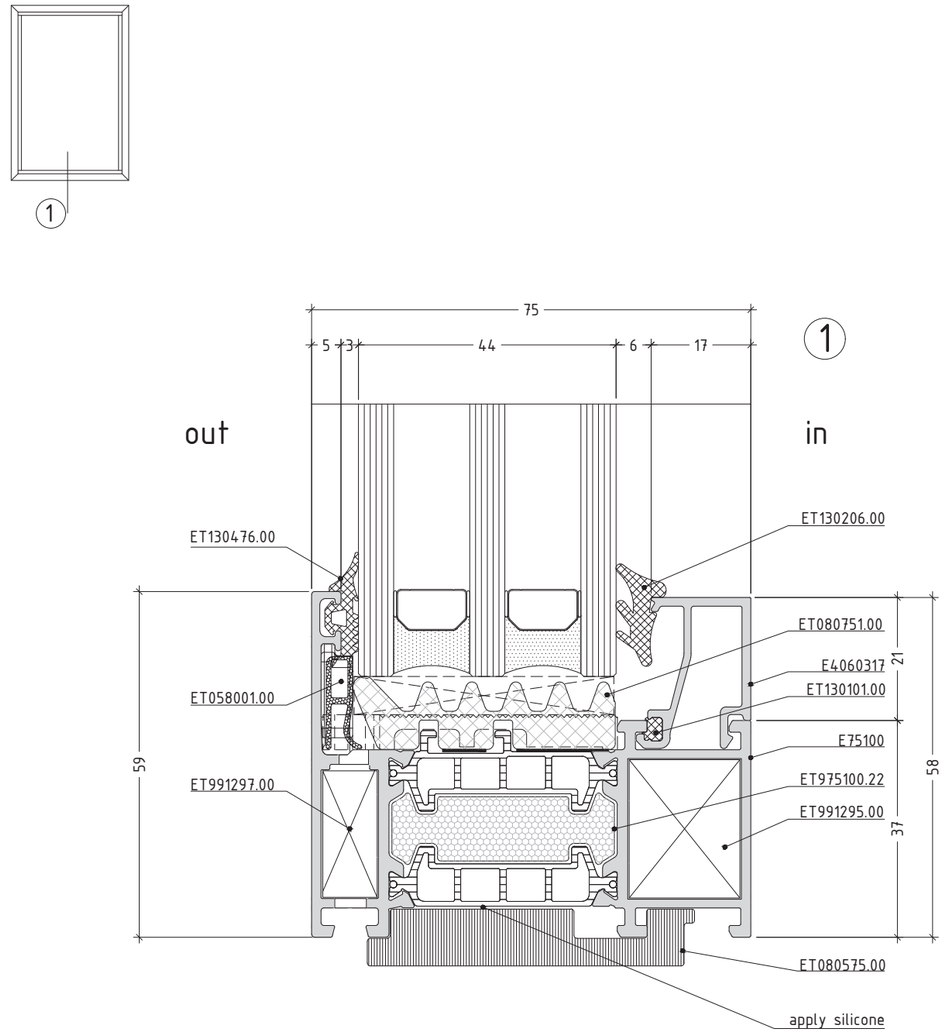


Interface shown on the drawing is an example ONLY!
Connection between backing wall and frame is specific for each single project. It is obligatory to observe different projects' features. All final decisions about materials used, interface finishing, etc. should be approved by the structural / façade engineer responsible for the specific project.

scale : 3/4

D75-33

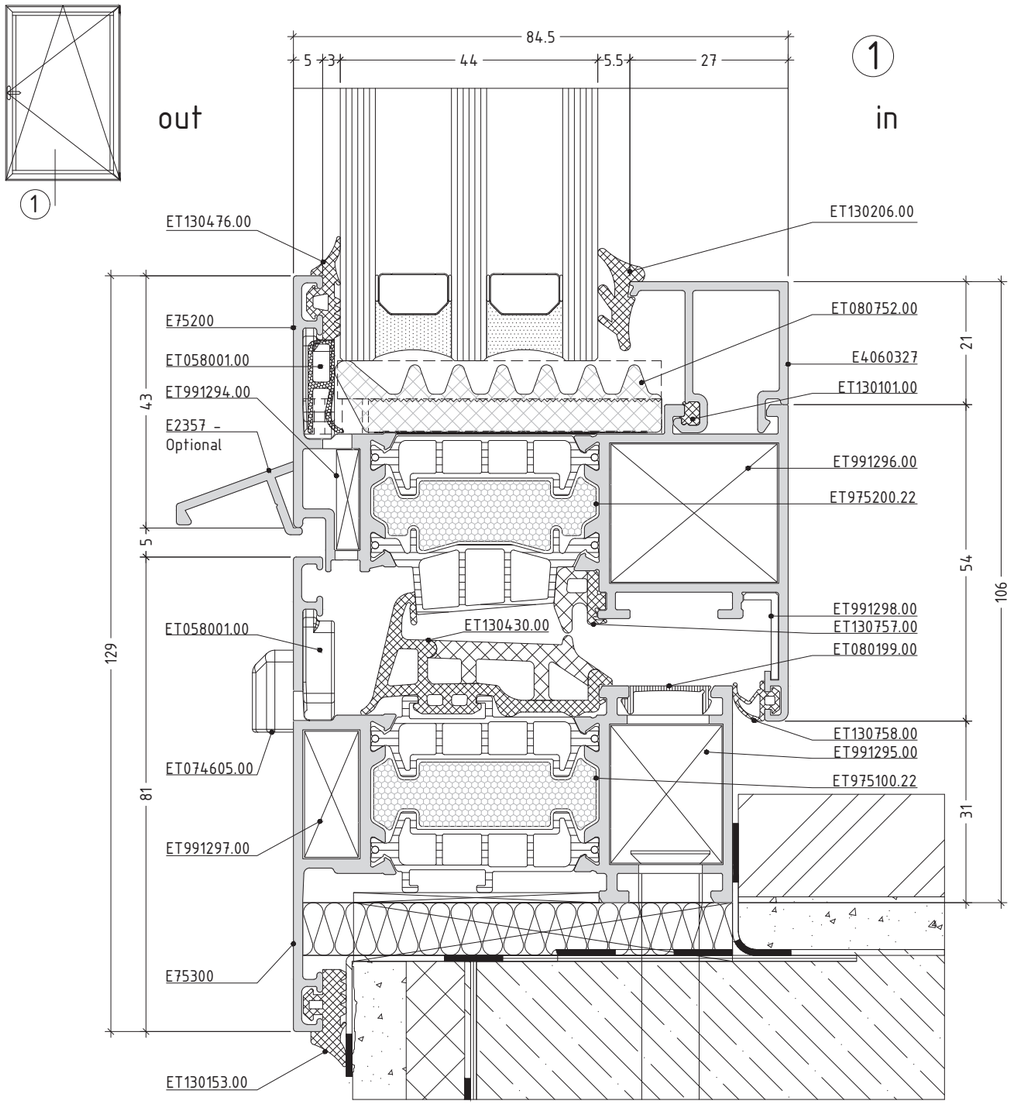
opening system with thermal break E75



Interface shown on the drawing is an example ONLY!
Connection between backing wall and frame is specific for each single project. It is obligatory to observe different projects' features. All final decisions about materials used, interface finishing, etc. should be approved by the structural / façade engineer responsible for the specific project.

scale : 1:1

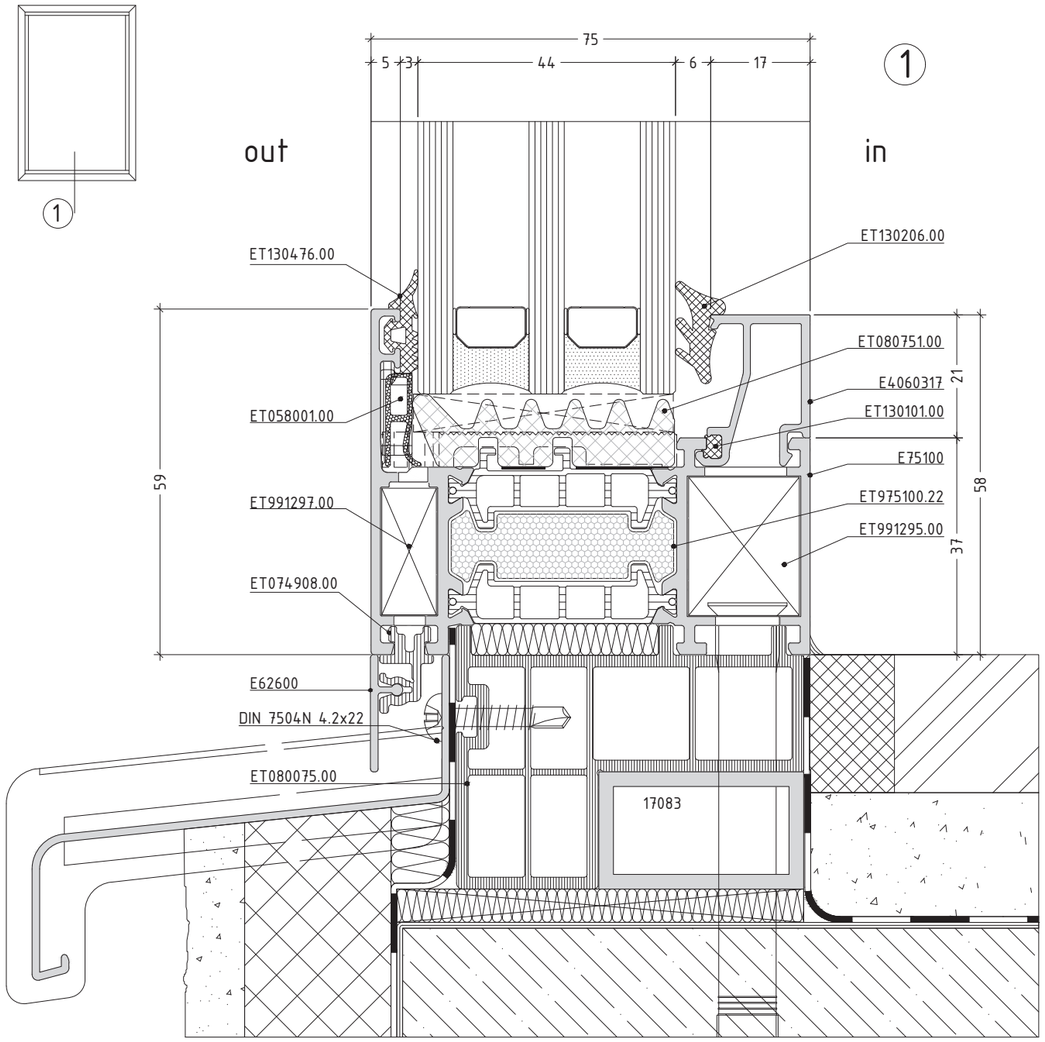
D75-34



Interface shown on the drawing is an example ONLY!
Connection between backing wall and frame is specific for each single project. It is obligatory to observe different projects' features. All final decisions about materials used, interface finishing, etc. should be approved by the structural / façade engineer responsible for the specific project.

scale : 1:1

D75-35

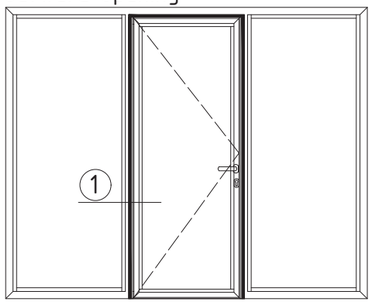


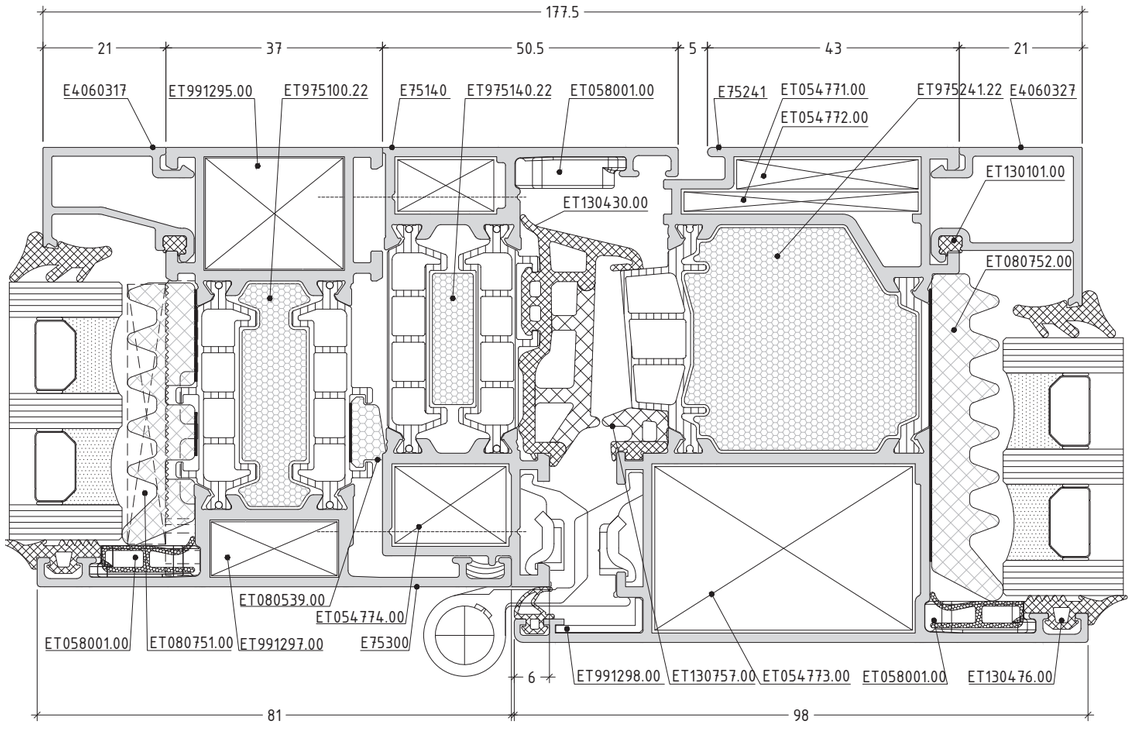
Interface shown on the drawing is an example ONLY!
Connection between backing wall and frame is specific for each single project. It is obligatory to observe different projects' features. All final decisions about materials used, interface finishing, etc. should be approved by the structural / façade engineer responsible for the specific project.

scale : 1:1

D75-36

outward opening



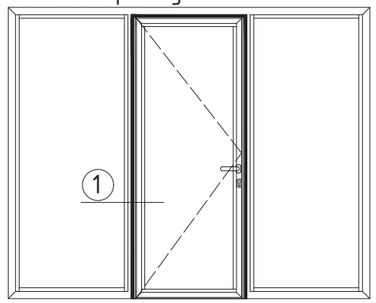


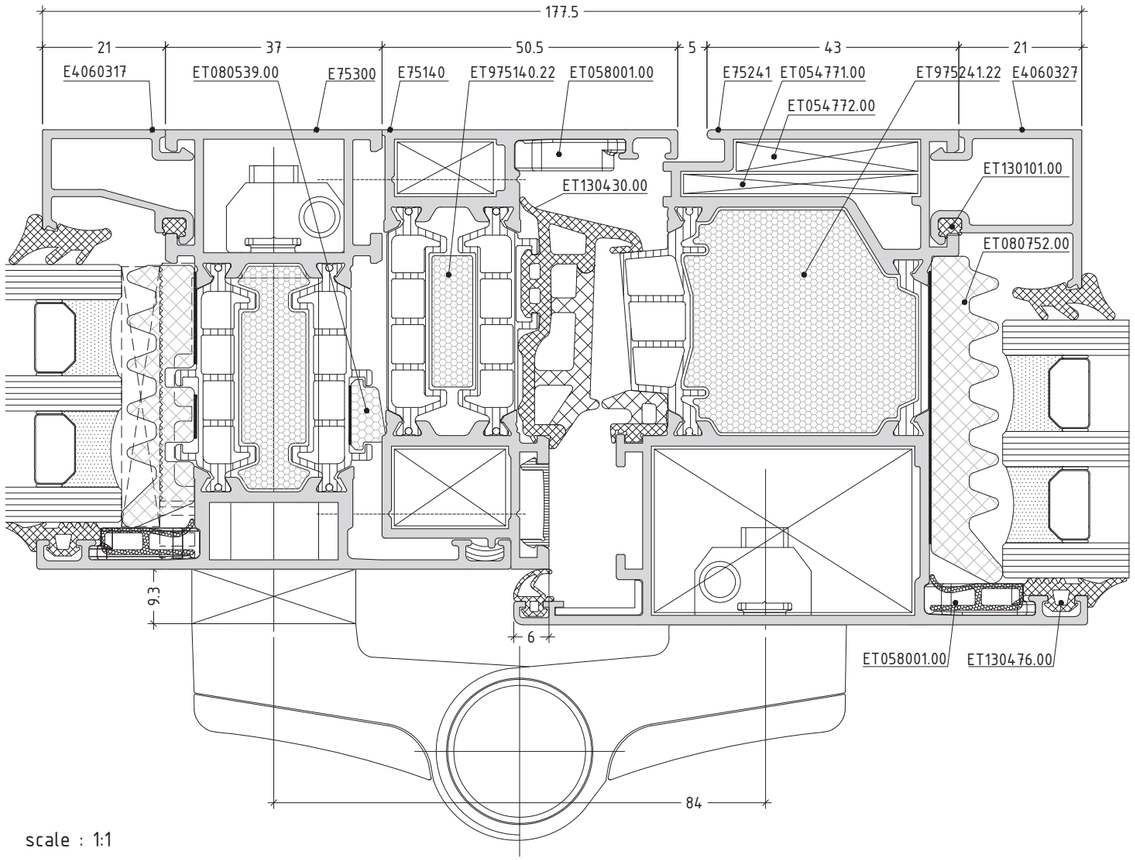
scale : 1:1

D75-38

opening system with thermal break E75

outward opening



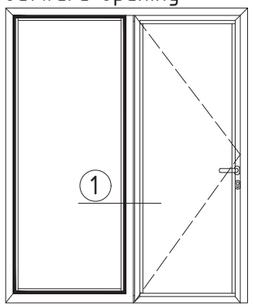


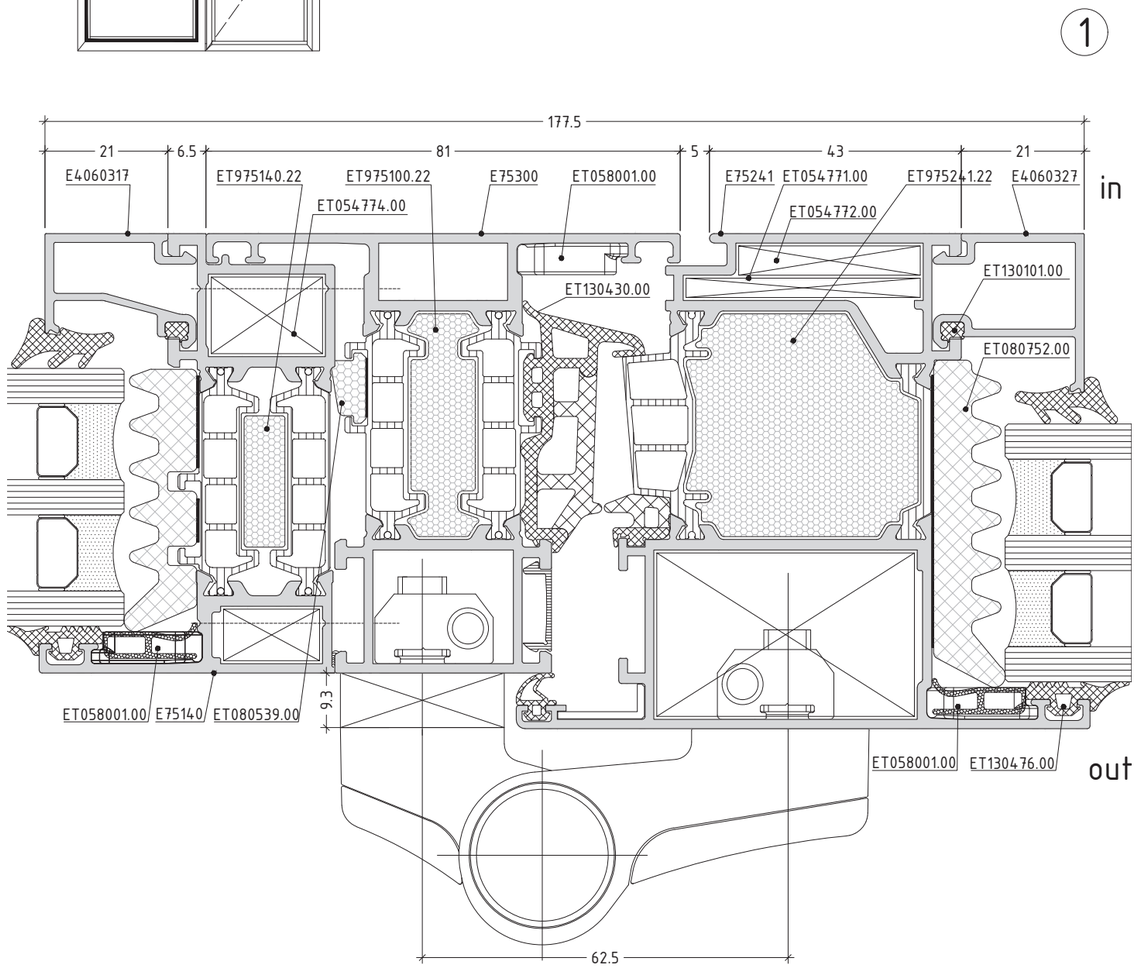
scale : 1:1

When the hinge and reverse profile are inside the openable part, the distance between axes of hinges has to be 84 mm

D75-39

outward opening



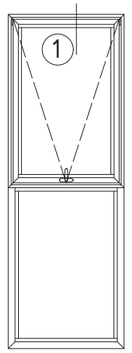


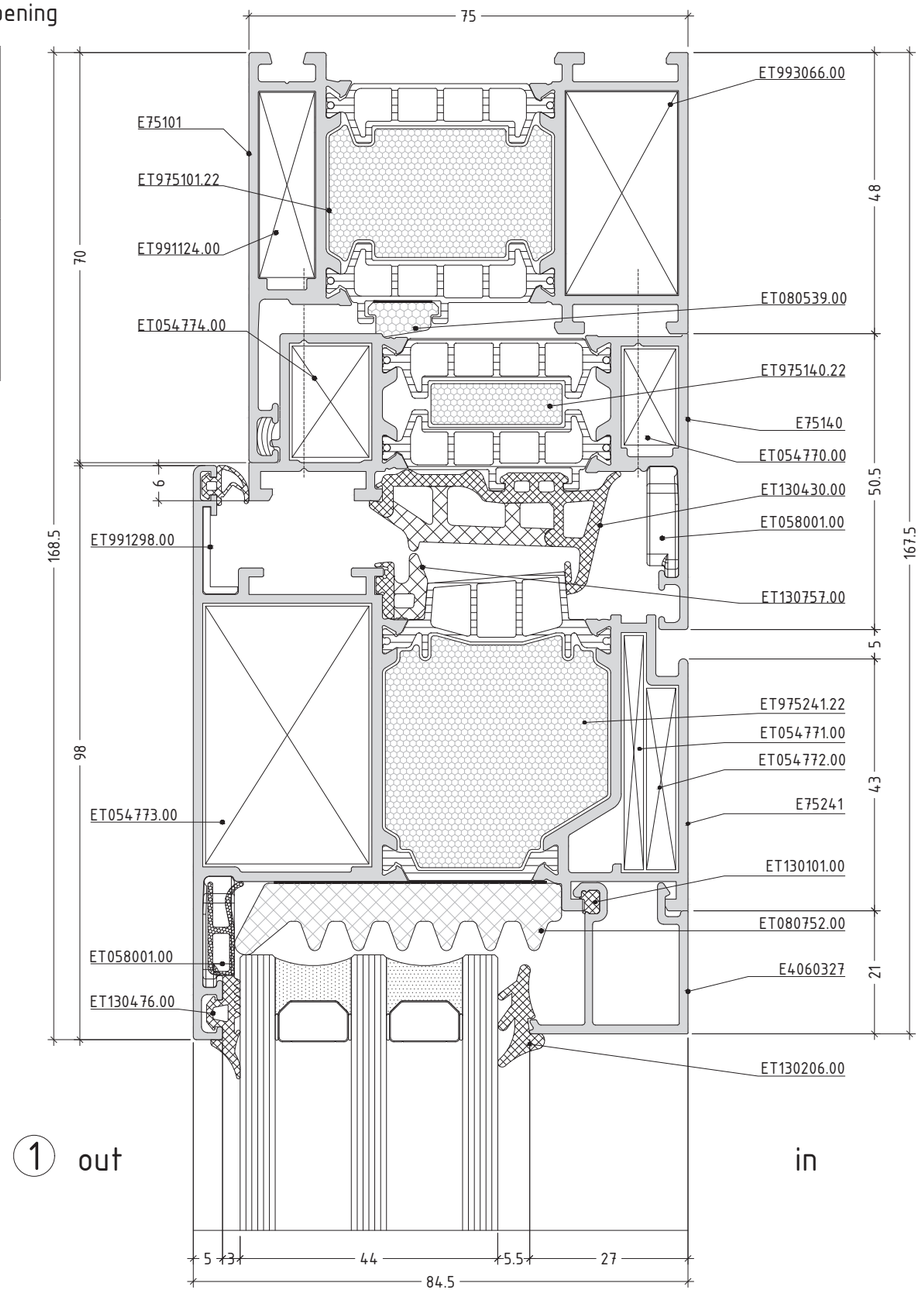
When the hinge and reverse profile are inside the fixed part, the distance between axes of hinges has to be 62,5 mm

scale : 1:1

D75-40

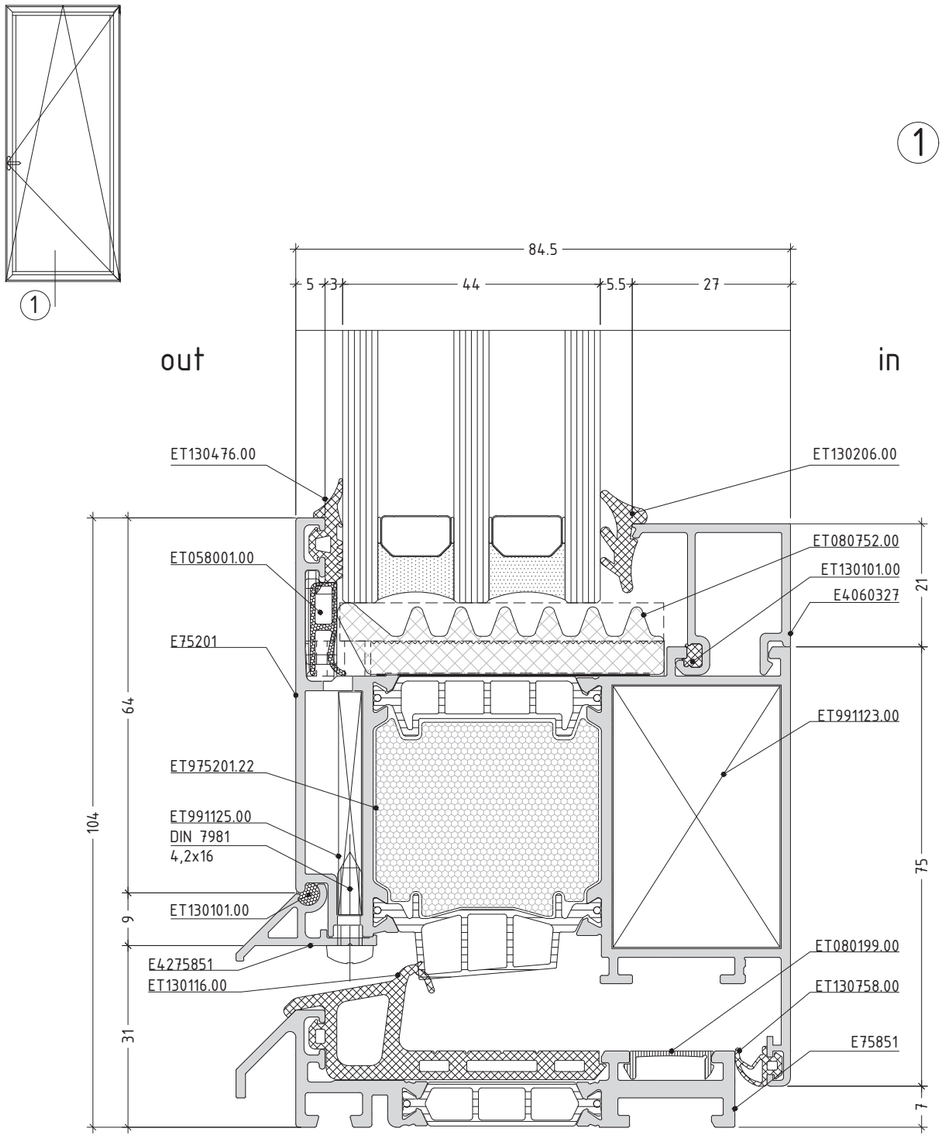
outward opening





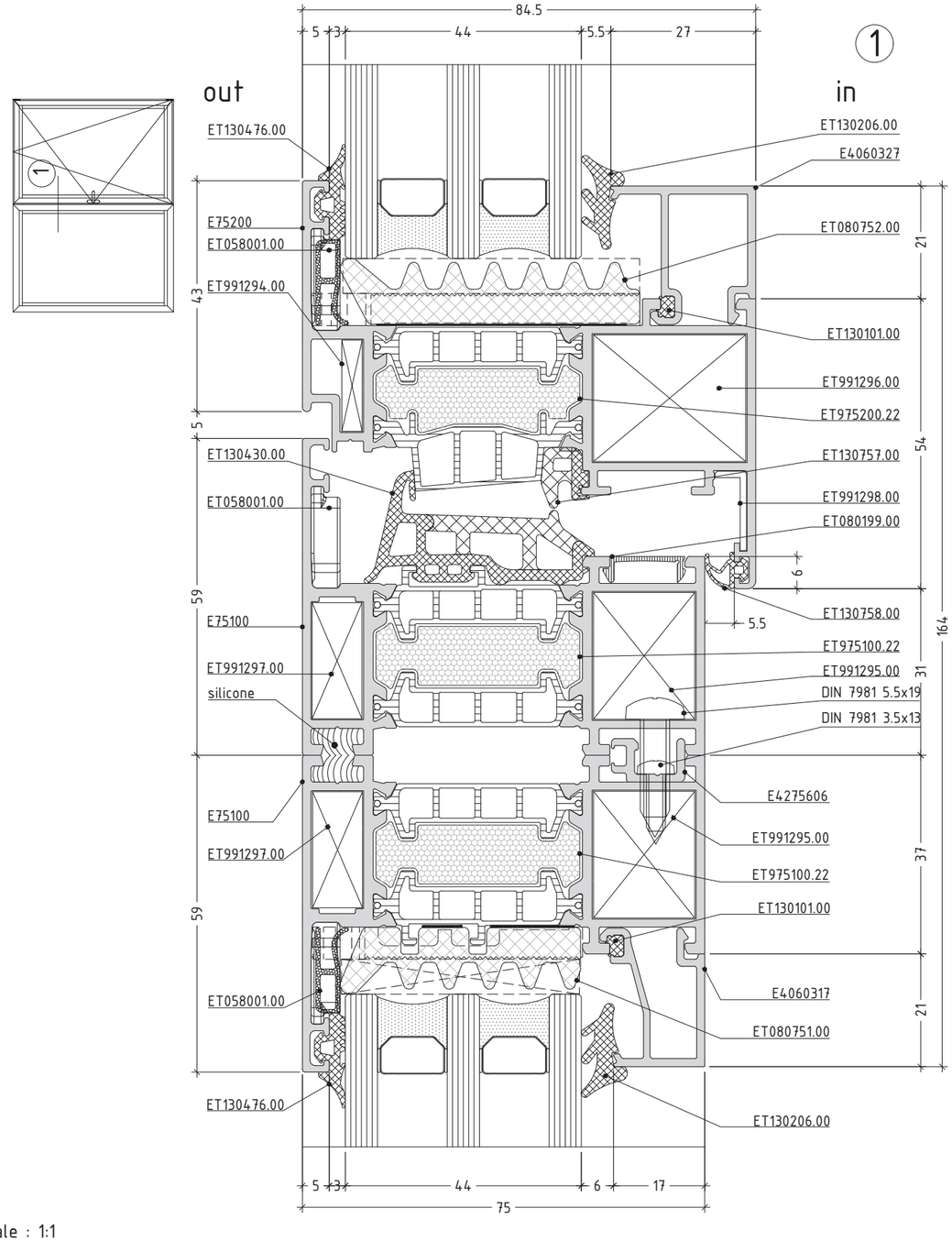
scale : 1:1

D75-41



scale : 1:1

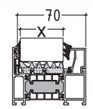
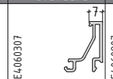
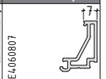
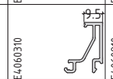
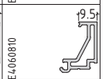
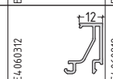
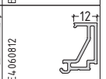
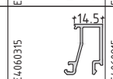
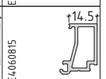
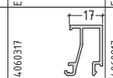
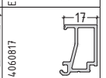
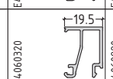
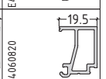
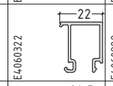
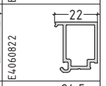
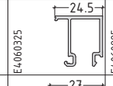
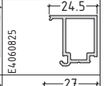
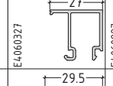
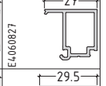
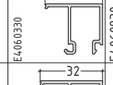
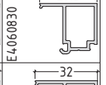
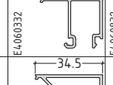
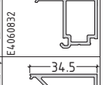
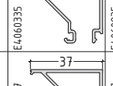
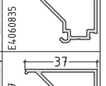
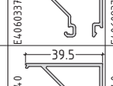
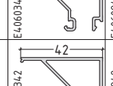
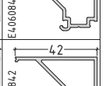
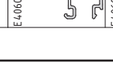
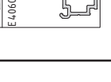
D75-42

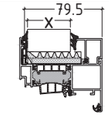
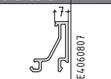
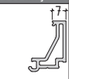
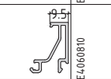
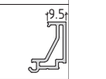
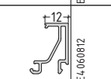
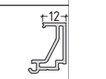


scale : 1:1

D75-43

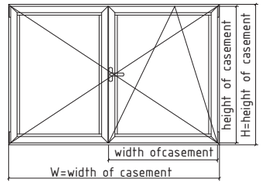
GLAZING OPTIONS

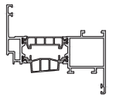
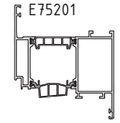
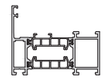
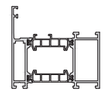
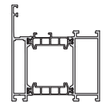
GLAZING OPTIONS FOR FRAME						
external gaskets	internal gaskets				glazing beads	
3 mm 130475	5 - 6 mm 130176		7 - 8 mm 130177			
3 mm 130476	5 mm 130205	6 mm 130206	7 mm 130207	8 mm 130208		
	X mm				standard	security
130475 130476	55	54	53	52	 E4060307	 E4060807
130475 130476	52	51	50	49	 E4060310	 E4060810
130475 130476	50	49	48	47	 E4060312	 E4060812
130475 130476	47	46	45	44	 E4060315	 E4060815
130475 130476	45	44	43	42	 E4060317	 E4060817
130475 130476	42	41	40	39	 E4060320	 E4060820
130475 130476	40	39	38	37	 E4060322	 E4060822
130475 130476	37	36	35	34	 E4060325	 E4060825
130475 130476	35	34	33	32	 E4060327	 E4060827
130475 130476	32	31	30	29	 E4060330	 E4060830
130475 130476	30	29	28	27	 E4060332	 E4060832
130475 130476	27	26	25	24	 E4060335	 E4060835
130475 130476	25	24	23	22	 E4060337	 E4060837
130475 130476	22	21	20	19	 E4060340	 E4060840
130475 130476	20	19	18	17	 E4060342	 E4060842
130475 130476	17	16	15	14	 E4060345	 E4060845

GLAZING OPTIONS FOR VENT						
external gaskets	internal gaskets				glazing beads	
3 mm 130475	5 - 6 mm 130176		7 - 8 mm 130177			
3 mm 130476	5 mm 130205	6 mm 130206	7 mm 130207	8 mm 130208		
	X mm				standard	security
130475 130476	64	63	62	61	 E4060307	 E4060807
130475 130476	62	61	60	59	 E4060310	 E4060810
130475 130476	59	58	57	56	 E4060312	 E4060812
130475 130476	57	56	55	54	E4060315	E4060815
130475 130476	54	53	52	51	E4060317	E4060817
130475 130476	52	51	50	49	E4060320	E4060820
130475 130476	49	48	47	46	E4060322	E4060822
130475 130476	47	46	45	44	E4060325	E4060825
130475 130476	44	43	42	41	E4060327	E4060827
130475 130476	42	41	40	39	E4060330	E4060830
130475 130476	39	38	37	36	E4060332	E4060832
130475 130476	37	36	35	34	E4060335	E4060835
130475 130476	34	33	32	31	E4060337	E4060837
130475 130476	32	31	30	29	E4060340	E4060840
130475 130476	29	28	27	26	E4060342	E4060842
130475 130476	27	26	25	24	E4060345	E4060845

CUTTING LISTS

calculation of cutting length for one leaf window



frame profile selection		casement profile selection: E75200 	casement profile selection: E75201 
E75100 	width of casement	$\frac{W - 68}{2}$	$\frac{W - 68}{2}$
	height of casement	H - 63	H - 63
	height of overhung	H - 135	H - 135
E75101 	width of casement	$\frac{W - 90}{2}$	$\frac{W - 90}{2}$
	height of casement	H - 85	H - 85
	height of overhung	H - 157	H - 157
E75102 	width of casement	$\frac{W - 114}{2}$	$\frac{W - 114}{2}$
	height of casement	H - 109	H - 109
	height of overhung	H - 181	H - 181

calculation of cutting length for one leaf window

frame profile selection		casement profile selection: E75200	E75201
E75100	width of casement	W - 63	W - 63
	height of casement	H - 63	H - 63
E75101	width of casement	W - 85	W - 85
	height of casement	H - 85	H - 85
E75102	width of casement	W - 109	W - 109
	height of casement	H - 109	H - 109

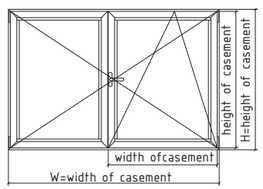
calculation of cutting length for glass unit

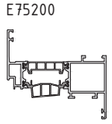
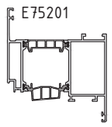
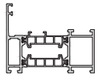
dimension of glass unit		casement profile: E75200	E75201
	width of glass unit	W - 123	W - 165
	height of glass unit	H - 123	H - 165

calculation of cutting length for glass unit

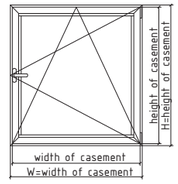
dimension of glass unit		frame profile: E75100	E75101	E75102
	width of glass unit	W - 88	W - 110	W - 134
	height of glass unit	H - 88	H - 110	H - 134

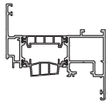
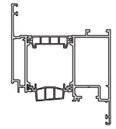
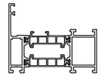
calculation of cutting length for double leaf window



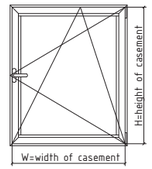
frame profile selection / casement profile selection		E75200 	E75201 
E75100 	width of casement	$\frac{W - 64}{2}$	$\frac{W - 64}{2}$
	height of casement	H - 58	H - 58
	height of overhung	H - 134	H - 134

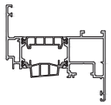
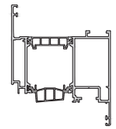
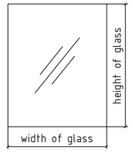
calculation of cutting length for one leaf window



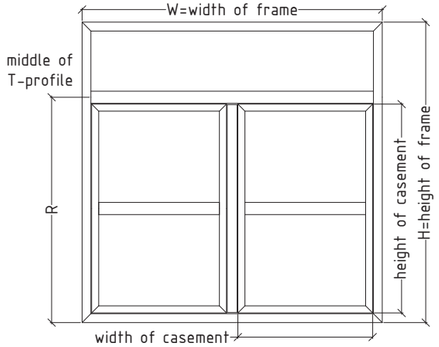
frame profile selection / casement profile selection		E75220 	E75221 
E75100 	width of casement	W - 58	W - 58
	height of casement	H - 58	H - 58

calculation of cutting length for glass unit



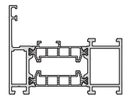
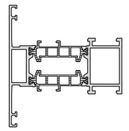
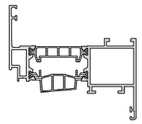
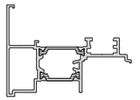
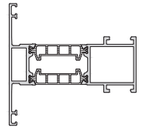
dimension of glass unit / casement profile		E75220 	E75221 
	width of glass unit	W - 135	W - 177
	height of glass unit	H - 135	H - 177

MACHININGS



Sample for manufacturing E75 position
with combination of profile with EURO groove

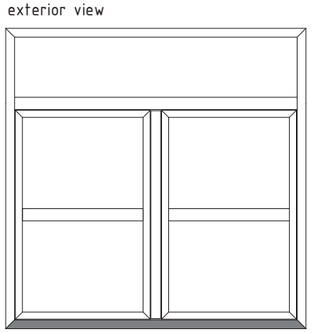
calculation of cutting length and angle for E75 profile

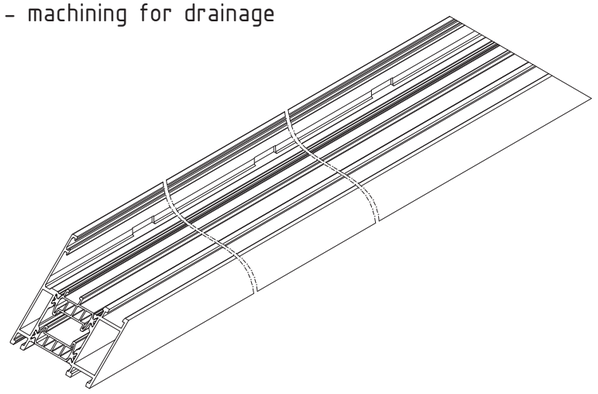
profile selection		pieces	cutting formula	cutting angles
E75100 	width of frame	2	W	2x45°
	height of frame	2	H	2x45°
E75300 	width of T profile	1	W - 65.5	2x90°
E75200 	width of casement	4	$\frac{W - 68}{2}$	2x45°
	height of casement	4	R - 44.5	2x45°
E75500 	height of overhung	1	height of casement - 72	2x90°
E75340 	width of T profile	2	width of casement - 99.5	2x90°

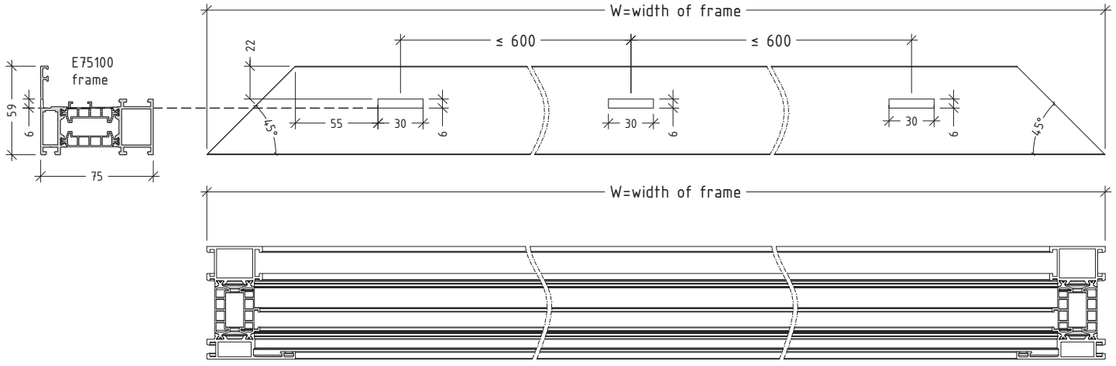
M75-1

Additional treatment of profiles after cutting
Frame E75100 - machining for drainage

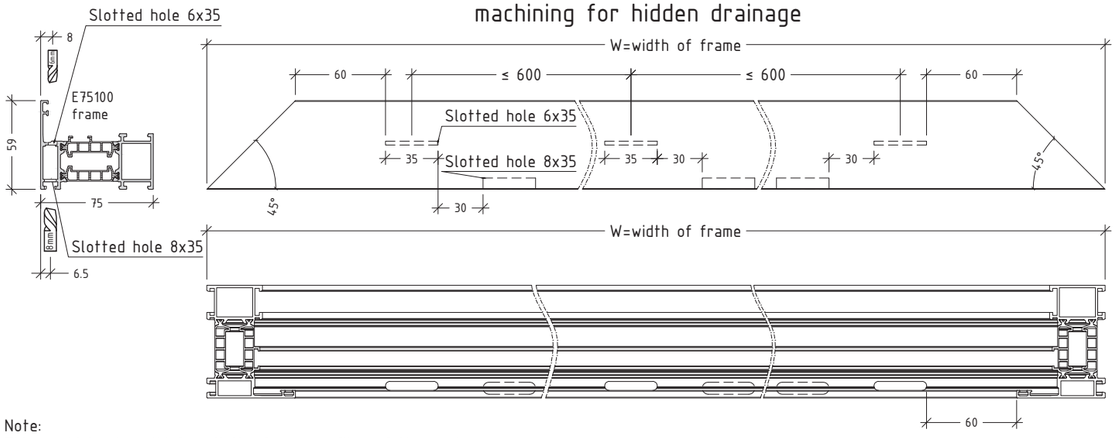
exterior view

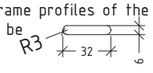






Optional
machining for hidden drainage

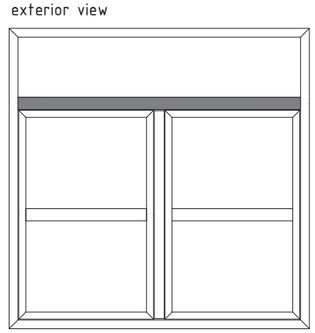


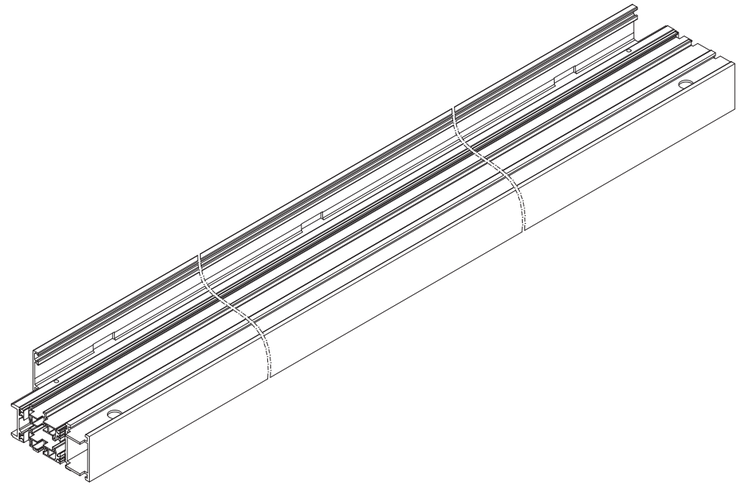
Note:
This machining is valid for all the frame profiles of the system
For CNC machine drainage hole must be  for punching machine is 

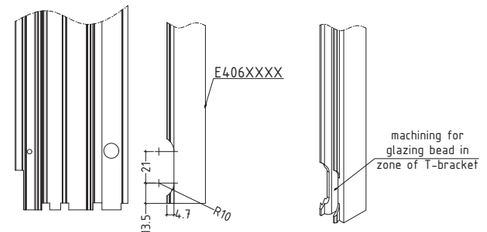
M75-2

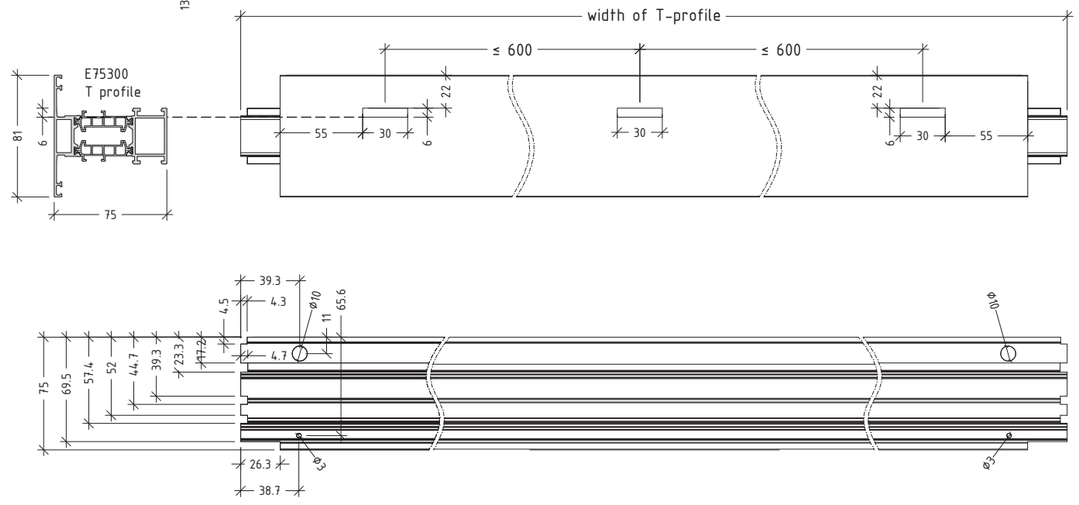
Additional treatment of profiles after cutting
T profile E75300 - machining for visible drainage and connecting to the frame

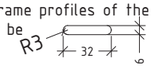
exterior view







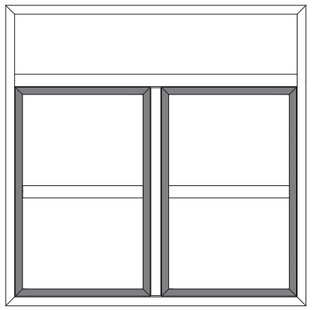


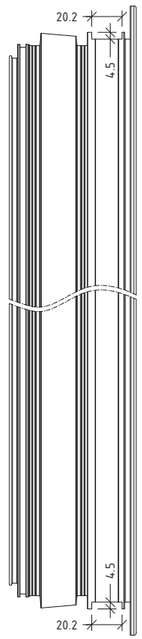
Note:
This machining is valid for all the frame profiles of the system
For CNC machine drainage hole must be  for punching machine is 

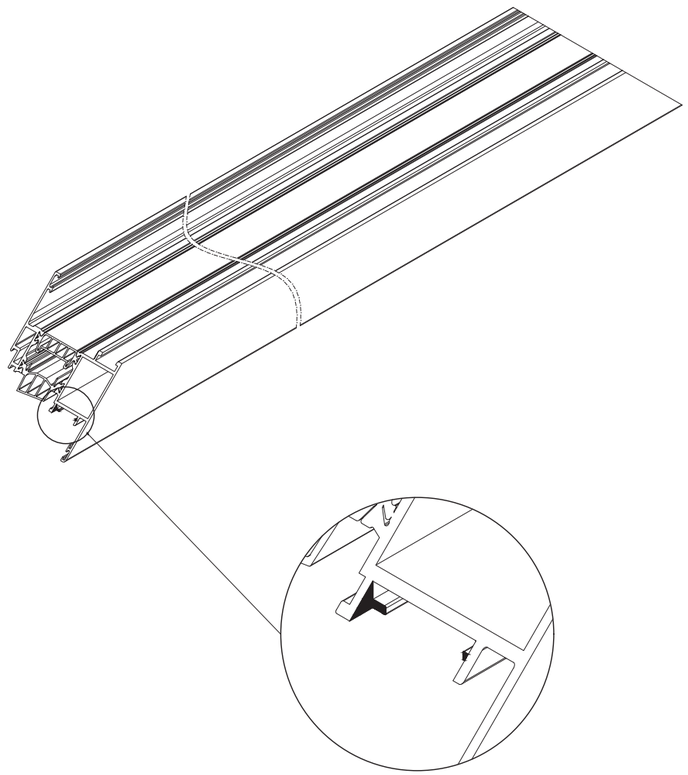
M75-3

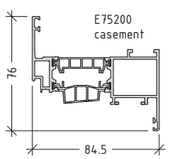
Additional treatment of profiles after cutting
casement E75200 - machining for connecting rod E2308

exterior view







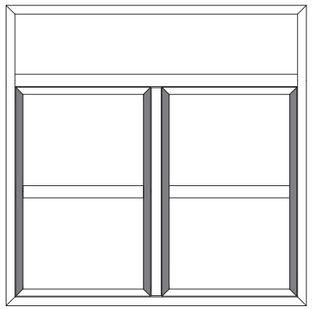


Note:
This machining's is valid for all the casement profiles with Euro groove in the system

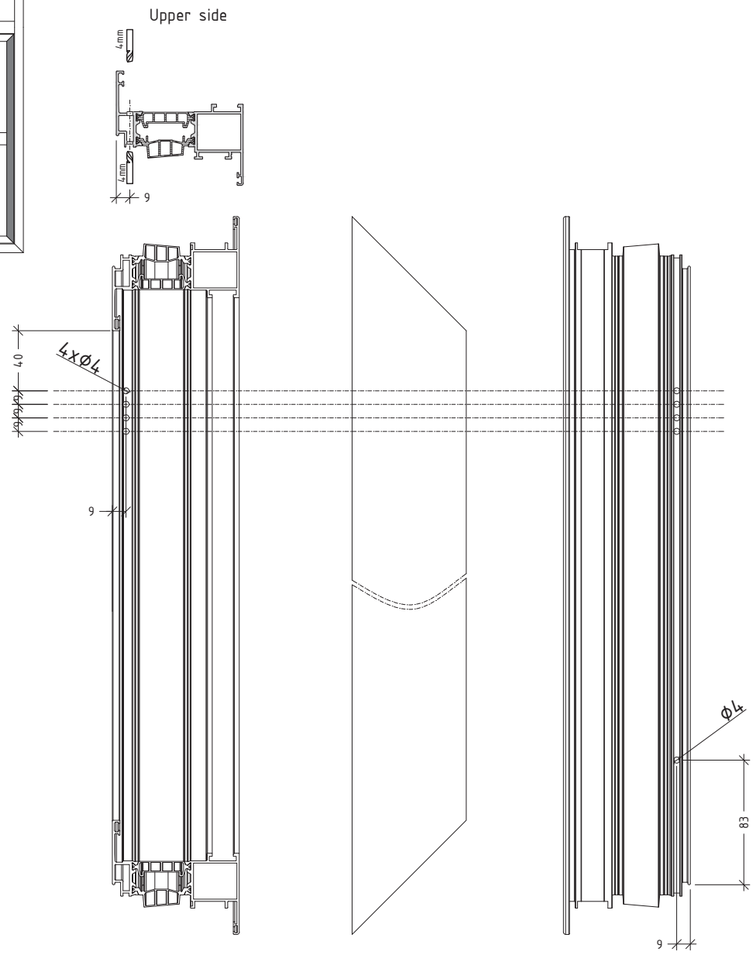
M175-4

Additional treatment of profiles after cutting
casement E75200 - machining for ventilation

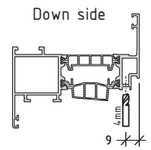
exterior view



Upper side



Down side

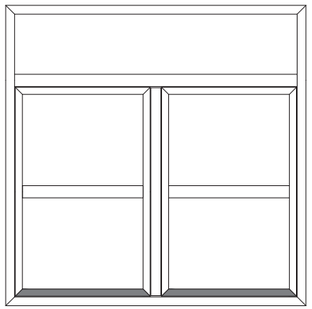


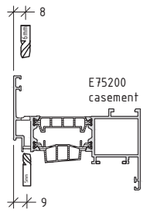
Note:
This machining's is valid for all the casement profiles with Euro groove in the system

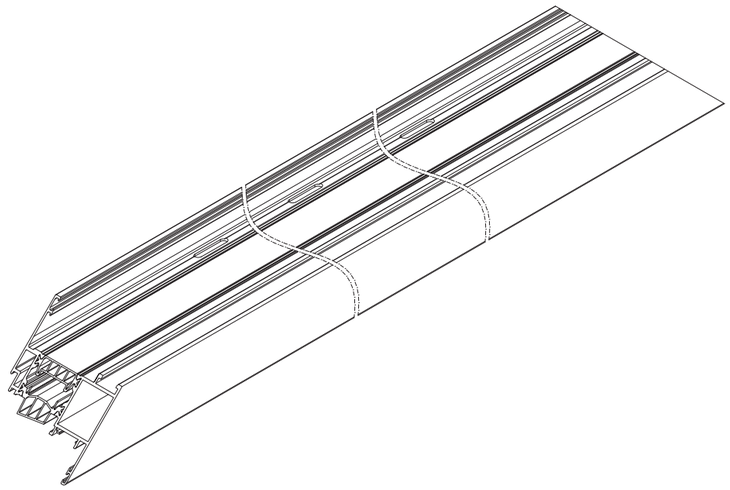
M175-4.1

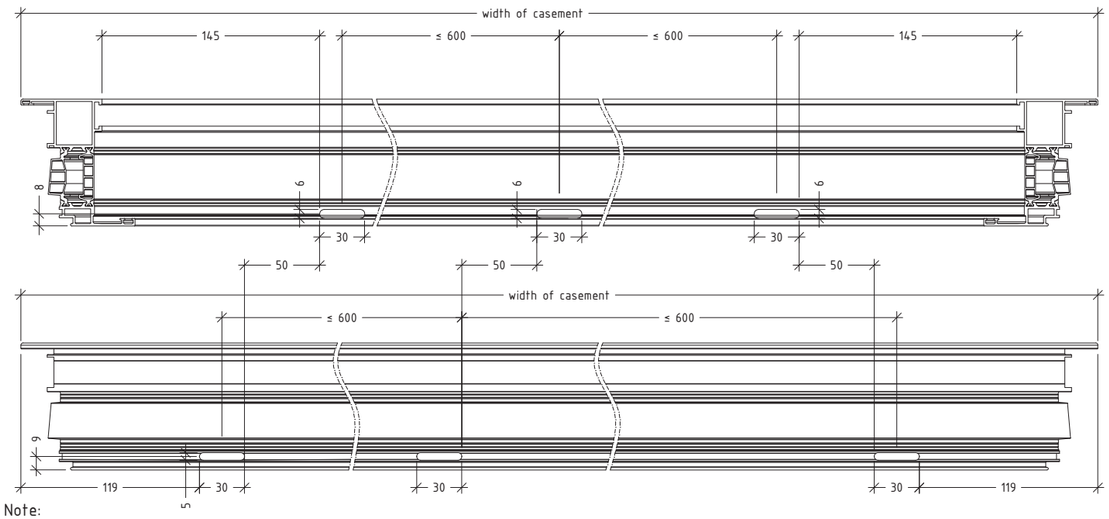
Additional treatment of profiles after cutting
casement E75200 – machining for drainage

exterior view







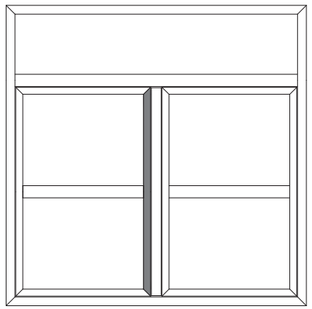


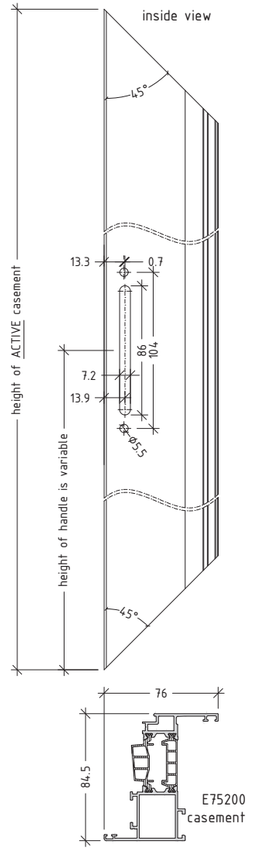
Note:
This machining is valid for all the casement profiles in the system

M75-5

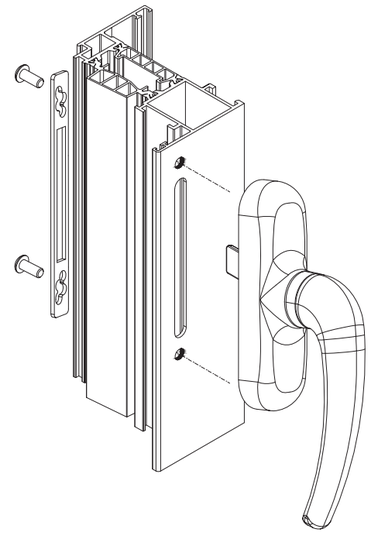
Additional treatment of profiles after cutting
casement E75200 – machining for handle on active casement

exterior view





machining for window handle



NOTE:

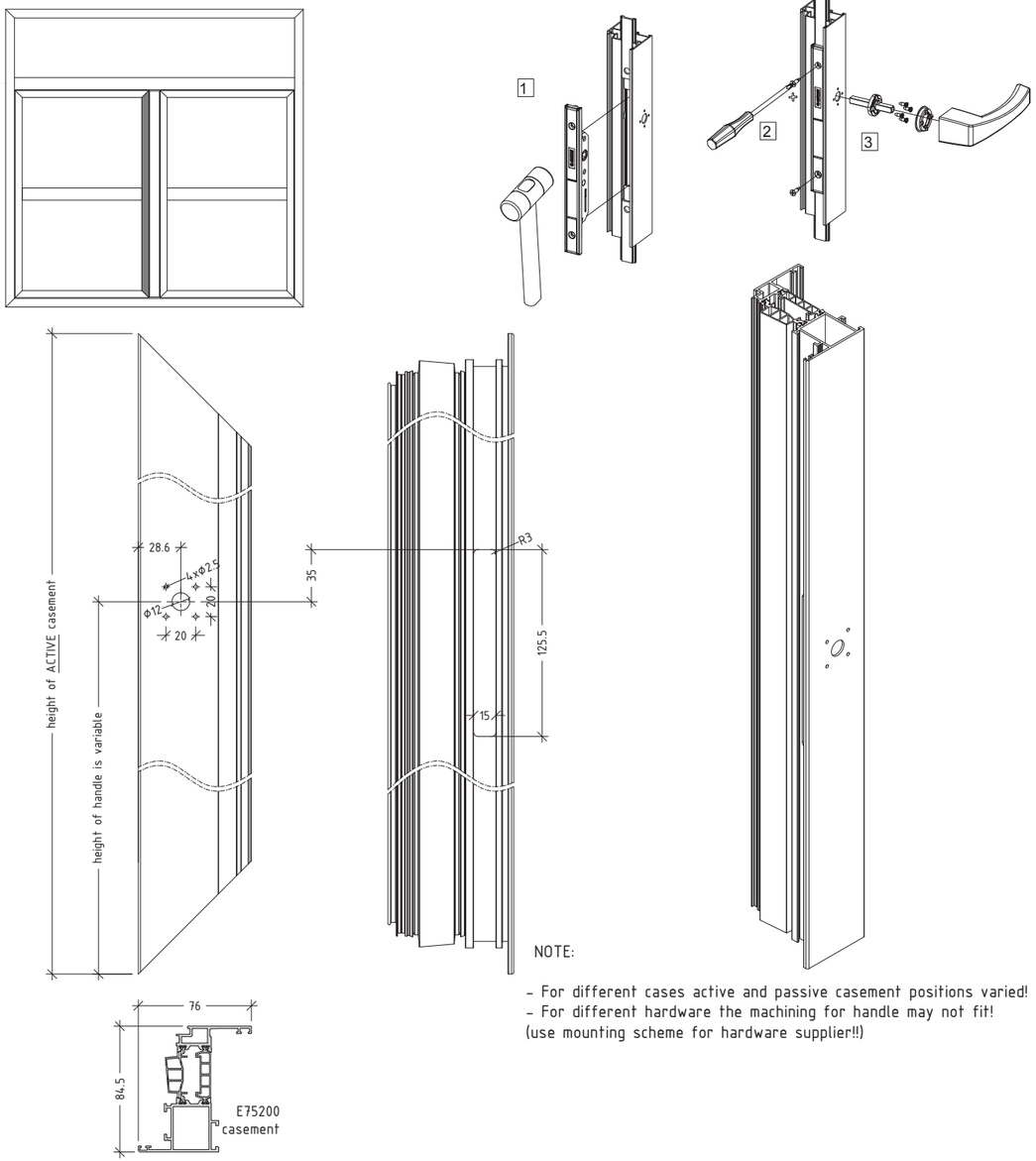
- For different cases active and passive casement positions varied!
- For different hardware the machining for handle may not fit!
(use mounting scheme for hardware supplier!!)

Note:
This machining is valid for all the casement profiles with Euro groove in the system

M75-6

Additional treatment of profiles after cutting
casement E75200 - machining for handle on active casement

exterior view



NOTE:

- For different cases active and passive casement positions varied!
- For different hardware the machining for handle may not fit!
(use mounting scheme for hardware supplier!!)

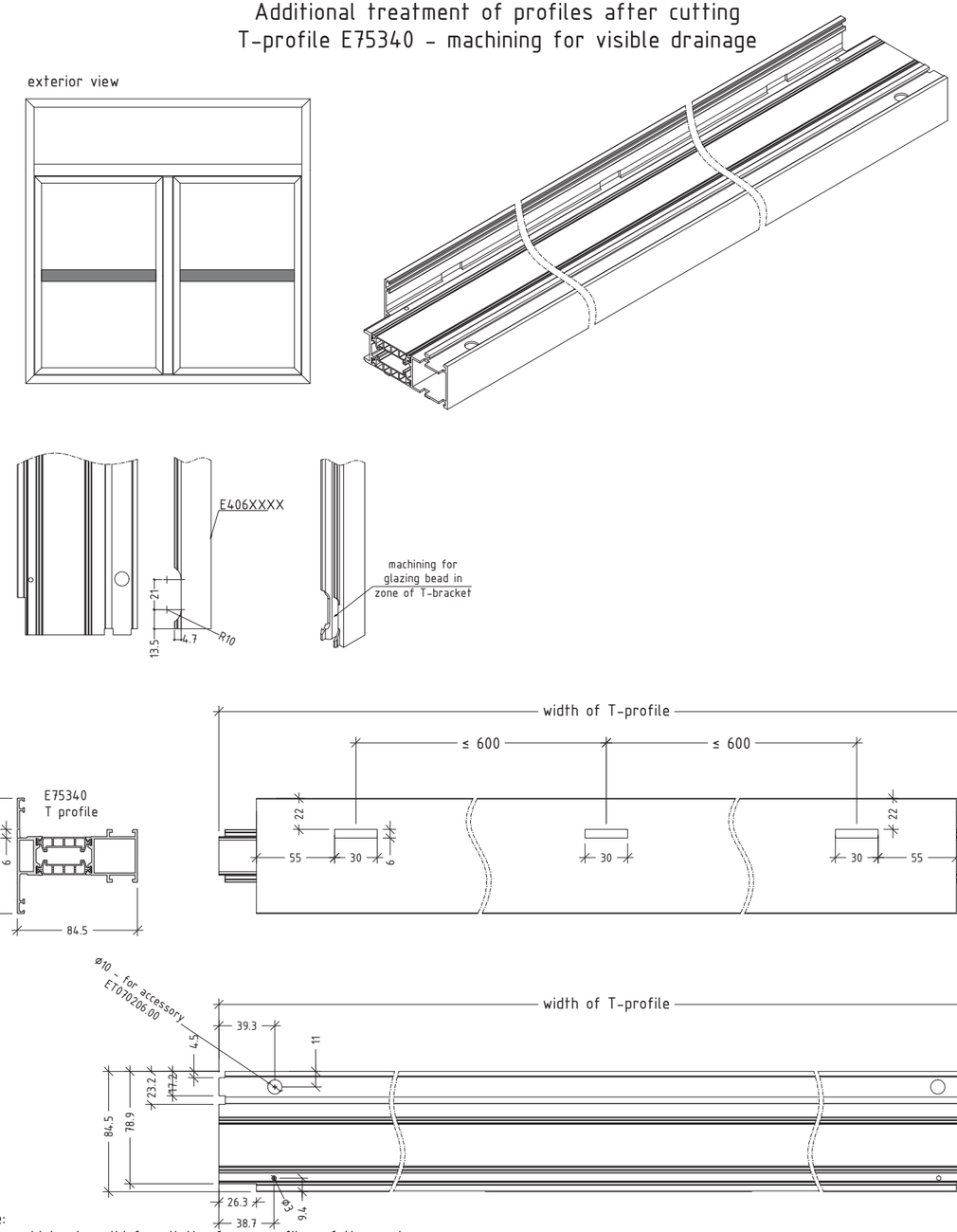
Note:
This machining is valid for all the casement profiles with Euro groove in the system

M75-6.1

opening system with thermal break E75

Additional treatment of profiles after cutting
T-profile E75340 - machining for visible drainage

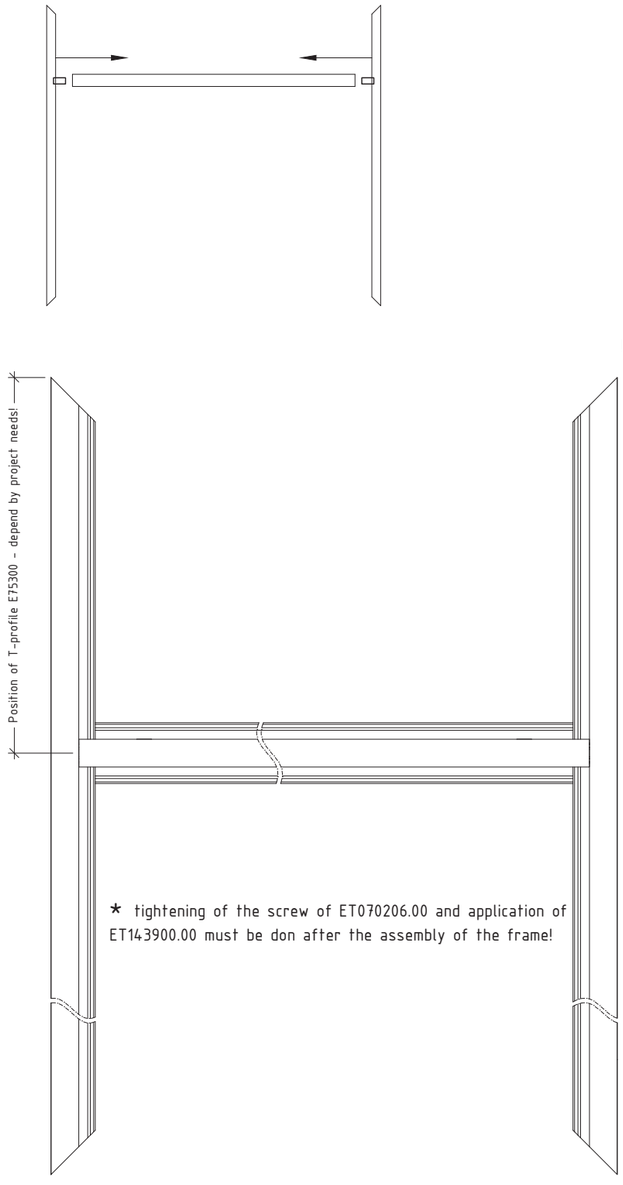
exterior view

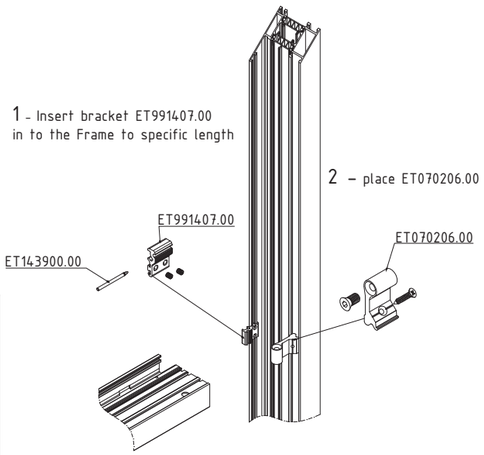


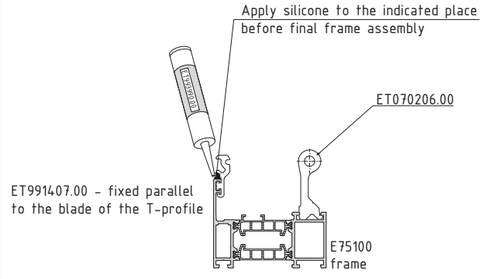
Note:
This machining is valid for all the frame profiles of the system
For CNC machine drainage hole must be for punching machine is

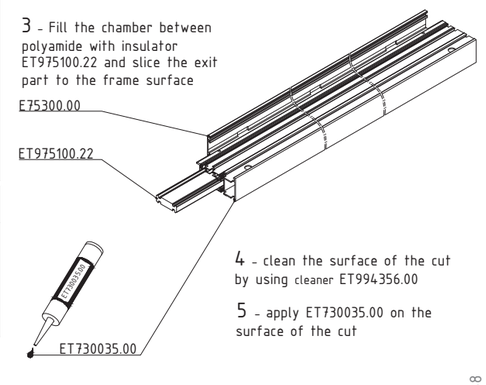
M75-7

Sequence for mounting of T-profile E75300 to the frame E75100



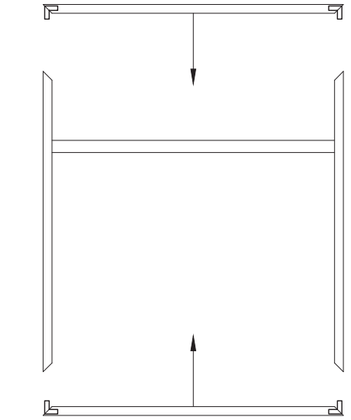


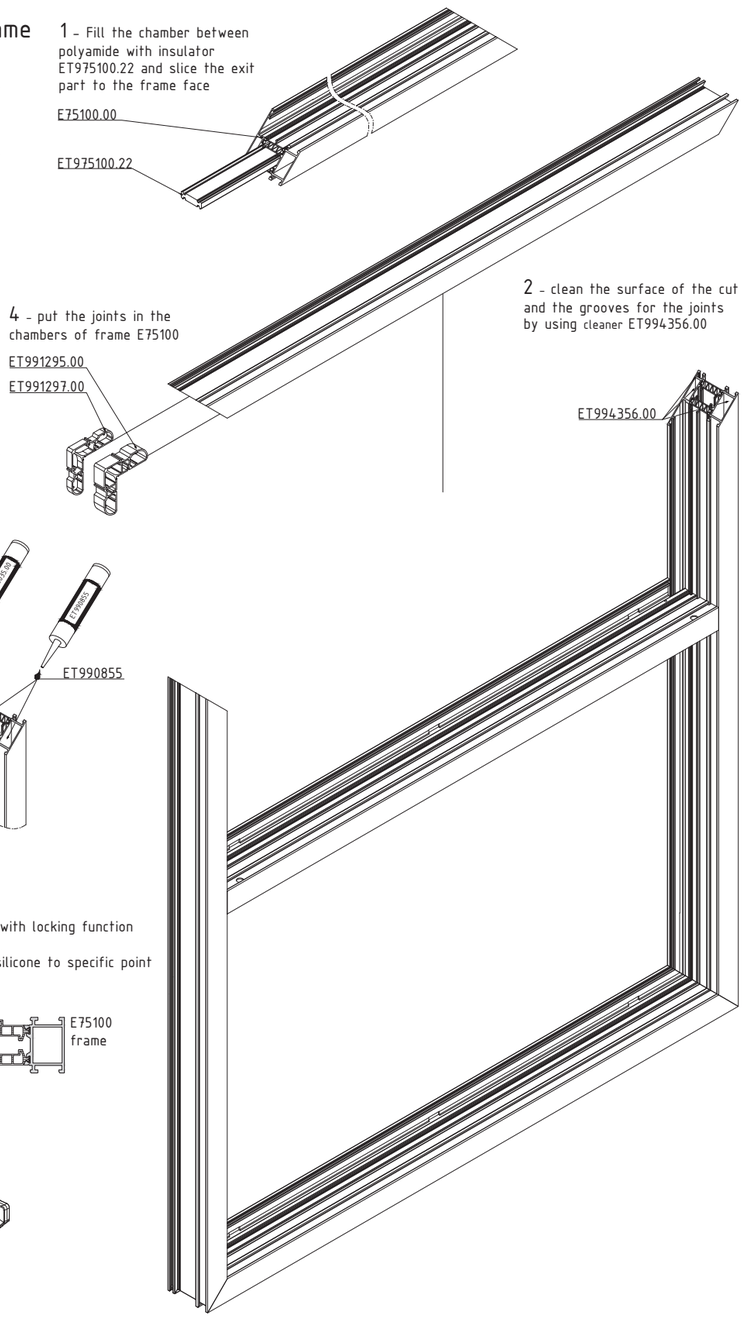


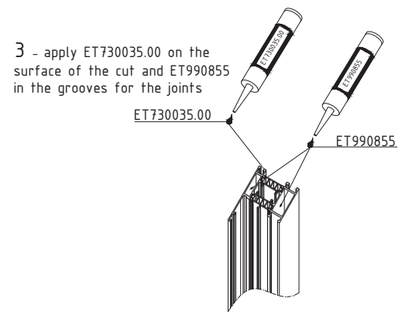


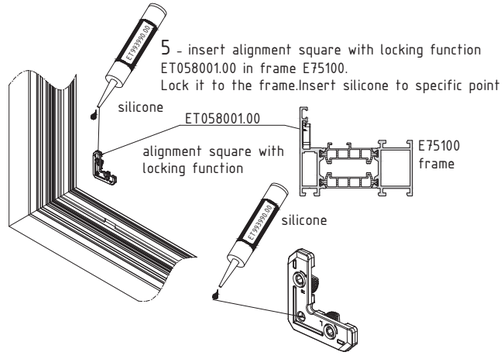
Note:
This mounting sequence is valid for all the frames in the system

Sequence for assembly the frame E75100



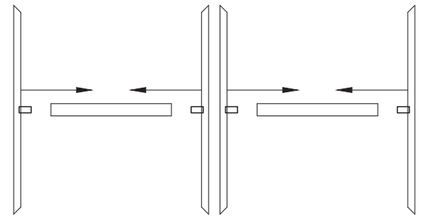


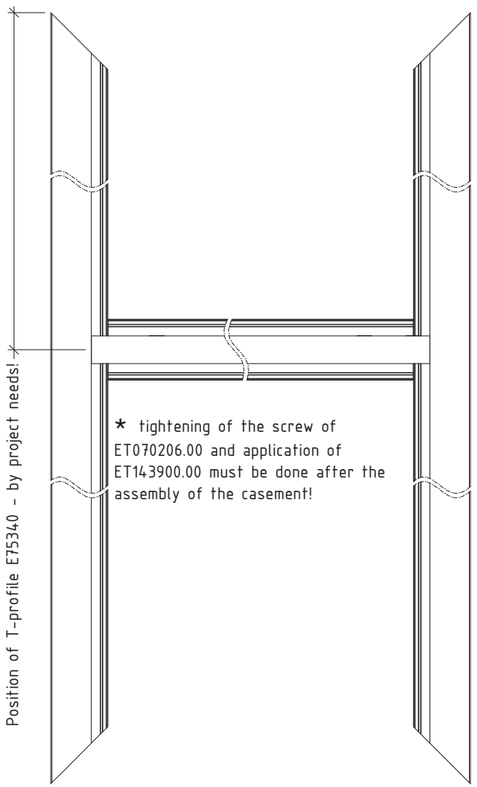




Note:
* This mounting sequence is valid for all the frame profiles in the system by using corresponding joint corners and insulators
* Clean the joints before application

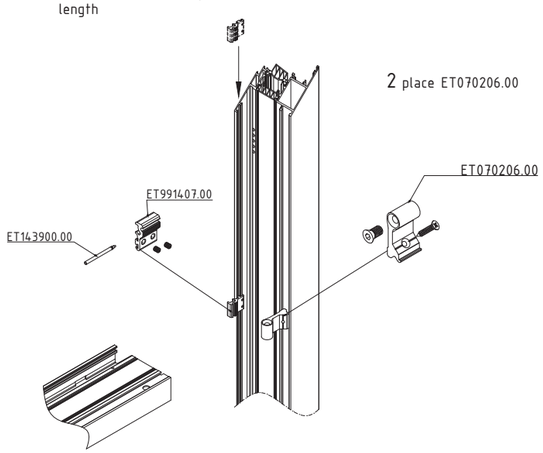
Sequence for mounting of T-profile E75340 to the casement E75200



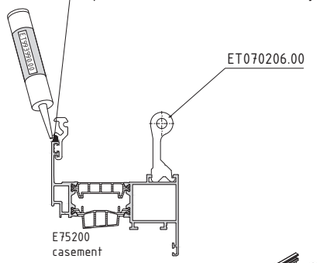


1 insert bracket ET991407.00 in to the casement to specific length

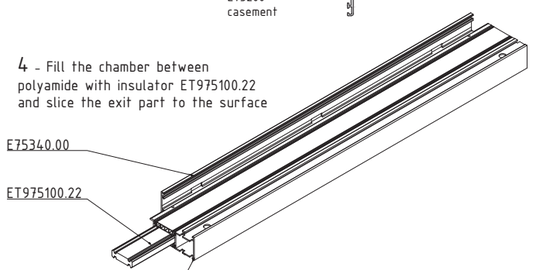
2 place ET070206.00



3 Apply silicone to the indicated place before final frame assembly



4 - Fill the chamber between polyamide with insulator ET975100.22 and slice the exit part to the surface



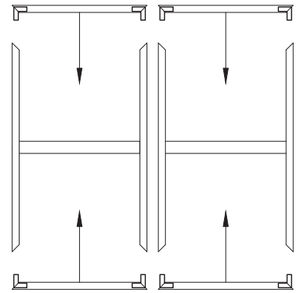
4 - clean the surface of the cut by using cleaner ET994356.00

5 - apply ET730035.00 on the surface of the cut

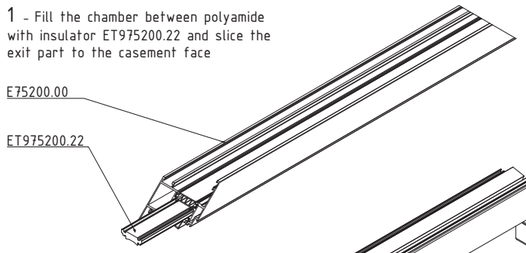
Note:
* This mounting sequence is valid for all casement profile with Euro groove in the system

M75-10

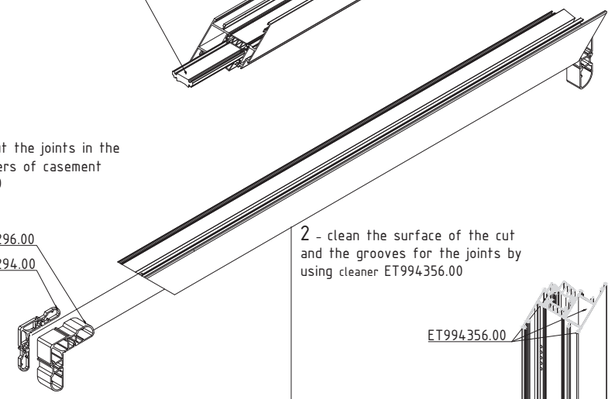
Sequence for assembly the casement E75200



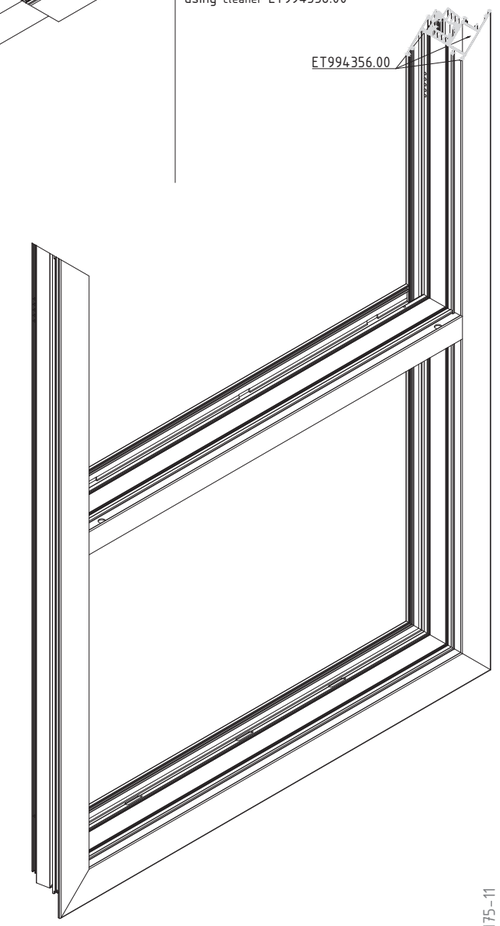
1 - Fill the chamber between polyamide with insulator ET975200.22 and slice the exit part to the casement face



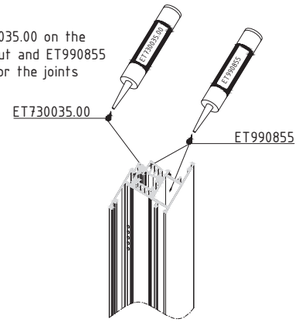
4 - put the joints in the chambers of casement E75200



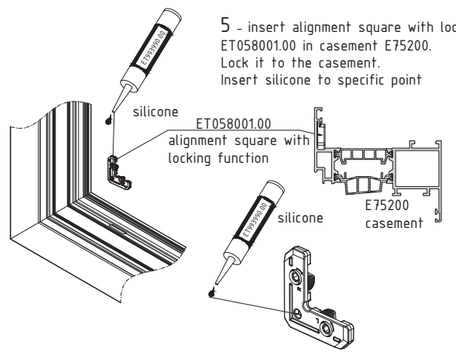
2 - clean the surface of the cut and the grooves for the joints by using cleaner ET994356.00



3 - apply ET730035.00 on the surface of the cut and ET990855 in the grooves for the joints



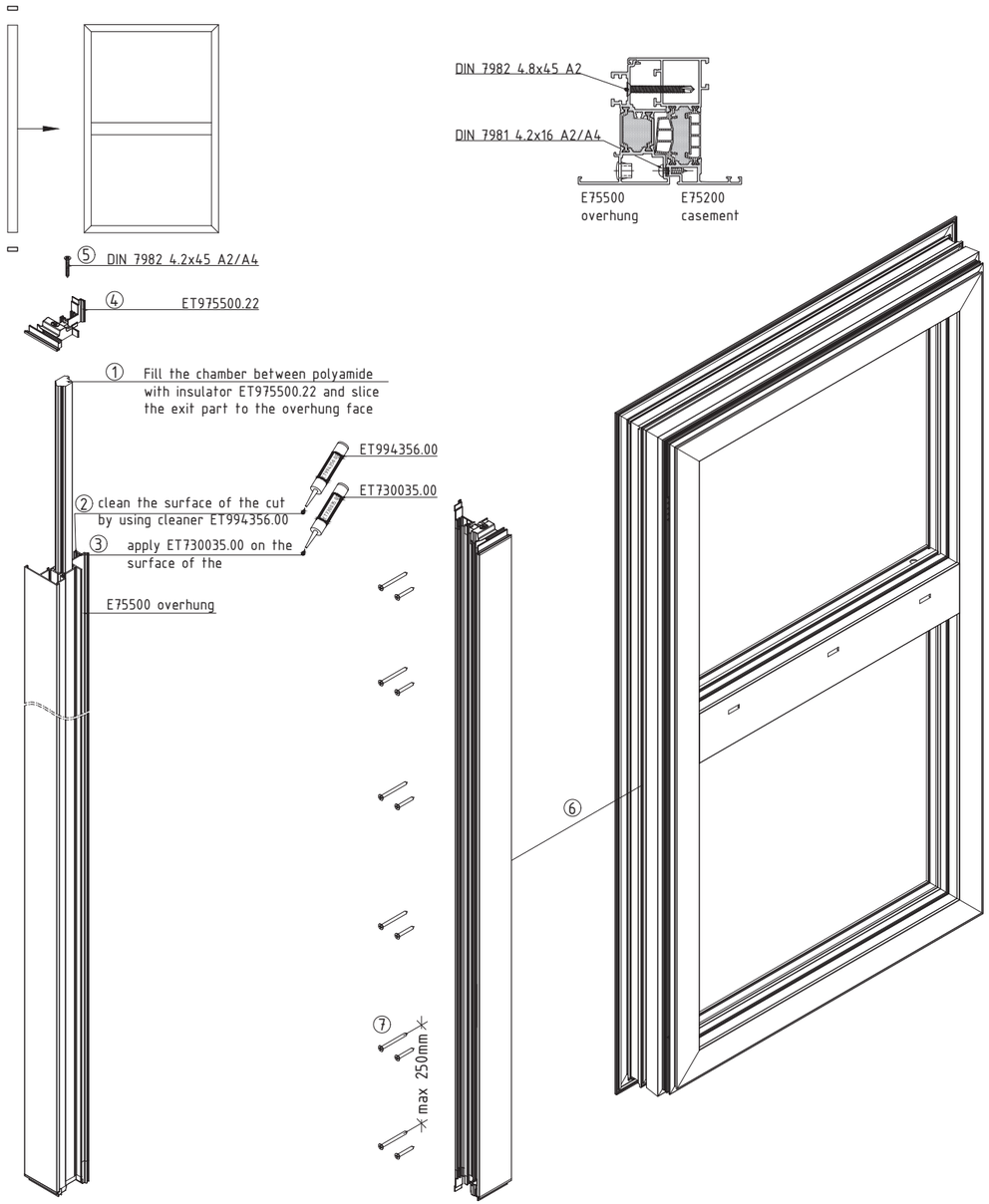
5 - insert alignment square with locking function ET058001.00 in casement E75200. Lock it to the casement. Insert silicone to specific point



Note:
* This mounting sequence is valid for all the casement profiles in the system by using corresponding joint corners and insulators
* Clean the joints before application

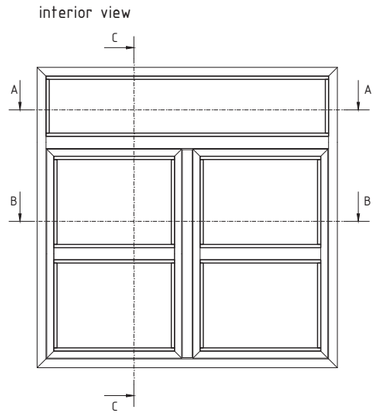
M75-11

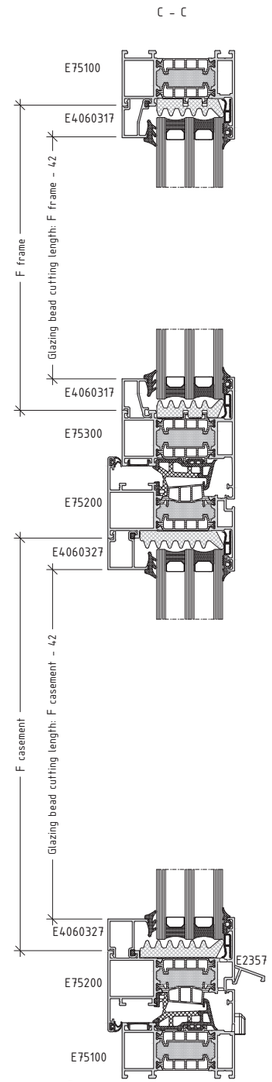
Sequence for assembly the E75500 overhung and mounting to the casement E75200

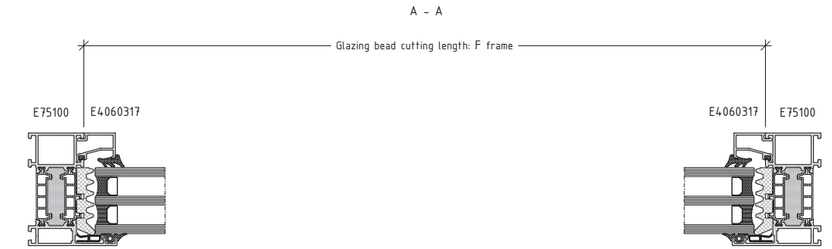


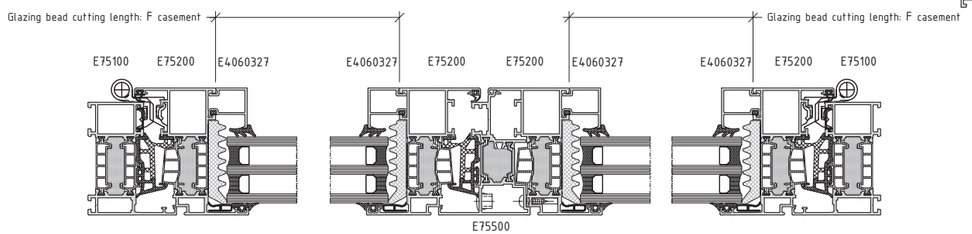
M75-12

Sequence for cutting of glazing bead



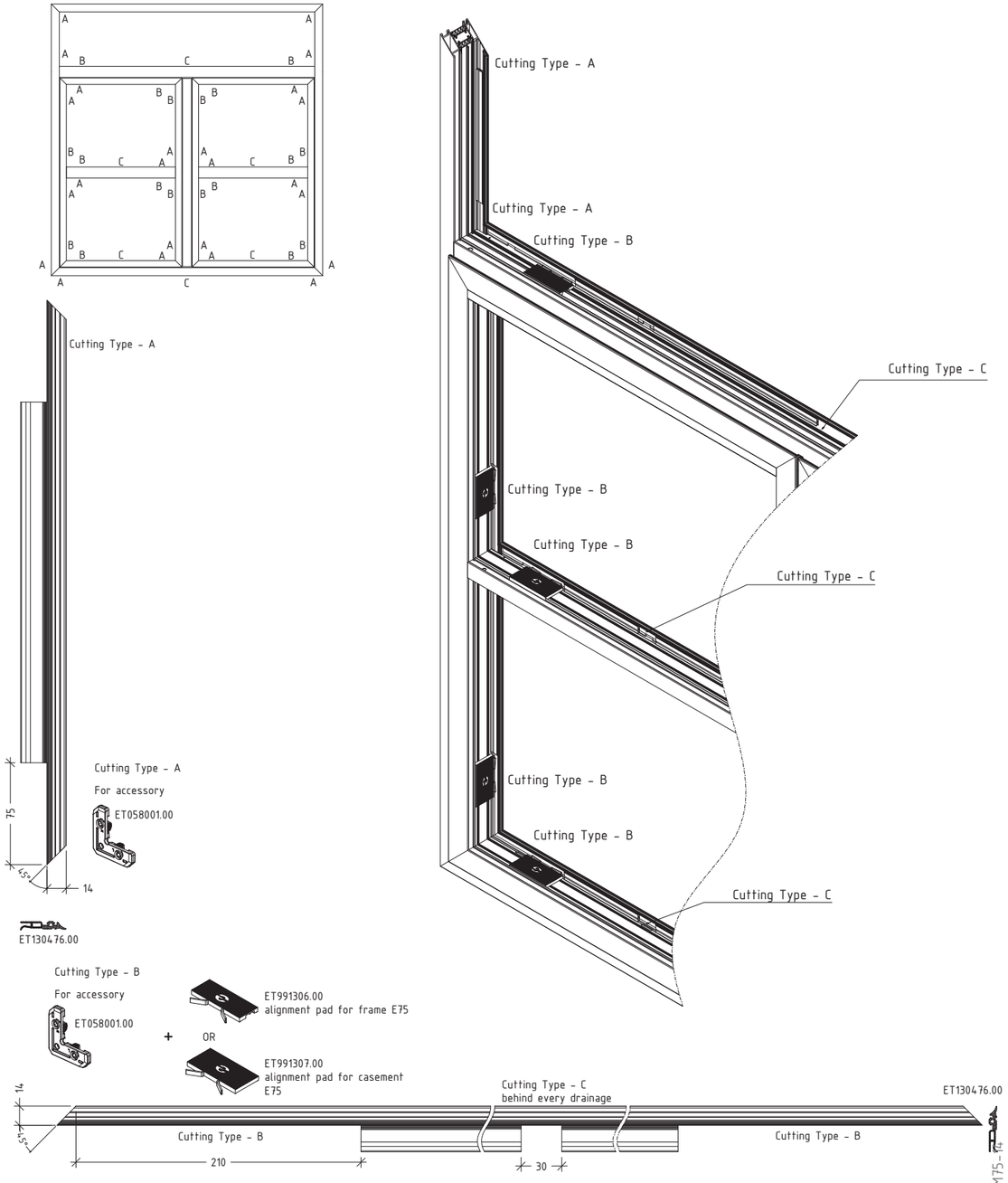






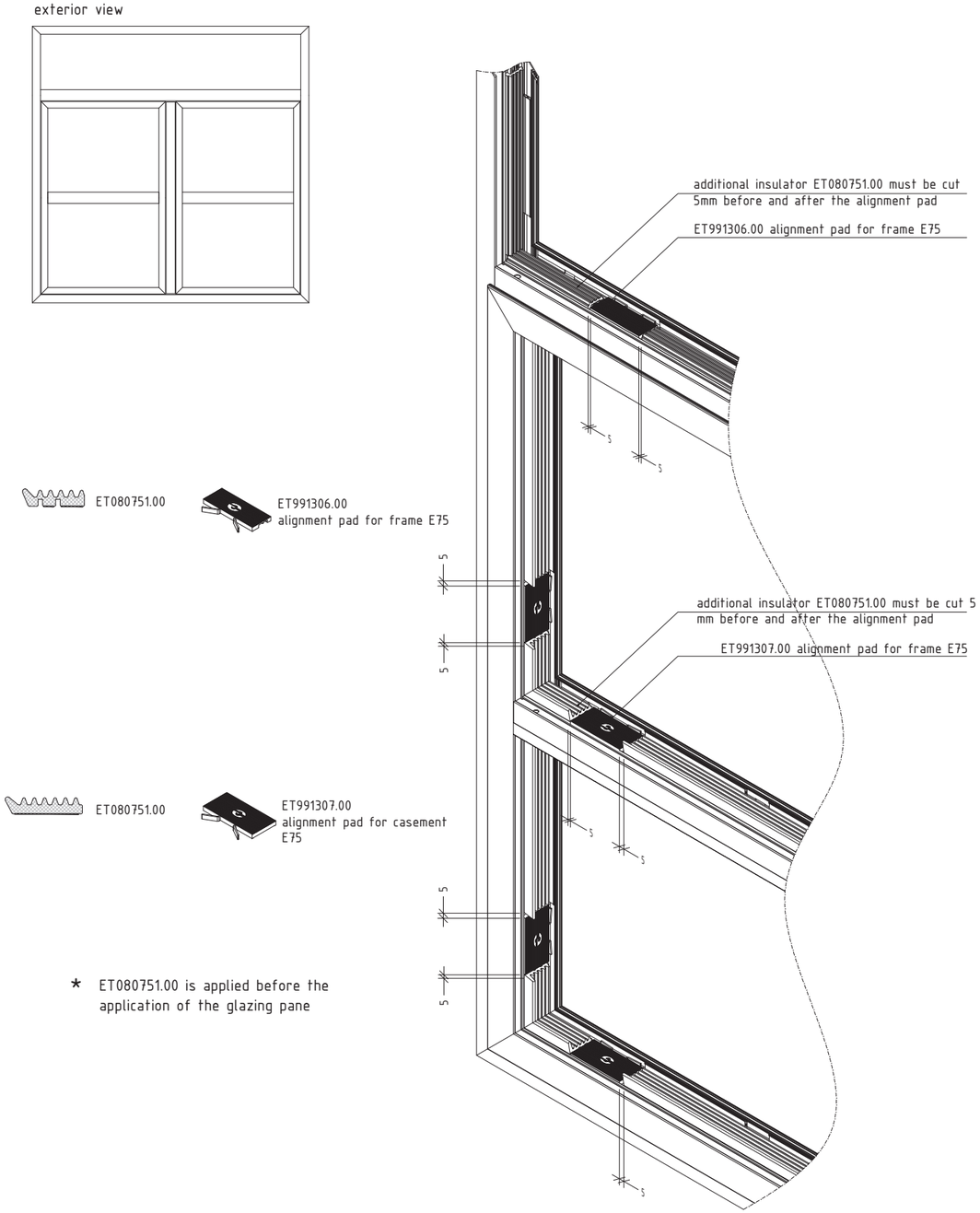
M75-13

Sequence for cutting of gasket ET130476.00



M175-14

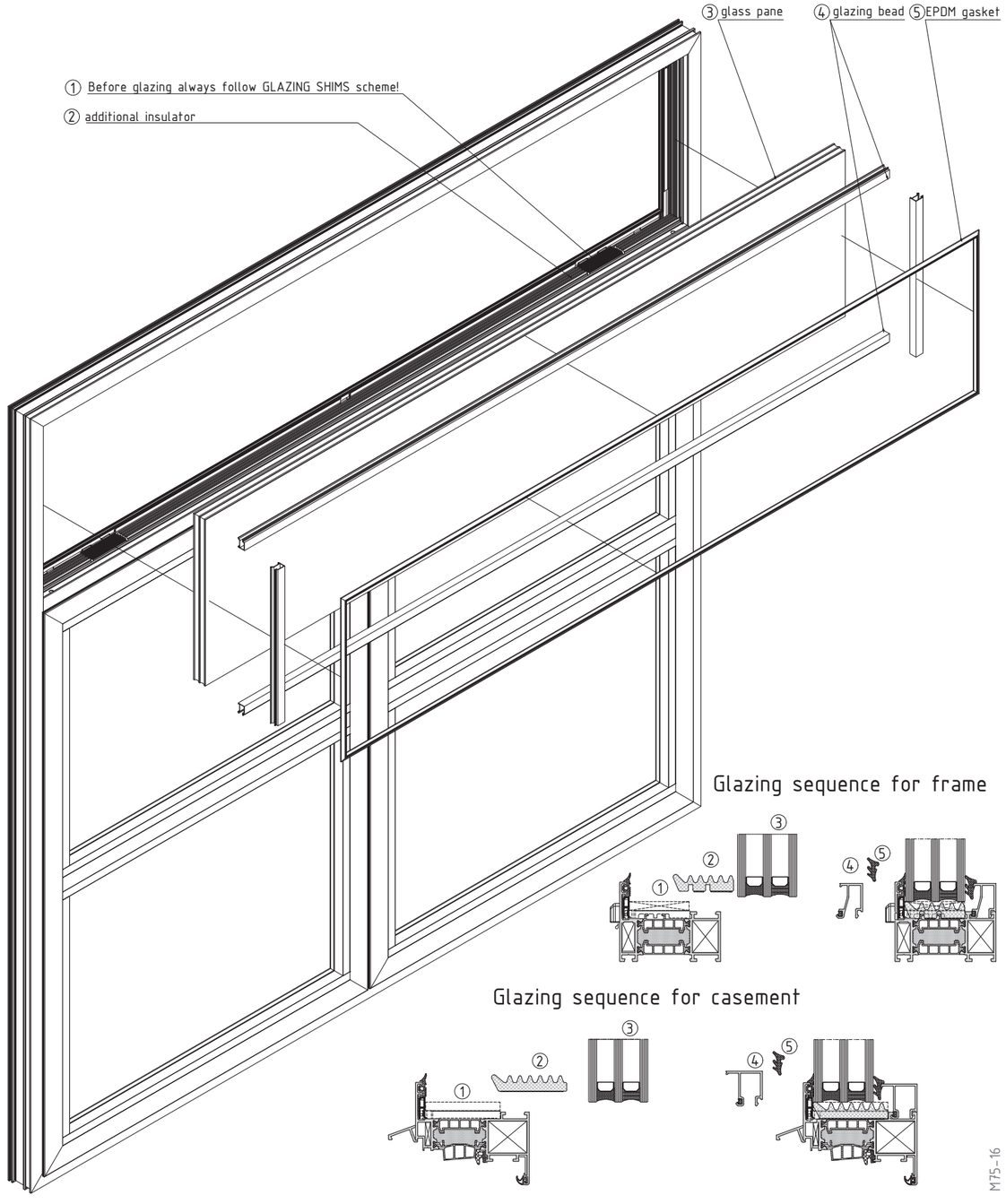
Sequence for cutting of additional insulators



* ET080751.00 is applied before the application of the glazing pane

M175-15

Sequence for mounting glass pane; glazing bead and gasket

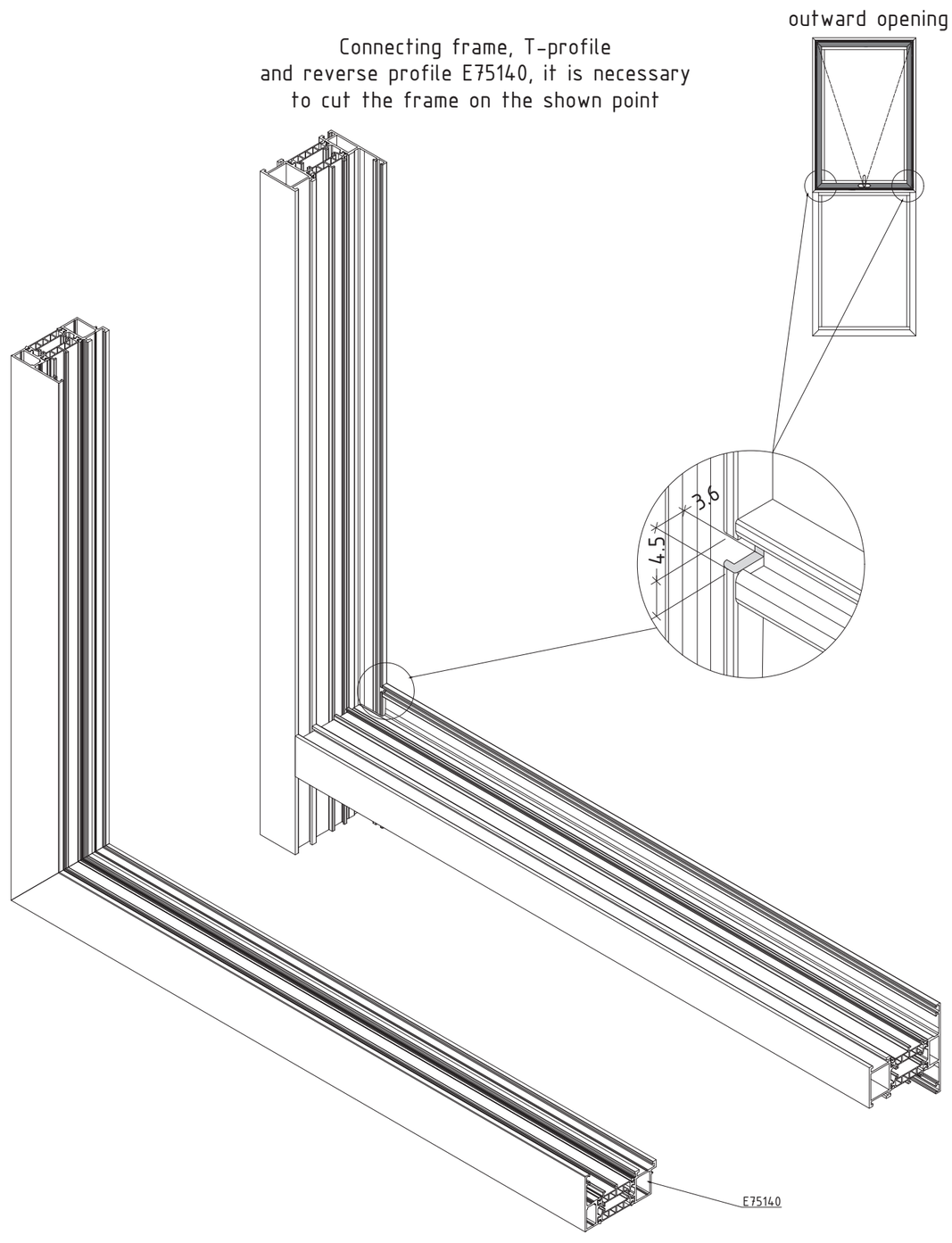


Glazing sequence for frame

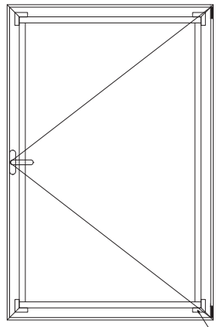
Glazing sequence for casement

M175-16

Connecting frame, T-profile
and reverse profile E75140, it is necessary
to cut the frame on the shown point



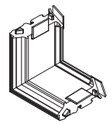
M175-17



Sequence for mounting EPDM vulcanised corner and central EPDM gasket to the frame for E75

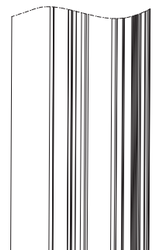
ET130430.00
co-extruded EPDM gasket for E75

ET991327.00 EPDM vulcanised corner for gasket ET130430.00



ET991327.00

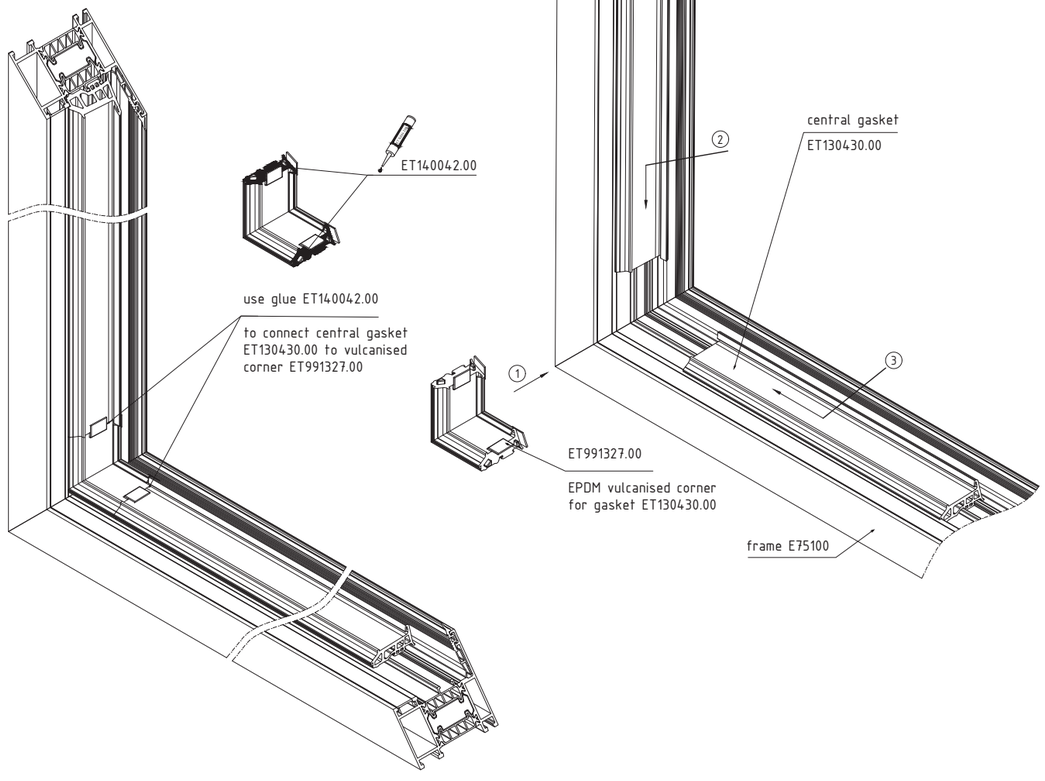
EPDM vulcanised corner for gasket ET130430.00



Note:

1- use cleaner ET994356.00
2- use primer ET140045.00
3- use glue ET140042.00

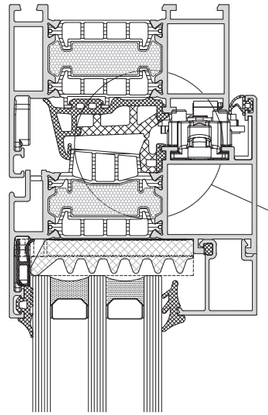
- Make sure central EPDM gasket ET130430.00 is in contact and glued to EPDM vulcanised corner ET060168.00!



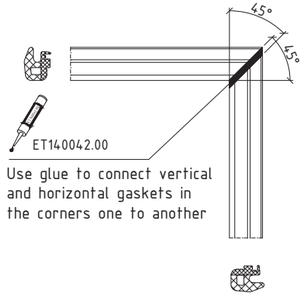
M75-18

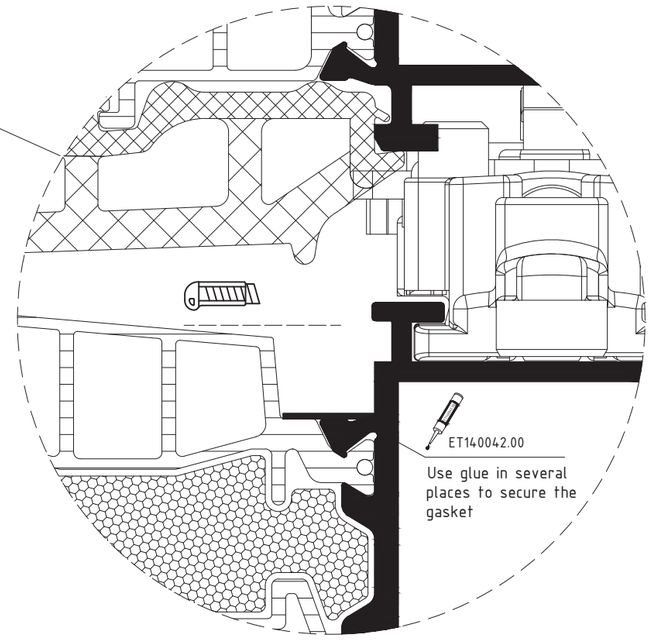
Sequence for mounting additional EPDM gasket to E75 casement

scale: 2:1



note: Cut the horizontal and vertical gasket at an angle of 45 °





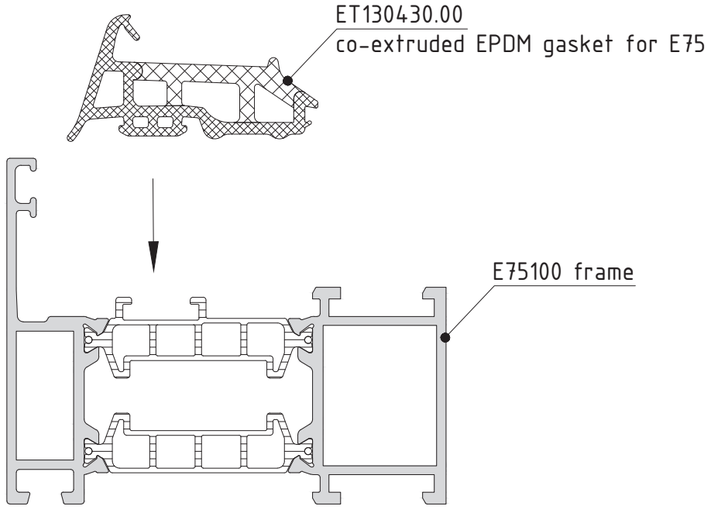
scale: 4:1

note: Remove the part of the gasket which is in conflict with the accessory using knife or other sharp cutting tool.

scale: 4:1

M75-19

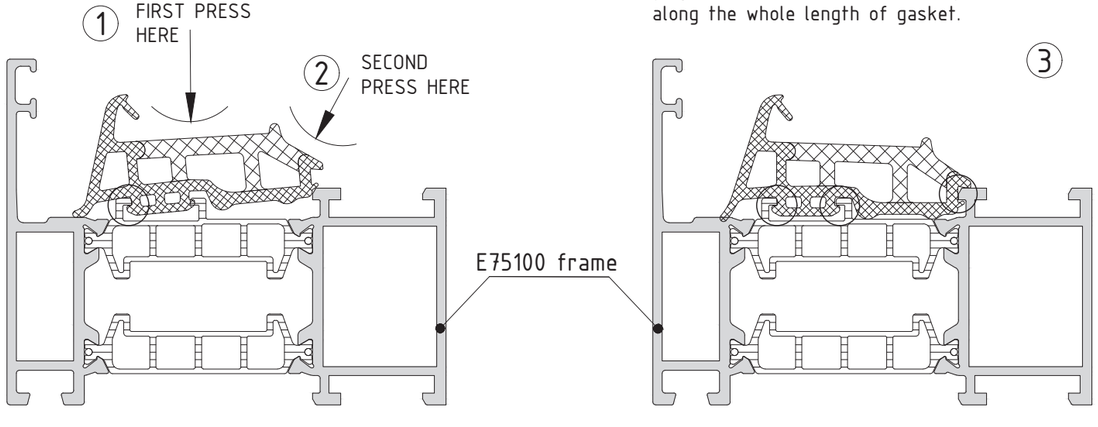
Sequence for mounting EPDM central gasket to E75 frame



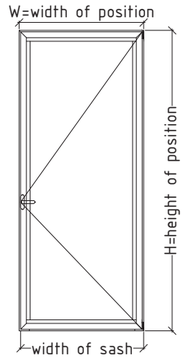
note: Insert the gasket into the chamber. The gasket must be in full contact with the polyamide.

Step 1: Press the gasket to the outer profile chamber.
Step 2: Press the gasket to the internal profile chamber.

Step 3: Be sure the all teeth are in contact with polyamide chamber and aluminum profile along the whole length of gasket.



M75-20



Sample for manufacturing E75 position with combination of profile:

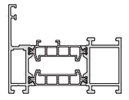
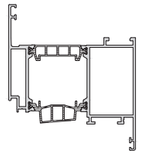
E75100 Frame

E75201 casement

E75851 threshold

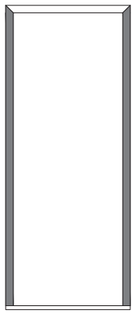
E4275851 application profile

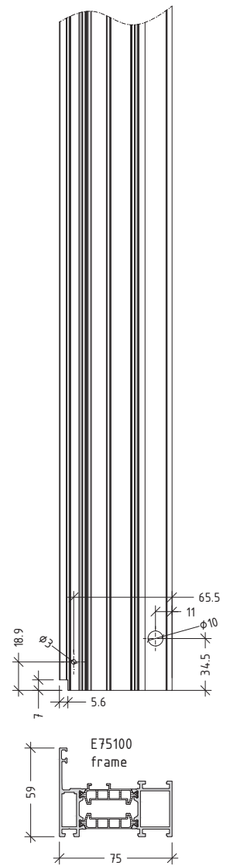
calculation of cutting length and angle for E75 profile

profile selection		pieces	cutting formula	cutting angles
E75100 	width of frame	1	W	2x45°
	height of frame	2	H - 13	1x45° 1x90°
E75201 	width of casement	2	W - 63	2x45°
	height of casement	2	H - 38.5	2x45°
E75851 	width of threshold	1	W	2x90°
E4275851 	width of application profile	1	width of sash - 78	2x90°

M75-20-1

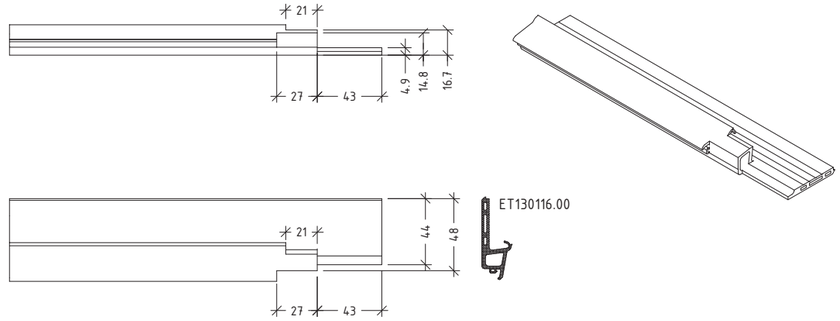
Additional treatment of profiles after cutting
Frame E75100 - machining for connecting on threshold



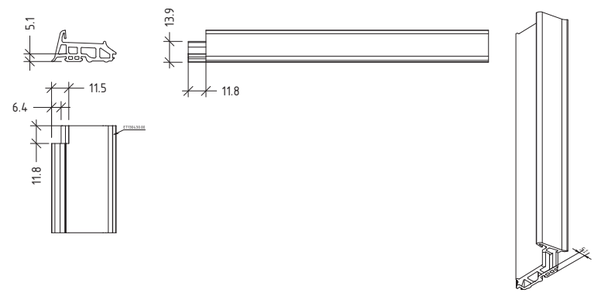


M75-20-2

Additional treatment of gaskets ET130116.00

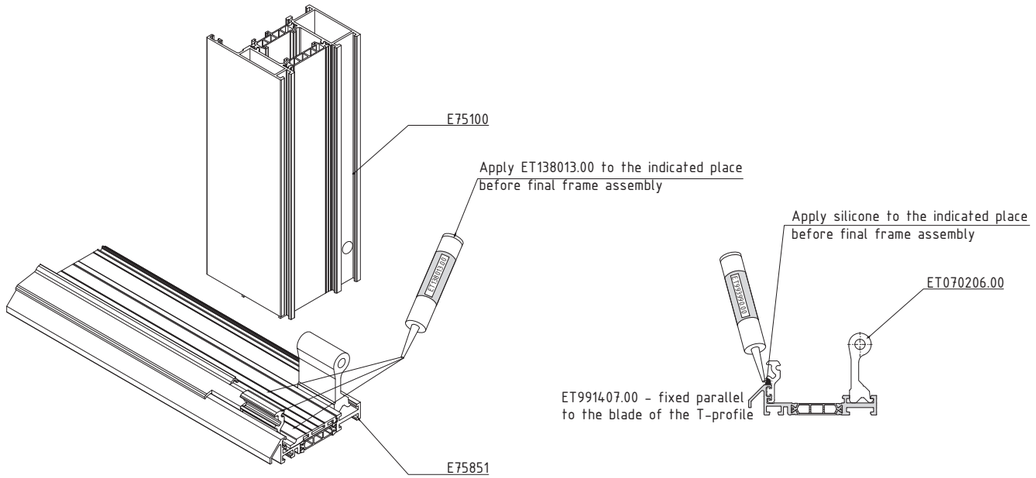


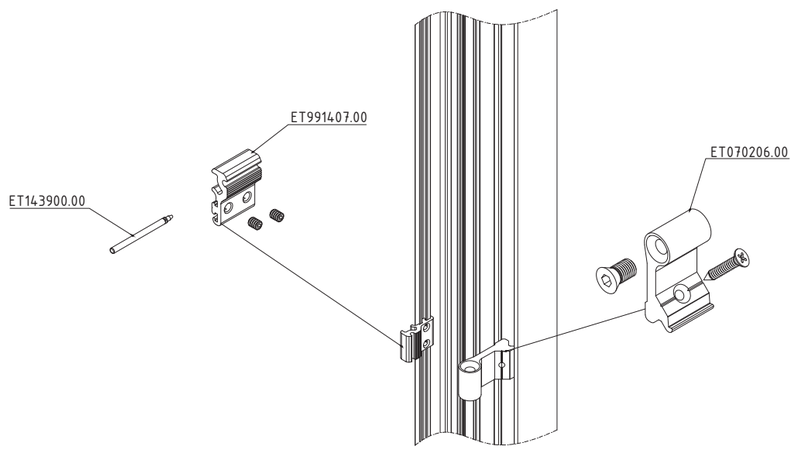
Additional treatment of gaskets ET130430.00



M75-20-3

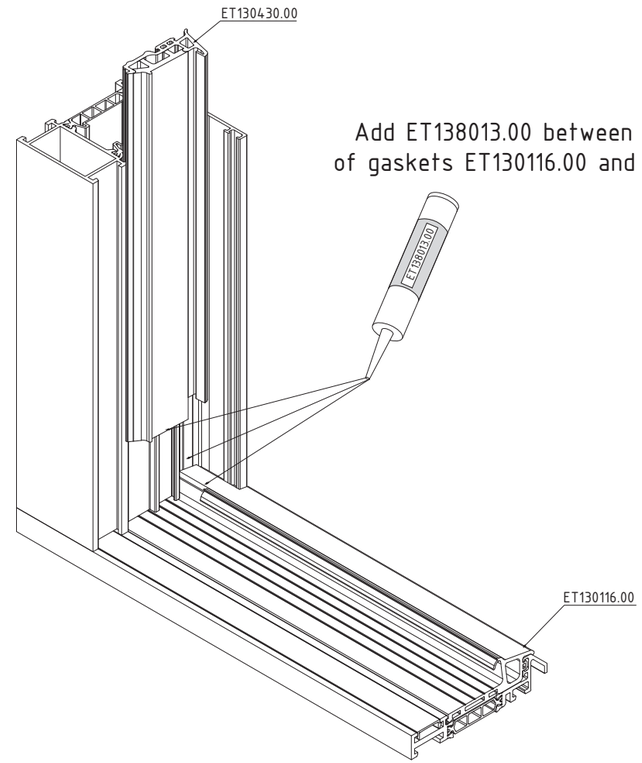
Assembling the frame E75100 to the threshold E75851

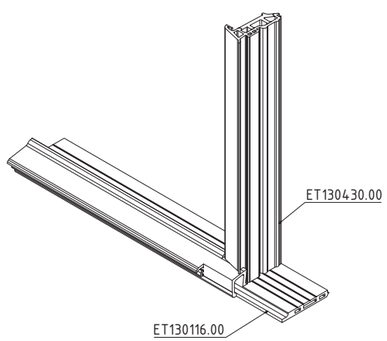




M75-20-4

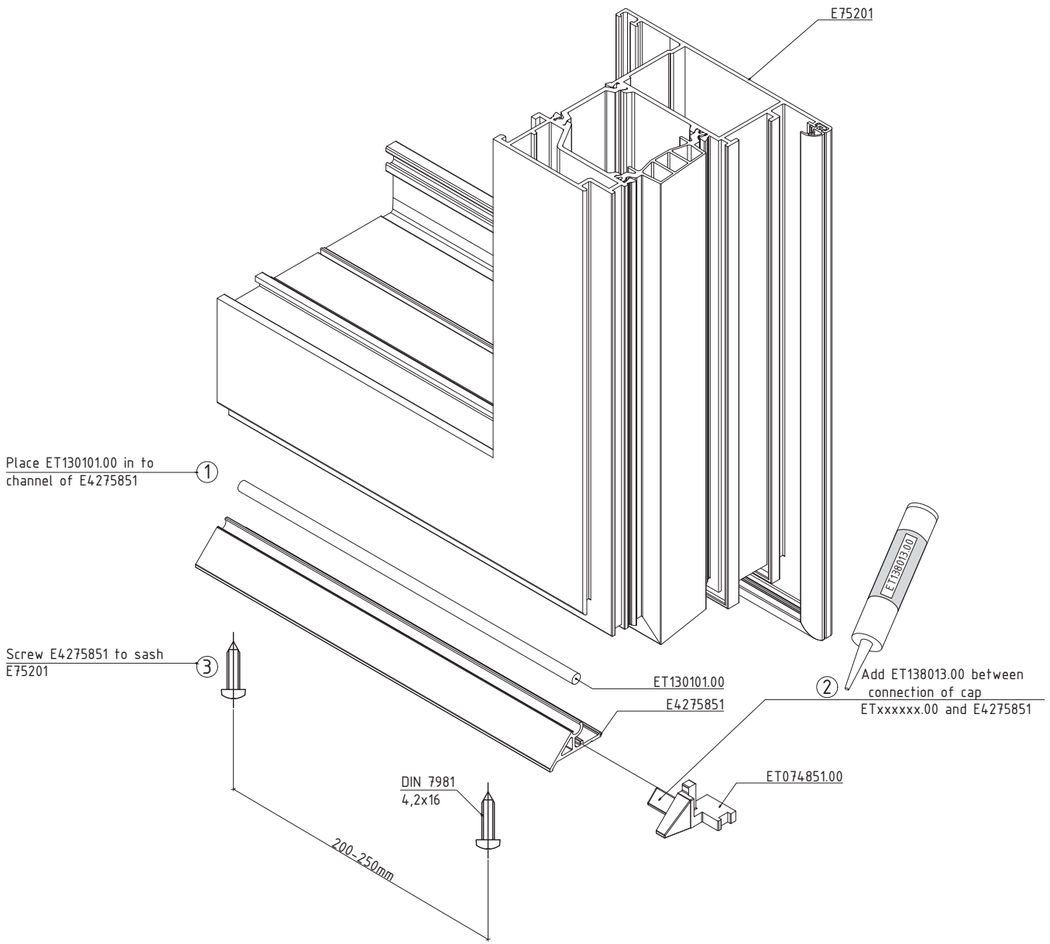
Pairing gaskets ET130116.00 and ET130430.00



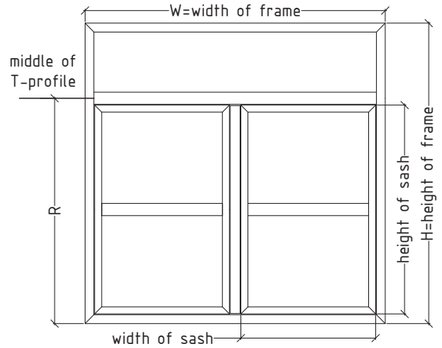


M75-20-5

Sequence for mounting E4275851 application profile to the sash E75201

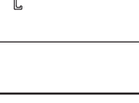
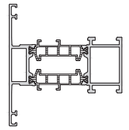
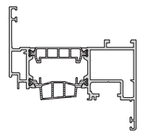
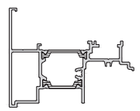
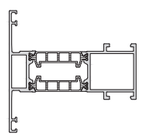


M75-20-6



Sample for manufacturing E75 position with combination of profile with PVC groove

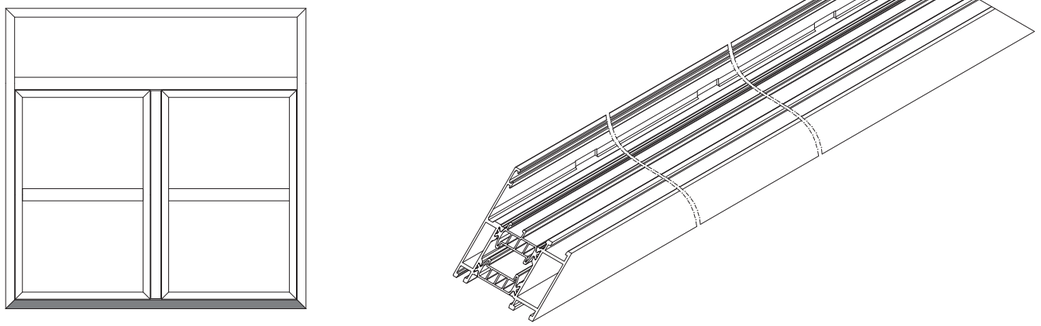
calculation of cutting length and angle for E75 profile

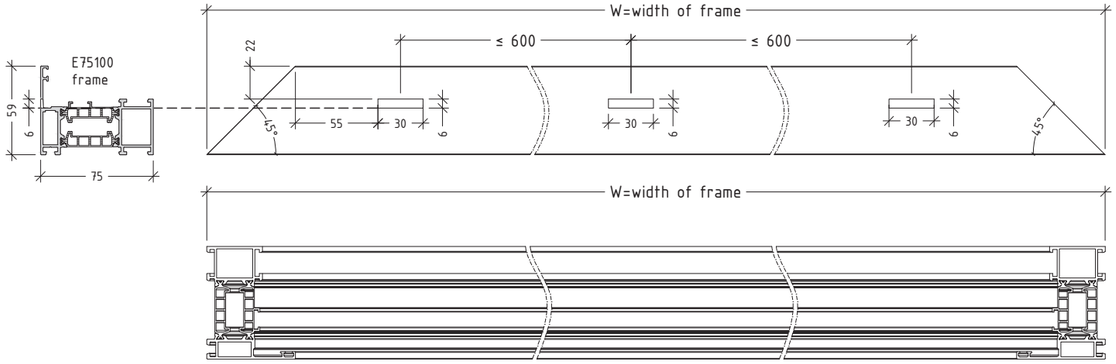
profile selection		pieces	cutting formula	cutting angles
E75100 	width of frame	2	W	2x45°
	height of frame	2	H	2x45°
E75300 	width of T profile	1	W - 65.5	2x90°
E75220 	width of sash	4	$\frac{W - 64}{2}$	2x45°
	height of sash	4	R - 39.5	2x45°
E75540 	height of overhung	1	height of casement - 76	2x90°
E75340 	width of T profile	2	width of casement - 111.5	2x90°

M75-P1

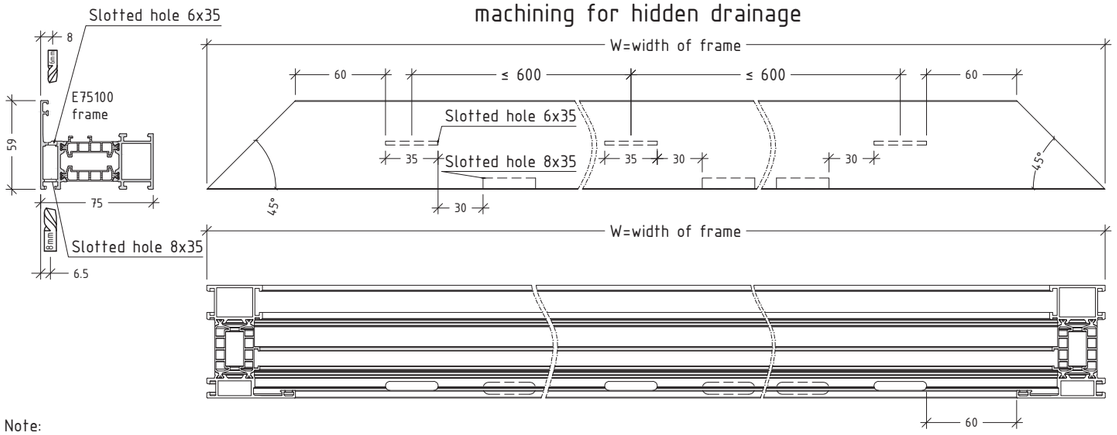
Additional treatment of profiles after cutting
Frame E75100 - machining for drainage

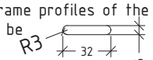
exterior view





Optional
machining for hidden drainage

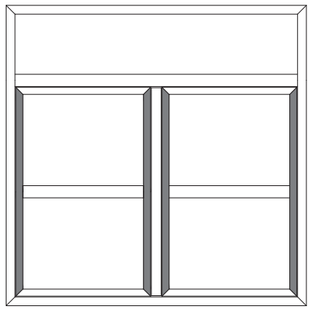


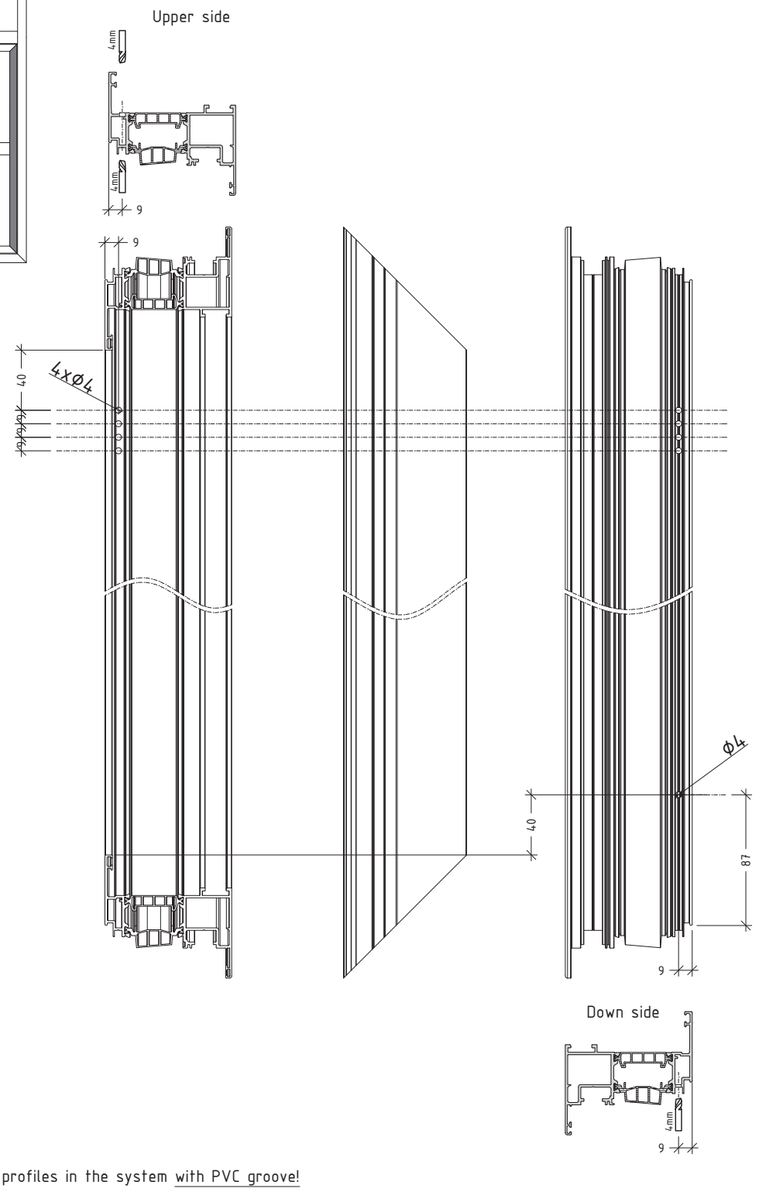
Note:
This machining is valid for all the frame profiles of the system
For CNC machine drainage hole must be  for punching machine is 

M75-P2

Additional treatment of profiles after cutting
casement E75220 - machining for ventilation

exterior view



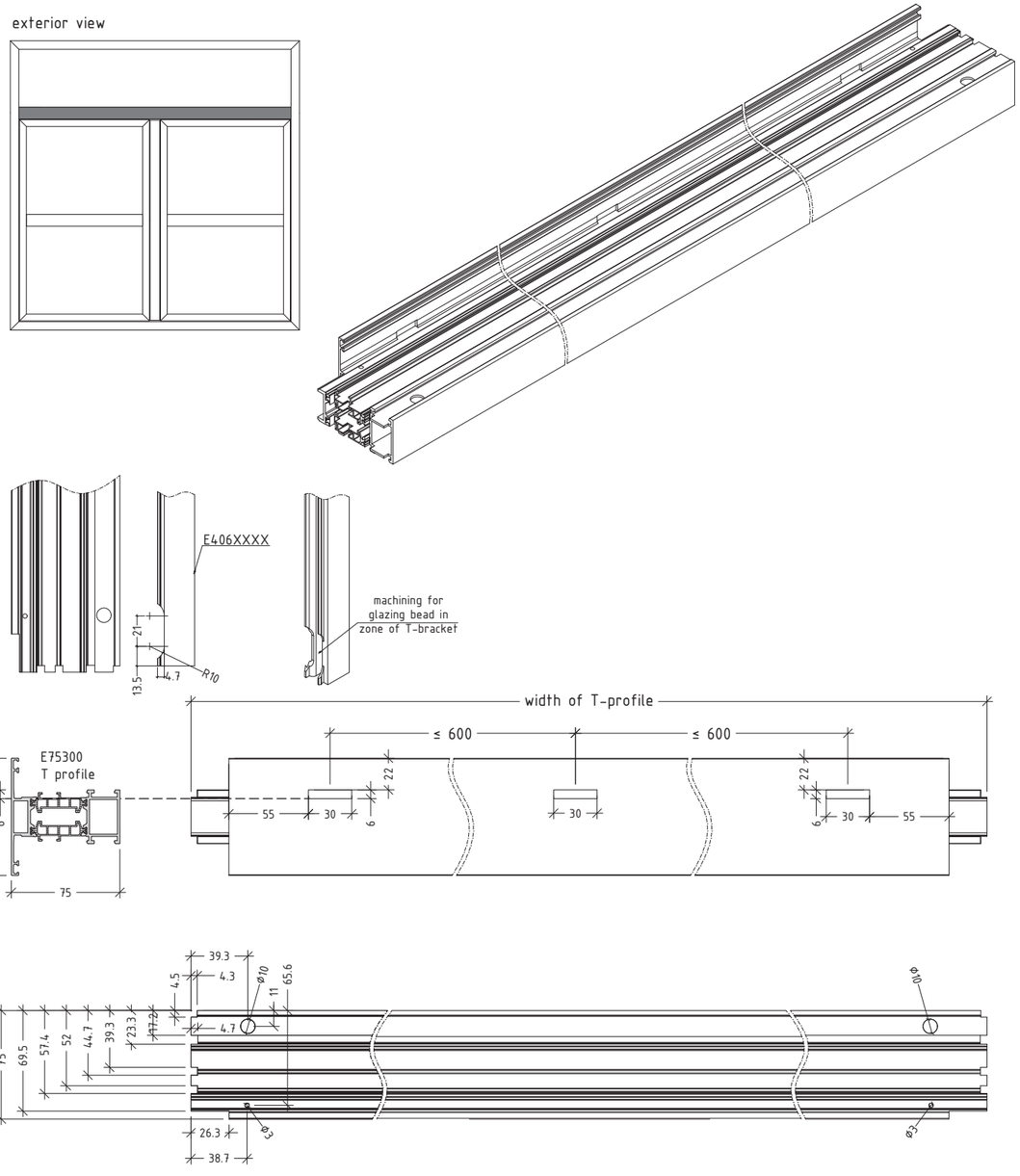


Note:
This machining is valid for all the casement profiles in the system with PVC groove!

M75-P3

Additional treatment of profiles after cutting
T profile E75300 – machining for visible drainage and connecting to the frame

exterior view

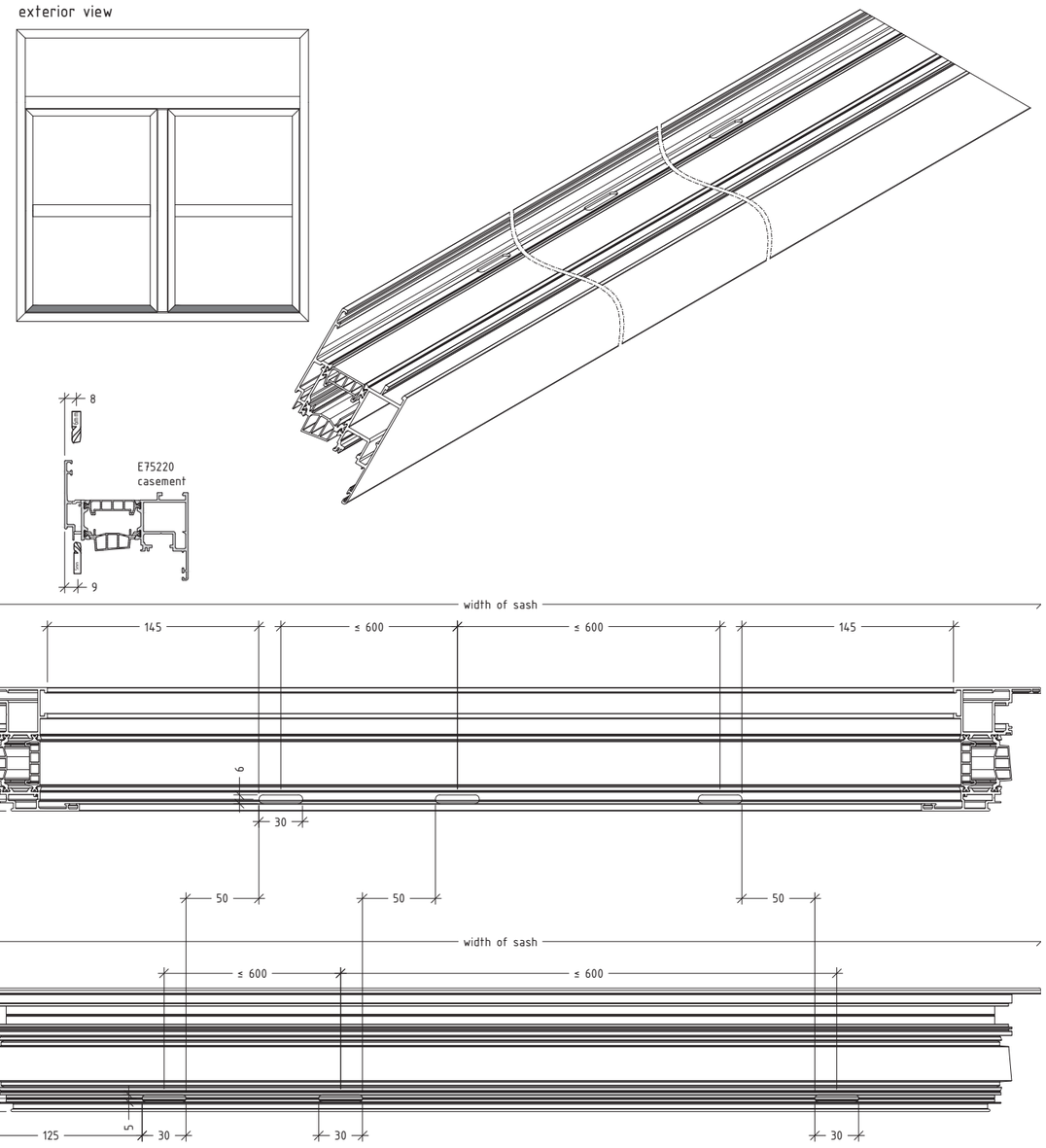


Note:
This machining is valid for all the T-profiles of the system
For CNC machine drainage hole must be R3 32 for punching machine is 30

M75-P4

Additional treatment of profiles after cutting
casement E75220 – machining for drainage

exterior view

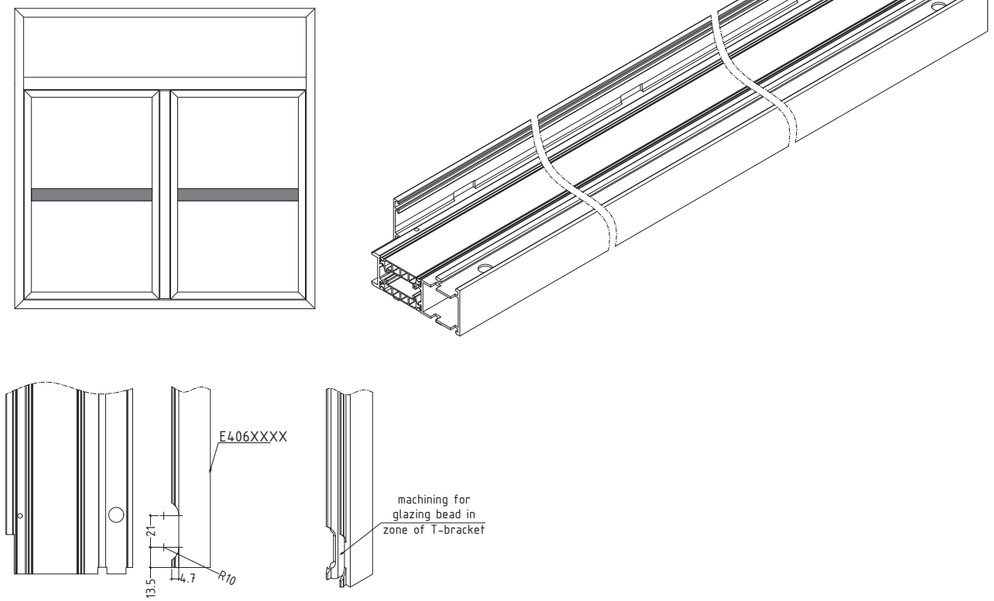


Note:
This machining is valid for all the casement profiles in the system with PVC groove!

M75-P5

Additional treatment of profiles after cutting
T-profile E75340 – machining for visible drainage

exterior view

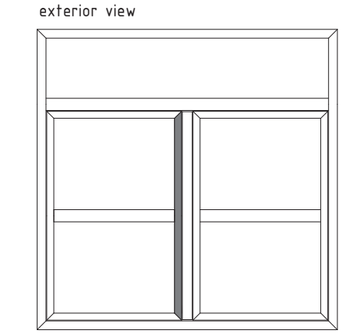


Note:
This machining is valid for all the T-profiles of the system
For CNC machine drainage hole must be for punching machine is

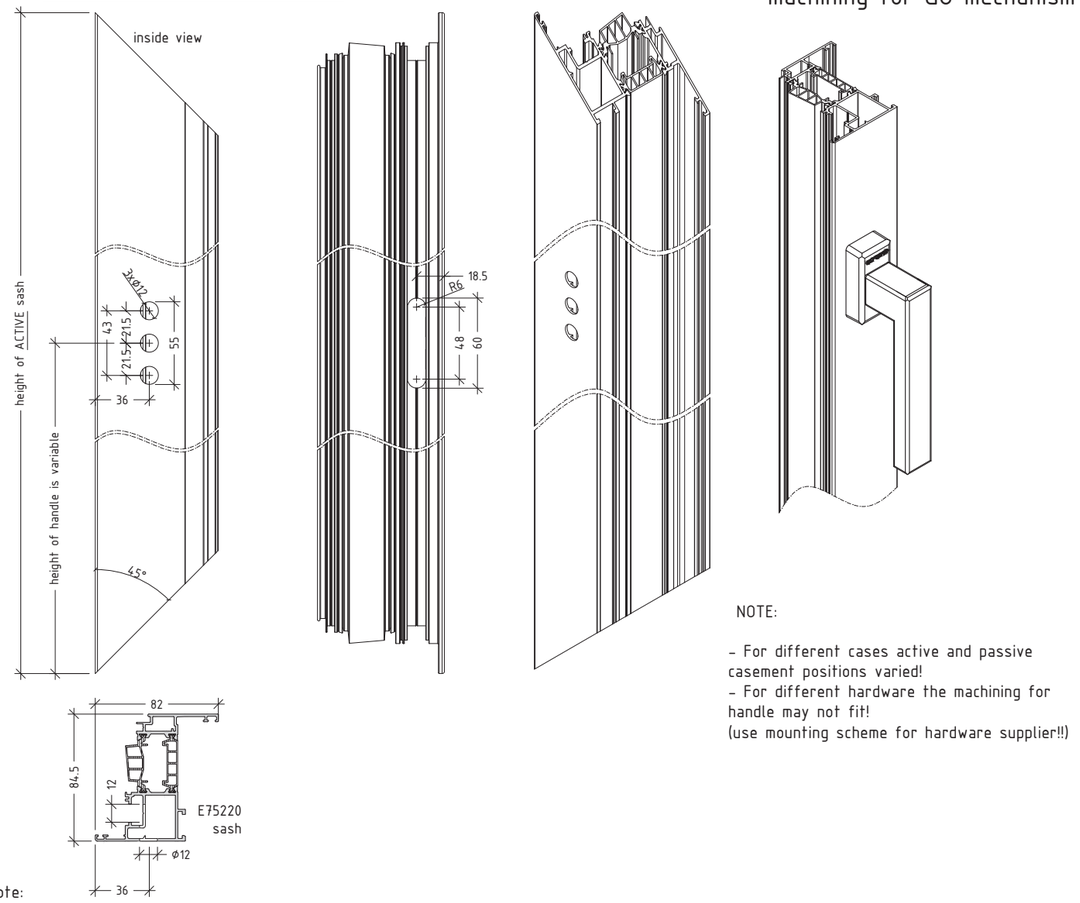
M75-P6

Additional treatment of profiles after cutting
casement E75220 – machining for handle on active casement

exterior view



machining for GU mechanism



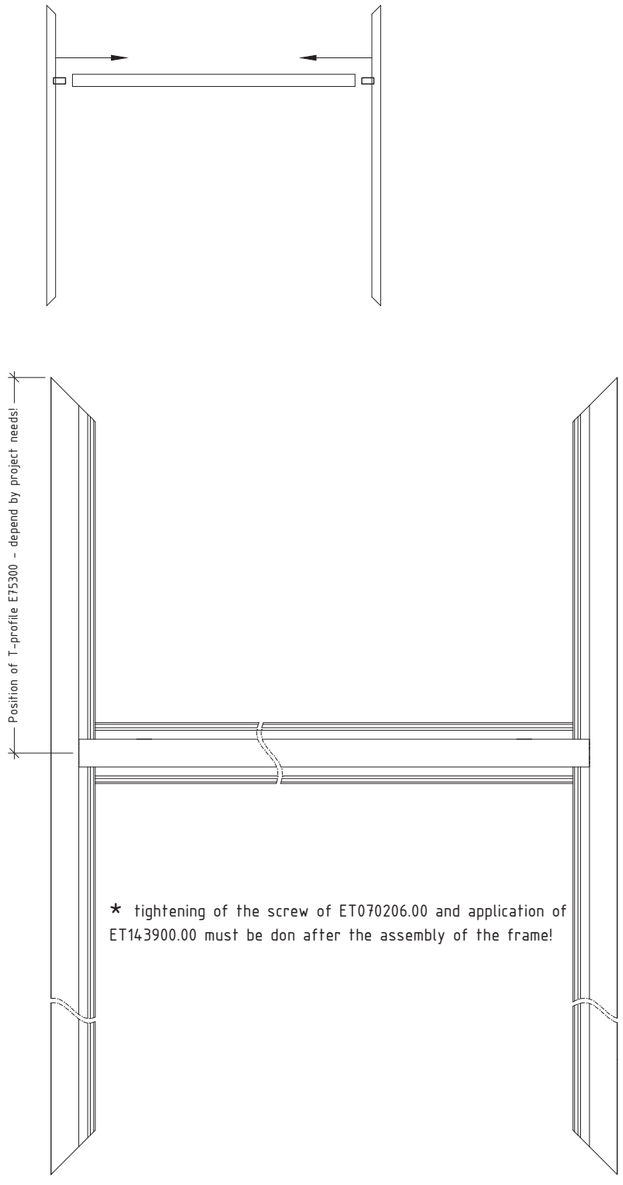
NOTE:

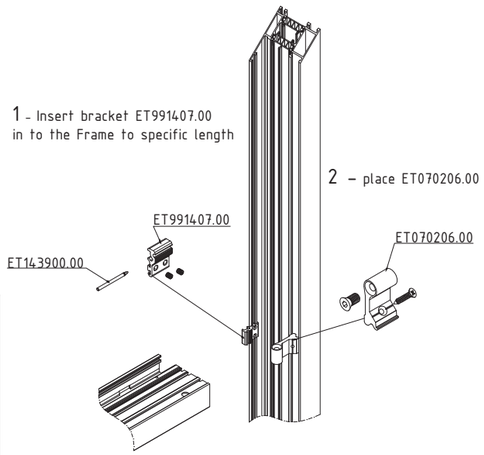
- For different cases active and passive casement positions varied!
- For different hardware the machining for handle may not fit!
(use mounting scheme for hardware supplier!!)

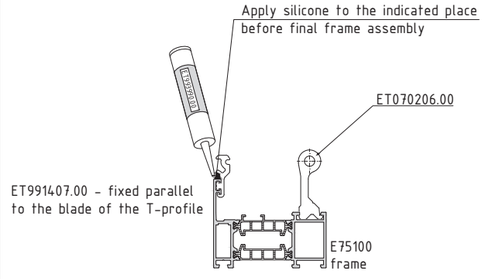
Note:
This machining is valid for all the casement profiles with PVC groove in the system

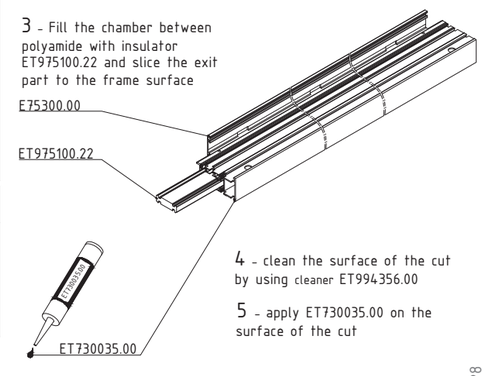
M75-P7

Sequence for mounting of T-profile E75300 to the frame E75100



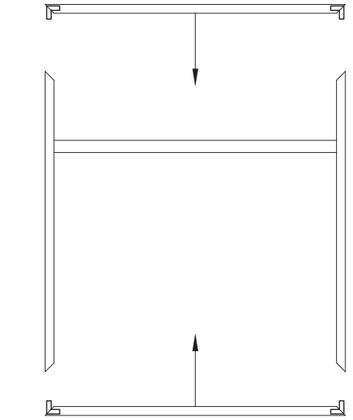


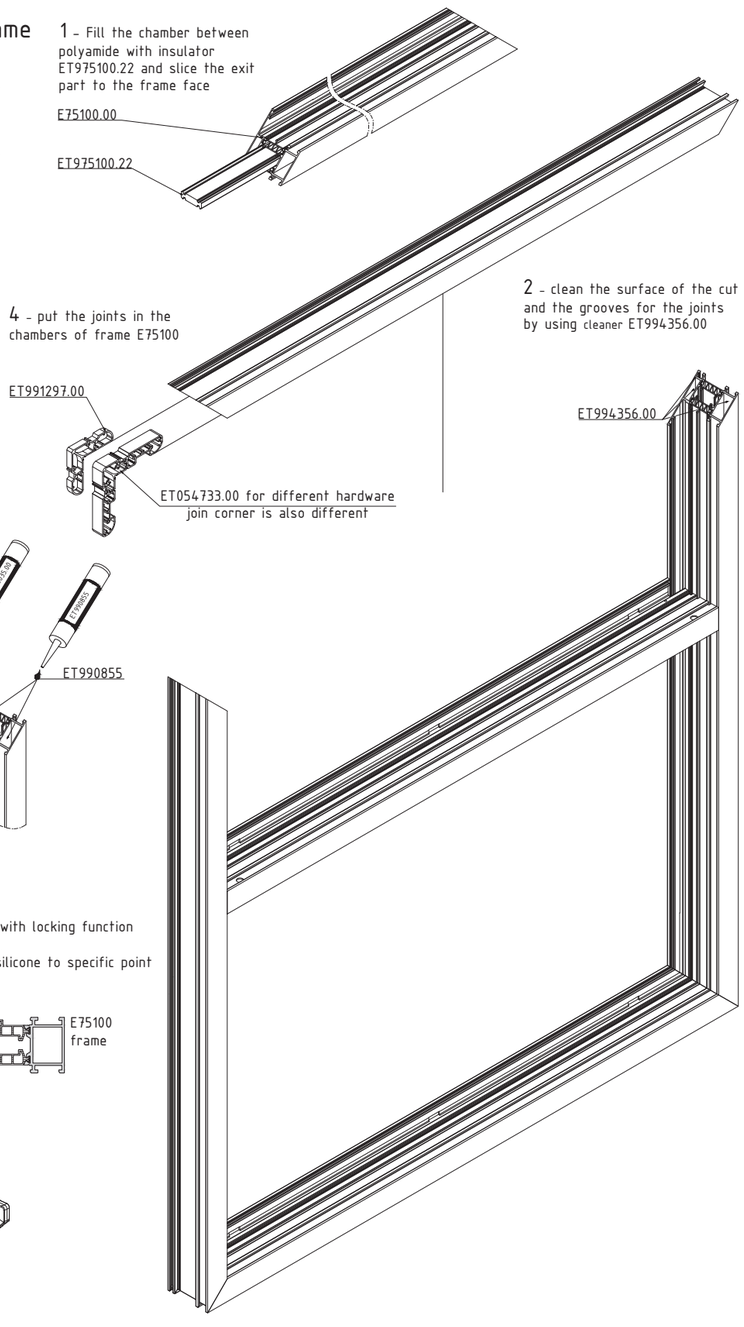




Note:
This mounting sequence is valid for all the frames in the system

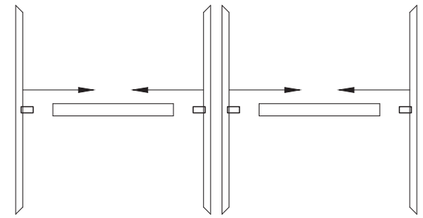
Sequence for assembly the frame E75100

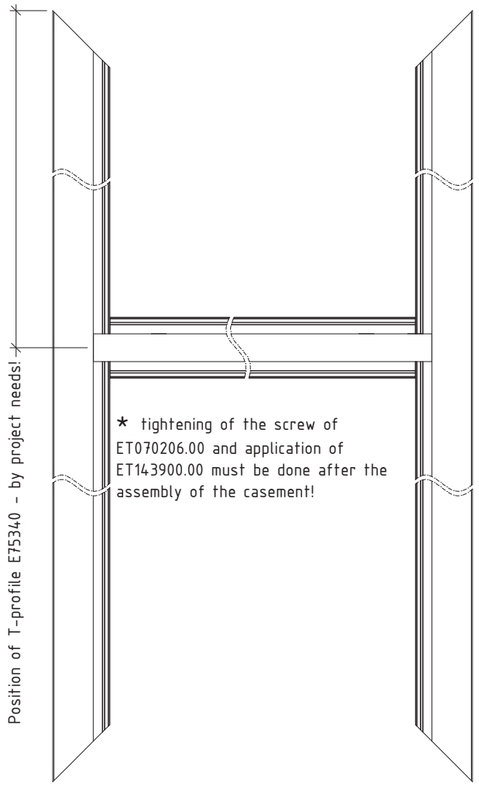




Note:
* This mounting sequence is valid for all the frame profiles in the system by using corresponding joint corners for specific hardware and insulators
* Clean the joints before application

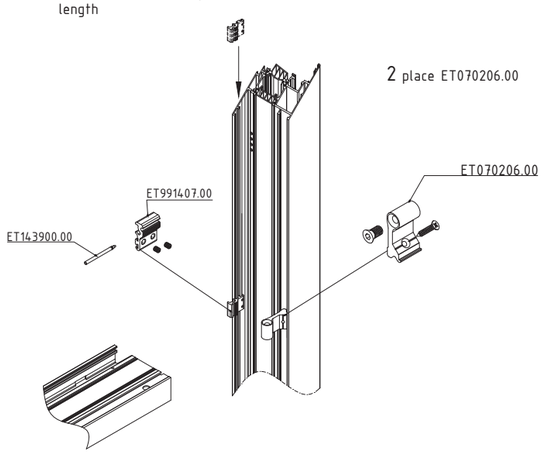
Sequence for mounting of T-profile E75340 to the casement E75220



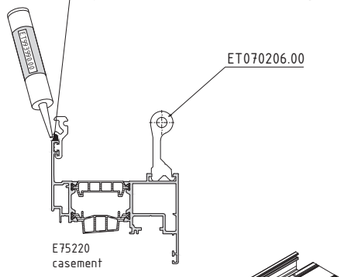


1 insert bracket ET991407.00 in to the casement to specific length

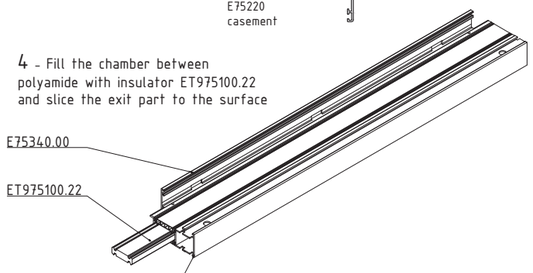
2 place ET070206.00



3 Apply silicone to the indicated place before final frame assembly



4 - Fill the chamber between polyamide with insulator ET975100.22 and slice the exit part to the surface



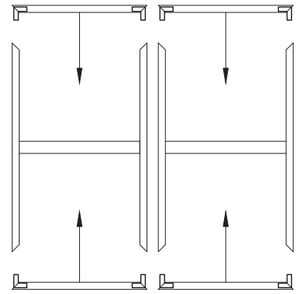
4 - clean the surface of the cut by using cleaner ET994356.00

5 - apply ET730035.00 on the surface of the cut

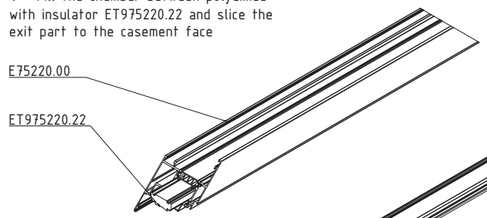
Note:
* This mounting sequence is valid for all casement profile with PVC groove in the system

M75-P10

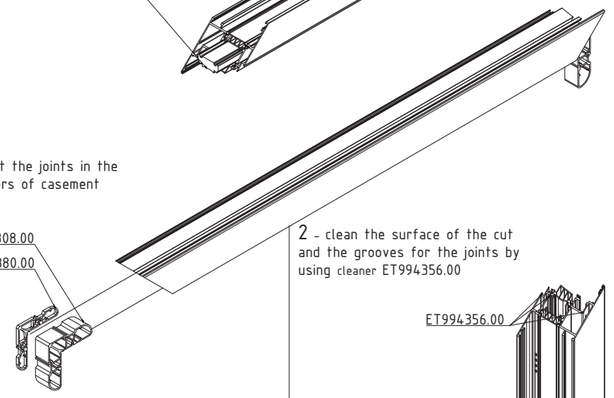
Sequence for assembly the casement E75220



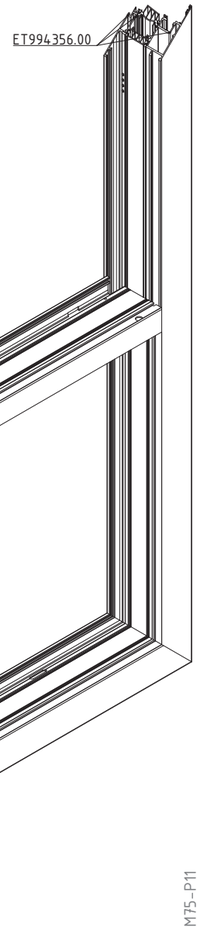
1 - Fill the chamber between polyamide with insulator ET975220.22 and slice the exit part to the casement face



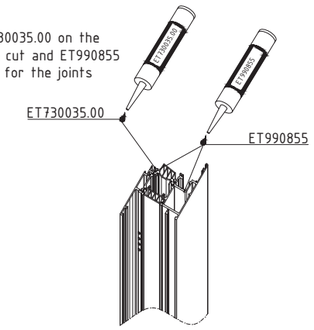
4 - put the joints in the chambers of casement E75220



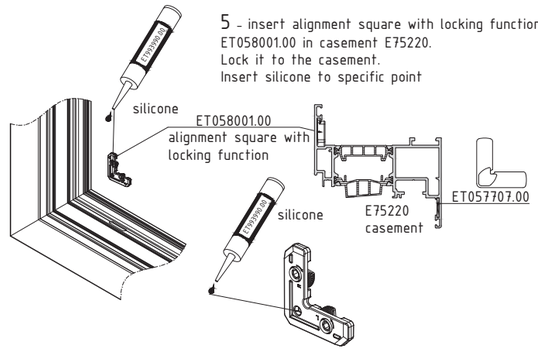
2 - clean the surface of the cut and the grooves for the joints by using cleaner ET994356.00



3 - apply ET730035.00 on the surface of the cut and ET990855 in the grooves for the joints



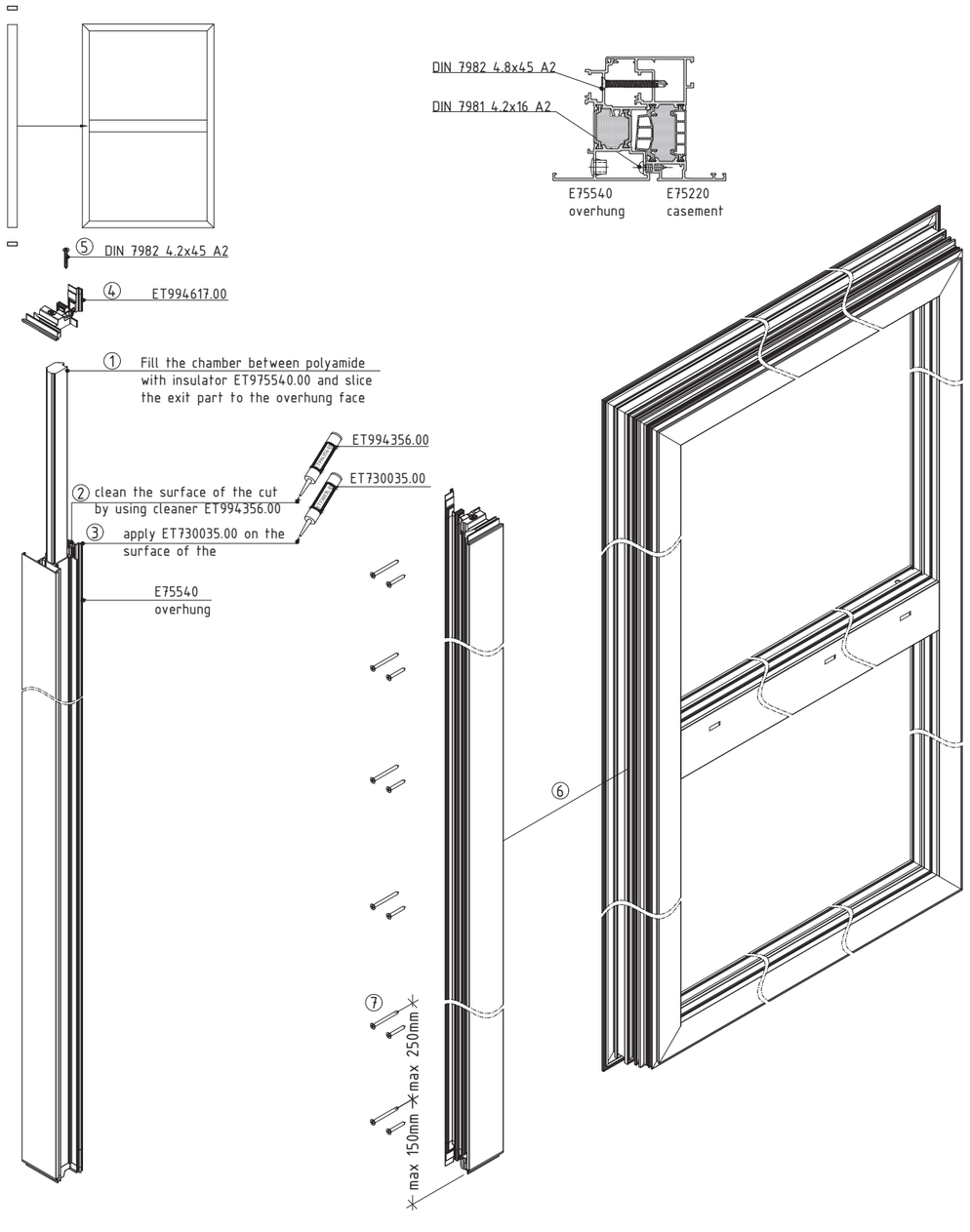
5 - insert alignment square with locking function ET058001.00 in casement E75220. Lock it to the casement. Insert silicone to specific point



Note:
* This mounting sequence is valid for all the casement profiles in the system by using corresponding joint corners and insulators
* Clean the joints before application

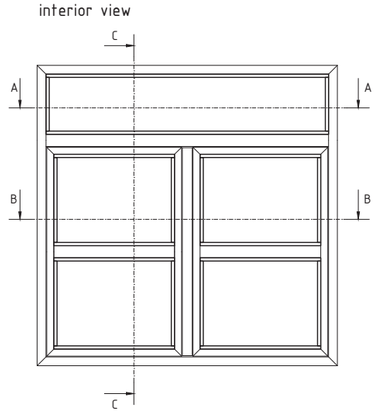
M75-P11

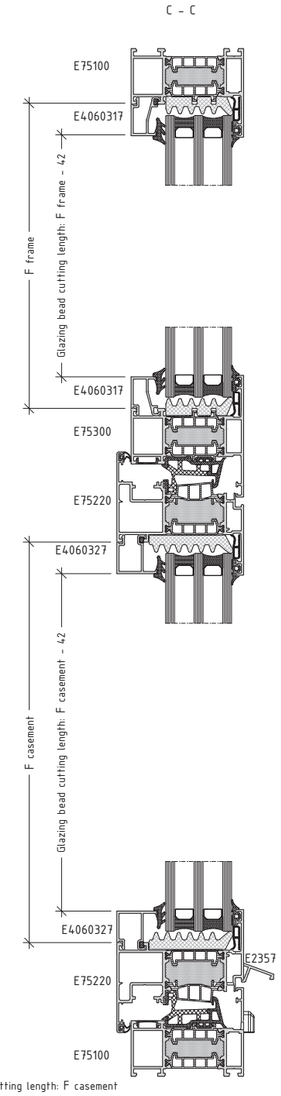
Sequence for assembly the E75540 overhung and mounting to the casement E75220



M75-P12

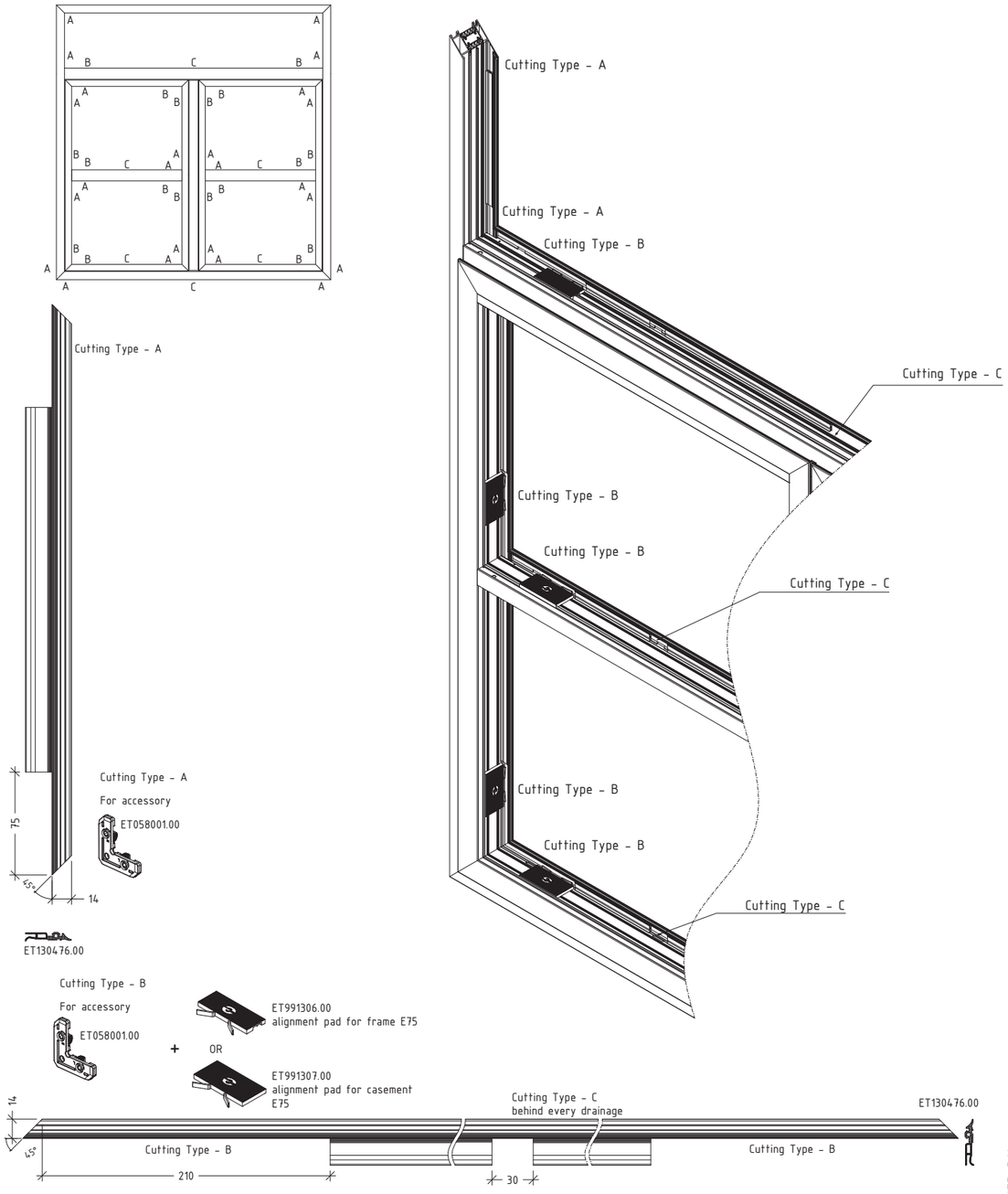
Sequence for cutting of glazing bead





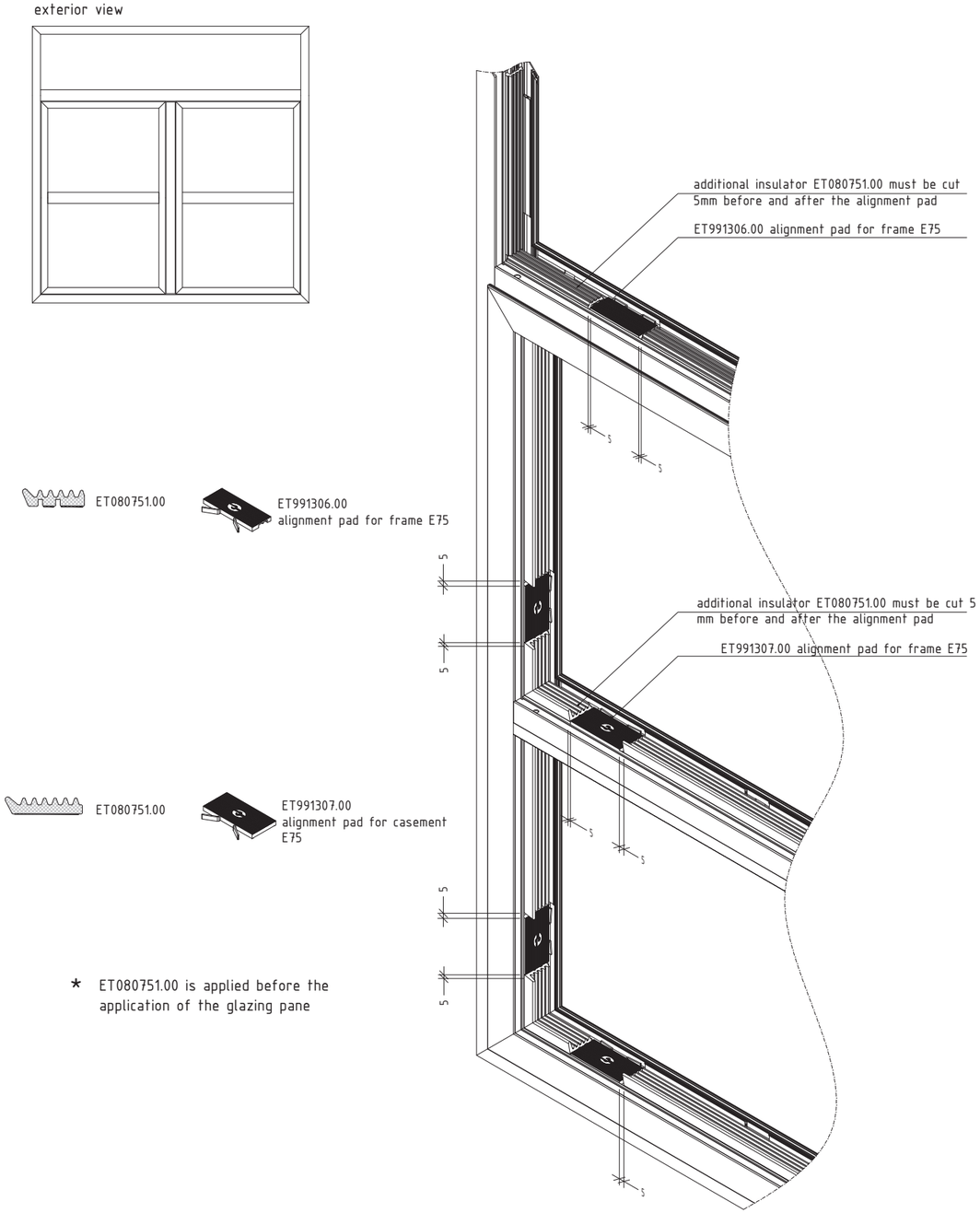
M75-P13

Sequence for cutting of gasket ET130476.00



M75-P14

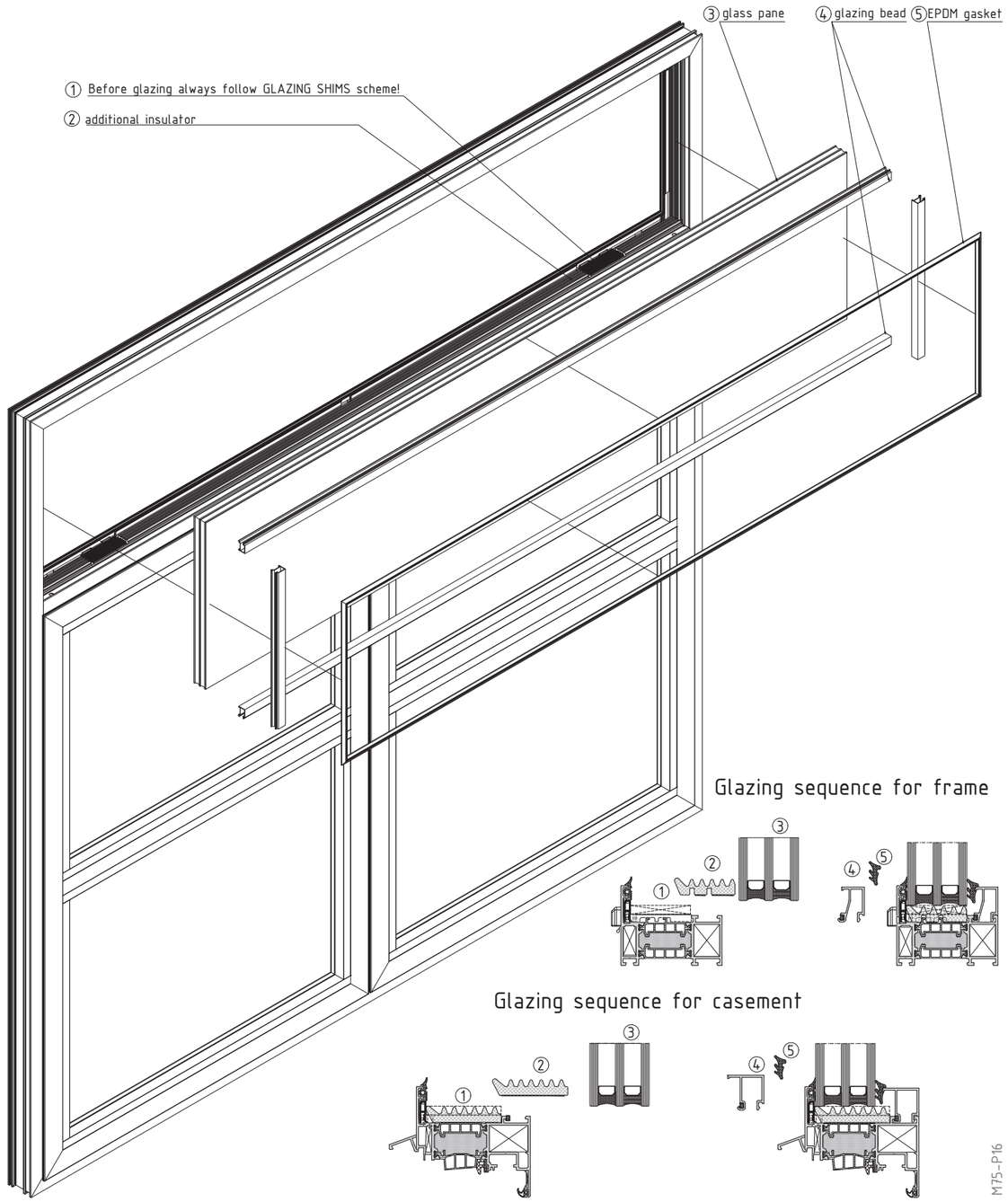
Sequence for cutting of additional insulators



* ET080751.00 is applied before the application of the glazing pane

M75-P15

Sequence for mounting glass pane; glazing bead and gasket



Glazing sequence for frame

Glazing sequence for casement

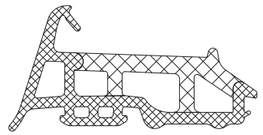
M75-P16

ACCESSORIES

IMAGES / DESCRIPTIONS

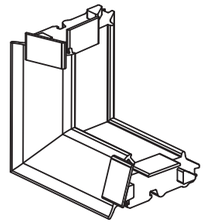
code/description	package/pcs	colour
ET **130430.00**	15	●

EPDM central gasket
coextruded



ET 991327.00	–	●

angle gasket for E75

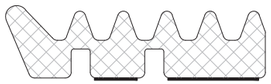


ET **130757.00**	100	●

EPDM additional gasket
coextruded for
E75200 / E75201 / E75220

ET **080751.00**	2	●

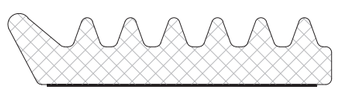
additional insulator for
frame E75



A75-1

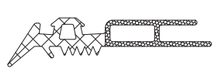
code/description	package/pcs	colour
ET **080752.00**	2	●

additional insulator for
sash E75



ET **130476.00**	60	●

EPDM gasket for glass
elongated



ET **130153.00**	150	●

glazing EPDM gasket 4 mm

ET **130176.00**	80	●

glazing EPDM gasket
press-in 5-6 mm

code/description	package/pcs	colour
ET **130177.00**	60	●

glazing EPDM gasket
press-in 7-8 mm

ET **130205.00**	125	●

glazing EPDM gasket
press-in 5 mm

ET **130206.00**	125	●

glazing EPDM gasket
press-in 6 mm

ET **130207.00**	75	●

glazing EPDM gasket
press-in 7 mm

code/description	package/pcs	colour
ET **130208.00**	40	●

glazing EPDM gasket
press-in 8 mm

ET **130758.00**	300	●

interior EPDM gasket
TOPLINE

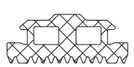
ET **130505.00**	100	●

wall-joining epdm gasket
(external) for fixed frame

upon customer's request

ET **130506.00**	180	●

wall-joining epdm gasket
(internal)



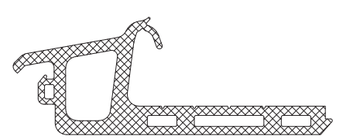
upon customer's request

code/description	package/pcs	colour
ET **130507.00**	220	●

wall-joining EPDM gasket
perimetric(external) for fixed
frame

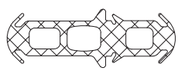
ET **130116.00**	–	●

EPDM central gasket
coextruded



ET **991275.00**	50	●

EPDM gasket for expansion
joint

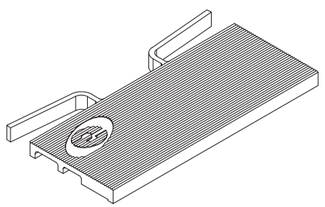


ET **130101.00**	–	●

upon customer's request

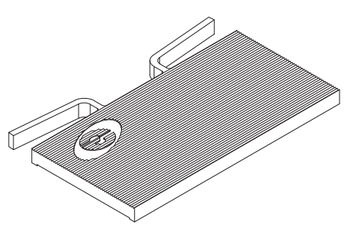
code/description	package/pcs	colour
ET **991306.00**	200	●

equalizing shim for frame
6 mm



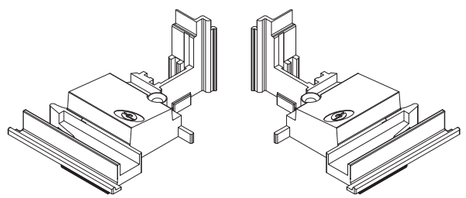
ET **991307.00**	200	●

equalizing shim for sash
6 mm



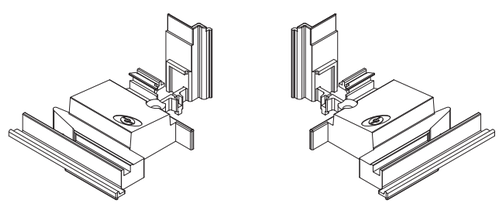
ET **991299.00**	5	●

pair of plastic plugs for
secondary sash profile
E75500



ET **994617.00**	5	●

pair of plastic plugs for
streight secondary sash
profile
E75540



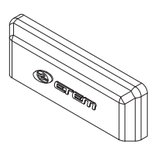
A75-6

code/description	package/pcs	colour
ET **080199.00**	6	●
ET **991308.00**	6	○

PVC plug for euro groove

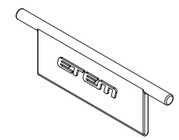
ET **074306.00**	50	●

plastic drainage cap 30x6mm



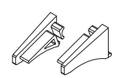
ET **074307.00**	50	●

flap for dreinage cap



ET **74629.00**	200	●

plastic plug for drip profile
E2357

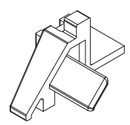


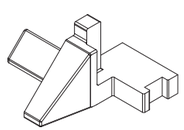
A75-7

code/description	package/pcs	colour
ET **074851.00**	–	●

plastic plug for threshold

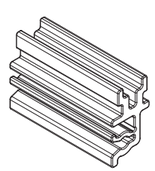
E4275851





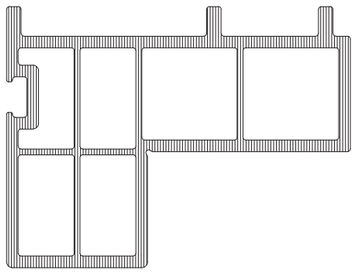
ET **074908.00**	100 pcs	●

Clips for profile E75



ET **080075.00**	6m	●

mounting PVC profile for E75

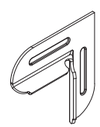


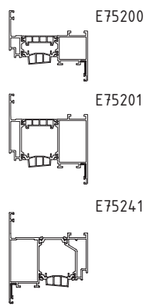
ET **080575.00**	6m	●

PVC mounting profile

code/description	package/pcs	colour
ET **991298.00**	20	●

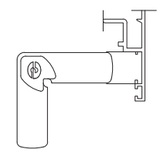
alignment square for
E75200 / E75201





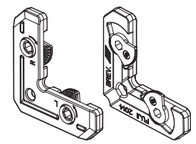
ET **057707.00**	100	

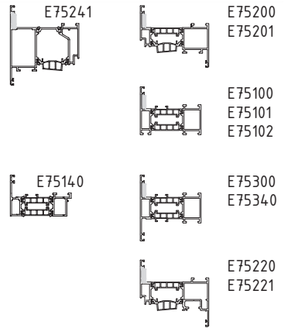
alignment square (plastic)
E75220, E75221



ET **058001.00**	250	MF

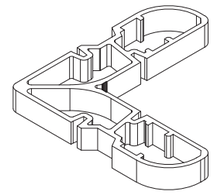
alignment square with
locking function

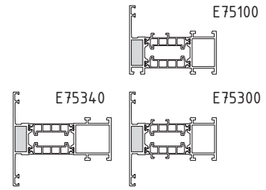




ET **991297.00**	250	MF

extruded aluminium corner
bracket 9.3 mm for
E75100 / E75300 / E75340

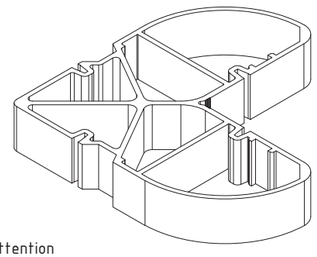


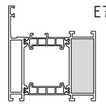


attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054311.00**	100	MF

extruded aluminium corner
bracket 18.9 mm for
E75102

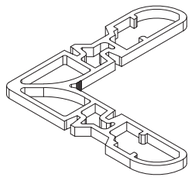


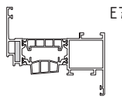


attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **991294.00**	300	MF

extruded aluminium corner
bracket 3.8 mm for
E75200

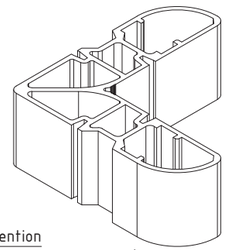


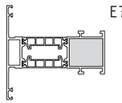


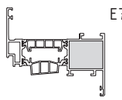
attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **991296.00**	100	MF

extruded aluminium corner
bracket 28.4 mm for
E75200 / E75340



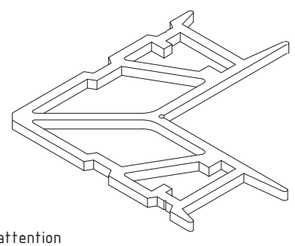


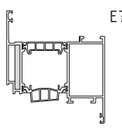


attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **991125.00**	300	MF

extruded aluminium corner
bracket 3.8 mm for
E75201



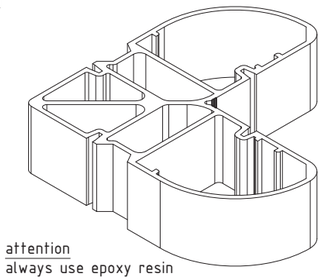


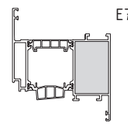
attention
always use epoxy resin
for long lasting joining

A 75-11

code/description	package/pcs	colour
ET **991123.00**	50	MF

extruded aluminium corner
bracket 28.4 mm for
E75201

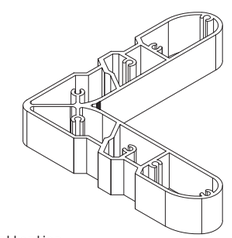


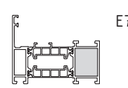


attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour	
ET **994616.00**	8	MF	ROTO

extruded aluminium corner
bracket 18.9 mm for
E75100

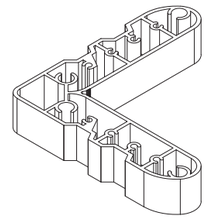


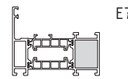


attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour	
ET **994618.00**	70	MF	MACO

extruded aluminium corner
bracket 18.9 mm for
E75100

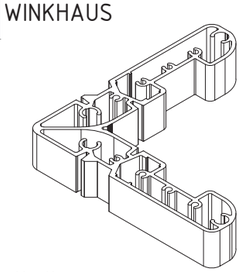


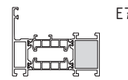


attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour	
ET **054733.00**	70	MF	WINKHAUS

extruded al. joint corner
bracket
for WINKHAUS





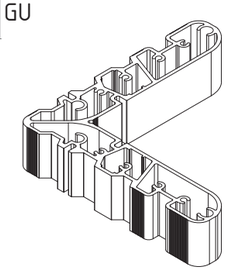
attention
always use epoxy resin
for long lasting joining

A 75-12

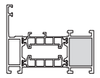
code/description	package/pcs	colour
ET **054718.00**	80	MF

GU

extruded aluminium corner
bracket 18.9 mm
for GU



E75100

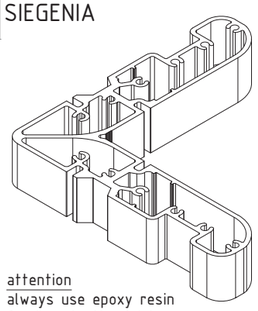


attention
always use epoxy resin
for long lasting joining

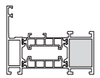
code/description	package/pcs	colour
ET **054727.00**	100	MF

SIEGENIA

extruded aluminium corner
bracket 18.9 mm for
E75100



E75100

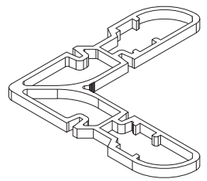


attention
always use epoxy resin
for long lasting joining

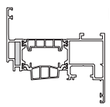
code/description	package/pcs	colour
ET **054880.00**	300	MF

ETEM mechanism for side hung window

extruded aluminium corner
bracket 3.9 mm



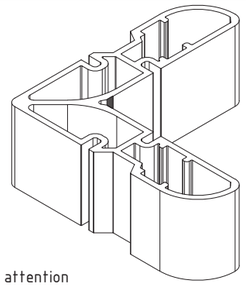
E75220



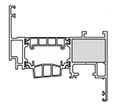
attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054808.00**	1	●

extruded aluminium corner
bracket for E75220



E75220

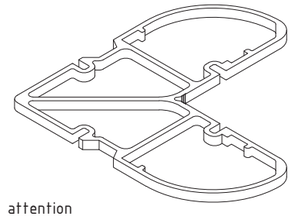


attention
always use epoxy resin
for long lasting joining

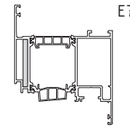
A75-13

code/description	package/pcs	colour
ET **991125.00**	100	MF

extruded aluminium corner
bracket 3.9 mm



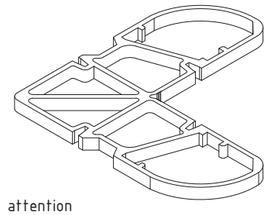
E75221



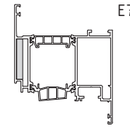
attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054879.00**	200	MF

extruded aluminium corner
bracket 5.2 mm



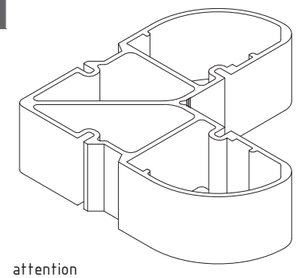
E75221



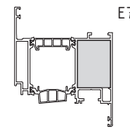
attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054742.00**	50	MF

extruded aluminium corner
bracket 28.3 mm for
E75221



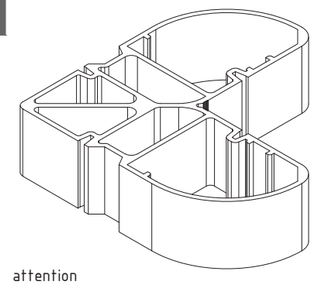
E75221



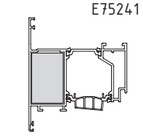
attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054773.00**	50	MF

extruded aluminium corner
bracket for E75241



E75241

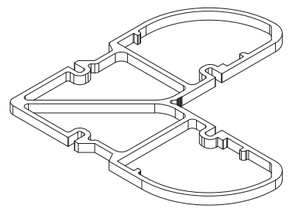


attention
always use epoxy resin
for long lasting joining

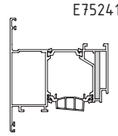
A75-14

code/description	package/pcs	colour
ET **054771.00**	200	MF

extruded aluminium corner
bracket for E75241



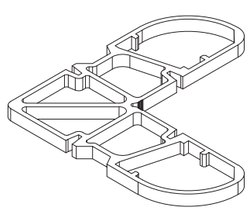
E75241



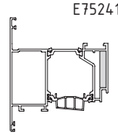
attention
always use epoxy resin
for long lasting joining

ET **054772.00**	200	MF

extruded aluminium corner
bracket for E75241



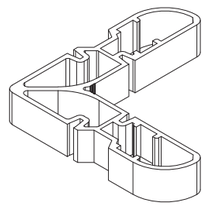
E75241



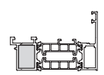
attention
always use epoxy resin
for long lasting joining

ET **054774.00**	100	MF

extruded aluminium corner
bracket for E75140



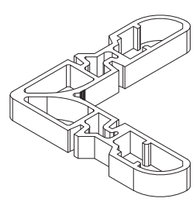
E75140
reverse
profile



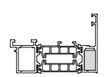
attention
always use epoxy resin
for long lasting joining

ET **054770.00**	200	MF

extruded aluminium corner
bracket for E75140



E75140
reverse
profile



attention
always use epoxy resin
for long lasting joining

A75-15

code/description	package/pcs	colour
ET **991407.00**	10	MF

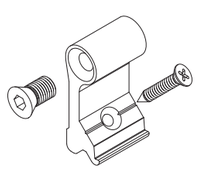
T - bracket external side for
E75300 / E75340

E75300

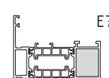
E75340

ET **070206.00**	10	MF

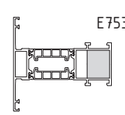
T - bracket internal side for
E75300 / E75340



E75300

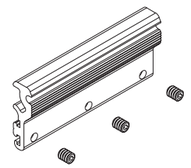


E75340

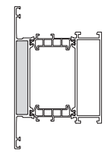


ET **070309.00**	10	MF

T - bracket external side

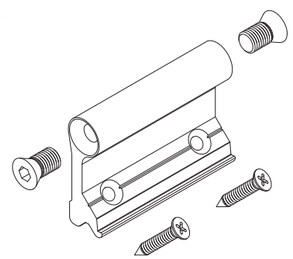


E75304

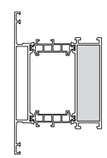


ET **070213.00**	10	MF

T - bracket internal side



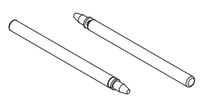
E75304



A75-16

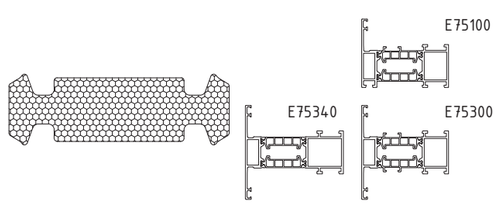
code/description	package/pcs	colour
ET **143900.00**	100	MF

roll pin 3 x 6 mm with andle



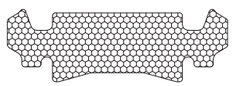
ET **975100.22**	6pcs x 1000mm	standard

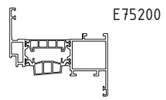
additional insulator for
E75100 / E75300 / E75340



ET **975200.22**	6pcs x 1000mm	standard

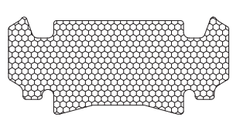
additional insulator for
E75200

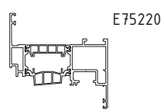




ET **975220.22**	6pcs x 1000mm	standard

additional insulator for
E75220

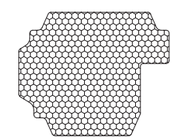


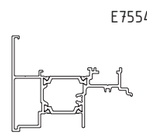


A75-17

code/description	package/pcs	colour
ET **975540.22**	6pcs x 1000mm	standard

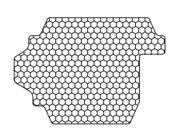
additional insulator for
E75540

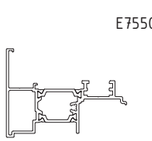




ET **975500.22**	6pcs x 1000mm	standard

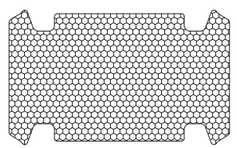
additional insulator for
E75500

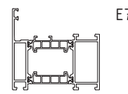




ET **975101.22**	6pcs x 1000mm	standard

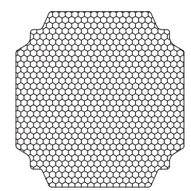
additional insulator for
E75101

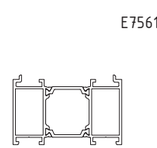




ET **975610.22**	6pcs x 1000mm	standard

additional insulator for
E75610

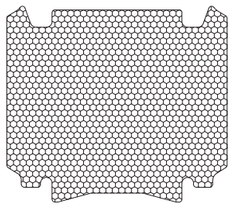


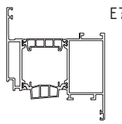


A75-18

code/description	package/pcs	colour
ET **975201.22**	6pcs x 1000mm	standard

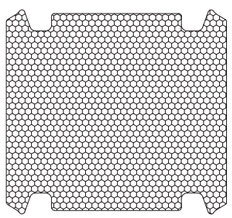
additional insulator for
E75201

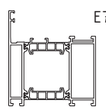




ET **975102.22**	6pcs x 1000mm	standard

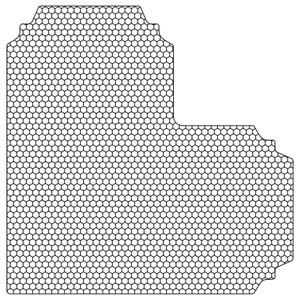
additional insulator for
E75102

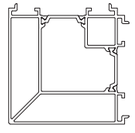




ET **975600.22**	6pcs x 1000mm	standard

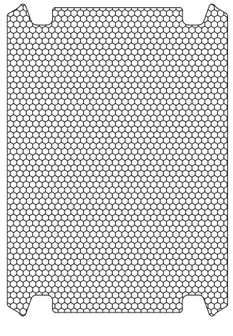
additional insulator for
E75600

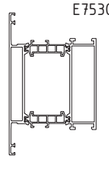




ET **975304.00**	6pcs x 1000mm	standard

additional insulator for
E75304

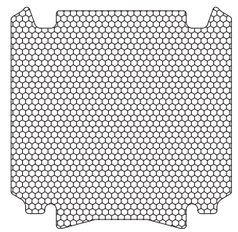


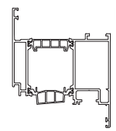


A75-19

code/description	package/pcs	colour
ET **975221.22**	6pcs x 1000mm	standard

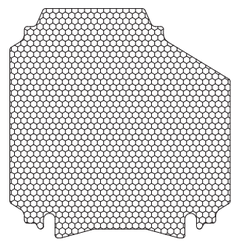
additional insulator for
E75221

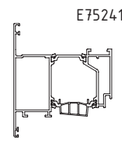




ET **975241.22**	6pcs x 1000mm	standard

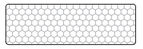
additional insulator 1000mm
for E75241

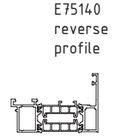




ET **975140.22**	6pcs x 1000mm	standard

additional insulator 1000mm
for E75140





ET **080539.00**	40	

insulator for
reverse profile E75140

A75-20

code/description	package/pcs	colour
ET 995645.00	1	●

cutter for end milling
machine for
E75300

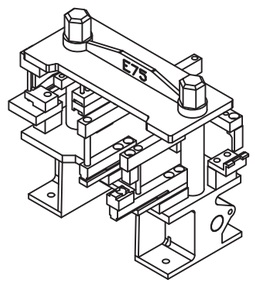
ET 995646.00	1	●

cutter for end milling
machine for
E75340

ET 991908.00	1	–

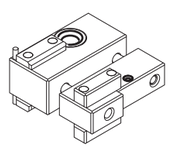
punching machine ETEM

Please note that changes are possible.In case you start with E 75
please ask for the last modification of the punching machine



ET 162086.00	1	–

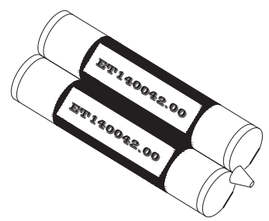
jig for T-profile



A75-21

code/description	package/pcs	colour
ET 140042.00	1	–

adhesive for corner brackets
ETEM 600ml



ET 140044.00	1	–

pistol

ET 140043.00	1	–

mixer

ET 140045.00	1	–

primer super bond 30ml

A75-22

code/description	package/pcs	colour
ET **730035.00**	1	–

Vario protect

ET **750016.00**	1	–

cleaner for Vario protect
1l

A75-23

E75HV

HIDDEN VENT WINDOW SYSTEM WITH THERMAL BREAK

E75HV

HIDDEN VENT WINDOW SYSTEM
WITH THERMAL BREAK

TABLE OF CONTENTS

GENERAL INFORMATION

CONCEPT / ADVANTAGES / CERTIFICATES

E75 HIDDEN VENT CONCEPT

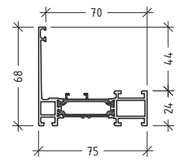
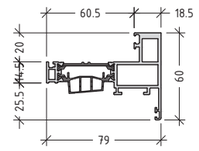
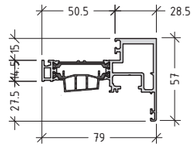
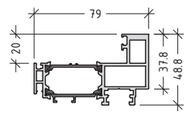
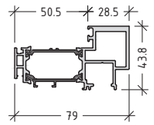
E75 HIDDEN VENT IS A SYSTEM CORRESPONDING TO THE MOST STRINGENT REQUIREMENTS FOR DESIGN, THERMAL INSULATION AND FUNCTIONALITY.

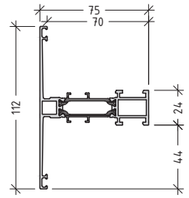
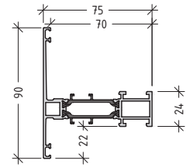
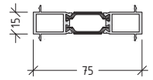
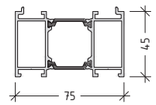
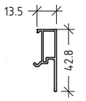
- Concealed casement profile
- Increased glazing surface
- Elegant straight design
- Excellent thermal insulation
- 75 mm system width allowing usage of triple glazing
- Additional insulator in the thermo-break area
- Co-extruded central gasket
- Casement profiles for EURO and PVC groves
- Excellent water tightness and air permeability
- Extruded corners for crimping machine with glue allowing greater connections

TABLES

TYPOLOGIES / LIST OF PROFILES / CHARACTERISTICS

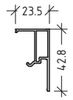
opening system with thermal break — E75HV

code	profile	weight length moment of inertia
E75160 frame		1345 g/m L=6.01 m Ix=11.79 cm^4 Iy=35.13 cm^4
E75267 casement EURO grove		1591 g/m L=6.01 m Ix=9.70 cm^4 Iy=30.98 cm^4
E4275268 casement PVC grove		1798 g/m L=6.01 m Ix=8.74 cm^4 Iy=29.69 cm^4
E4275560 overhung EURO groove		1629 g/m L=6.01 m Ix=9.57 cm^4 Iy=36.23 cm^4
E4275565 overhung PVC grove		1555 g/m L=6.01 m Ix=7.82 cm^4 Iy=33.05 cm^4
E4268662		563 g/m L=6.01 m Ix=0.17 cm^4 Iy=11.17 cm^4

code	profile	weight length moment of inertia
E4275361 T-profile		1532 g/m L=6.01 m Ix=26.32 cm^4 Iy=41.11 cm^4
E4275360 T-profile		1406 g/m L=6.01 m Ix=15.77 cm^4 Iy=38.07 cm^4
E75655 connecting profile		L=6.01 m 941 g/m Ix=0.98 cm^4 Iy=19.48 cm^4
E75610 frame extension		L=6.01 m 1600 g/m Ix=11.76 cm^4 Iy=37.77 cm^4
E4268660		345 g/m L=6.01 m
E4268661		325 g/m L=6.01 m

L75HV-01

opening system with thermal break — E75HV

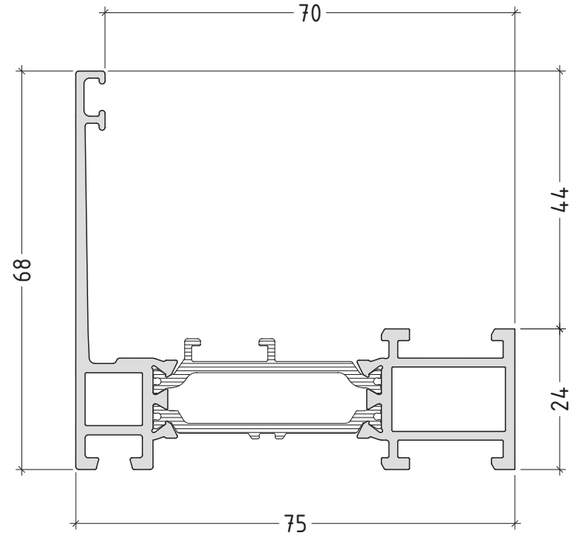
code	profile	weight length moment of inertia	code	profile	weight length moment of inertia
E4268663		359 g/m L=6.01 m			
E68760 glazing bead		103 g/m L=6.01 m			

L75HV-02

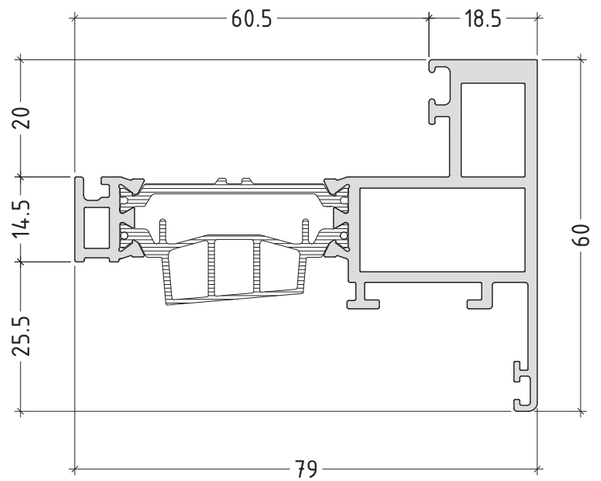
PROFILES

DRAWINGS

E75160
1345 g/m



E75267
1591 g/m



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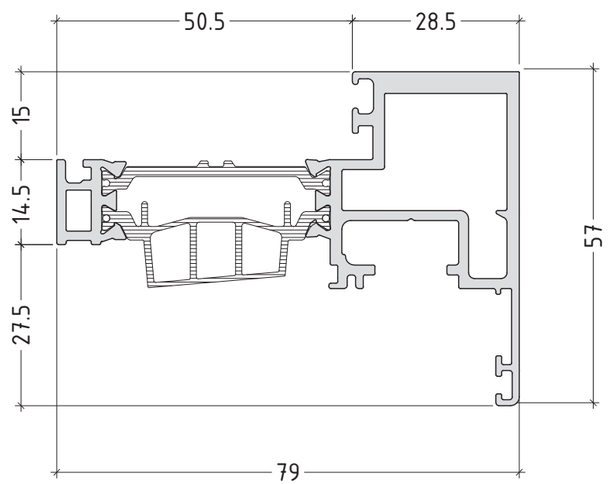
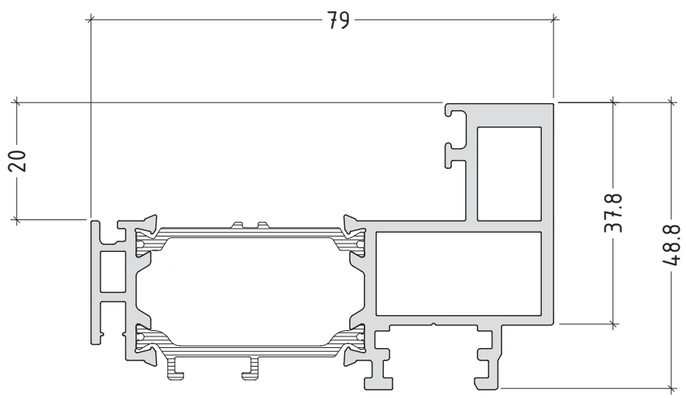
P75HV_01

E4275268
1798 g/m



E4275560
1629 g/m



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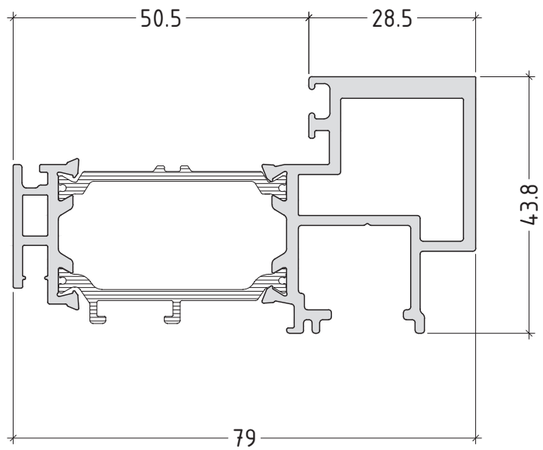
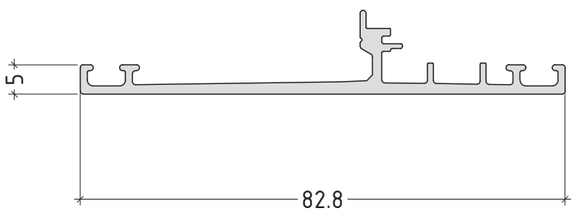
P75HV-02

E4275565
1555 g/m



E4268662
563 g/m



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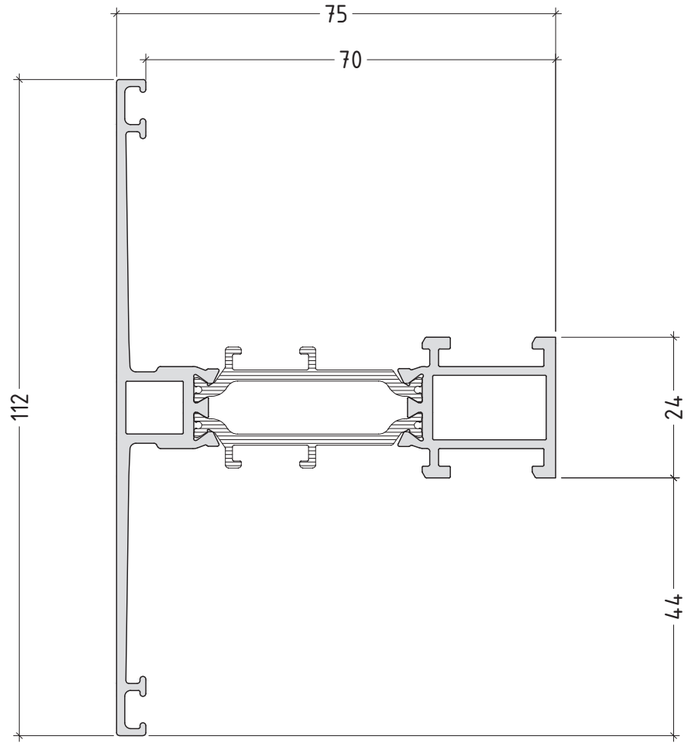
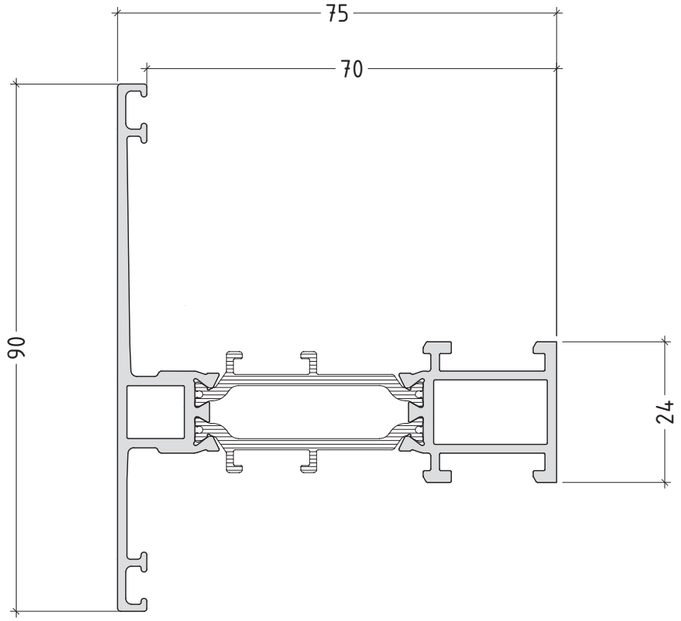
P75HV-03

E4275361
1532 g/m



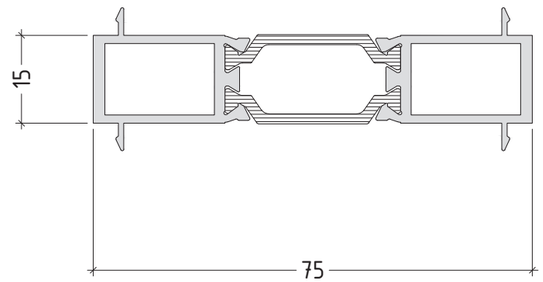
E4275360
1406 g/m



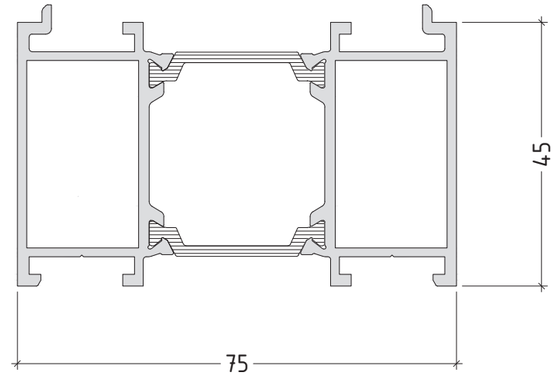
scale : 1:1

P75HV-04

E75655
941 g/m



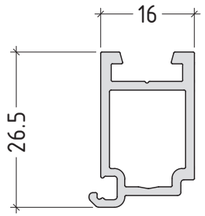
E75610
1600 g/m



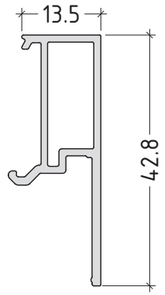
scale : 1:1

P75HV-05

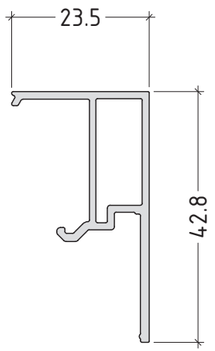
E4268660
345 g/m



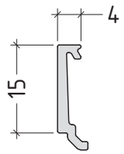
E4268661
325 g/m



E4268663
359 g/m



E68760
103 g/m



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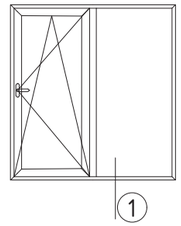
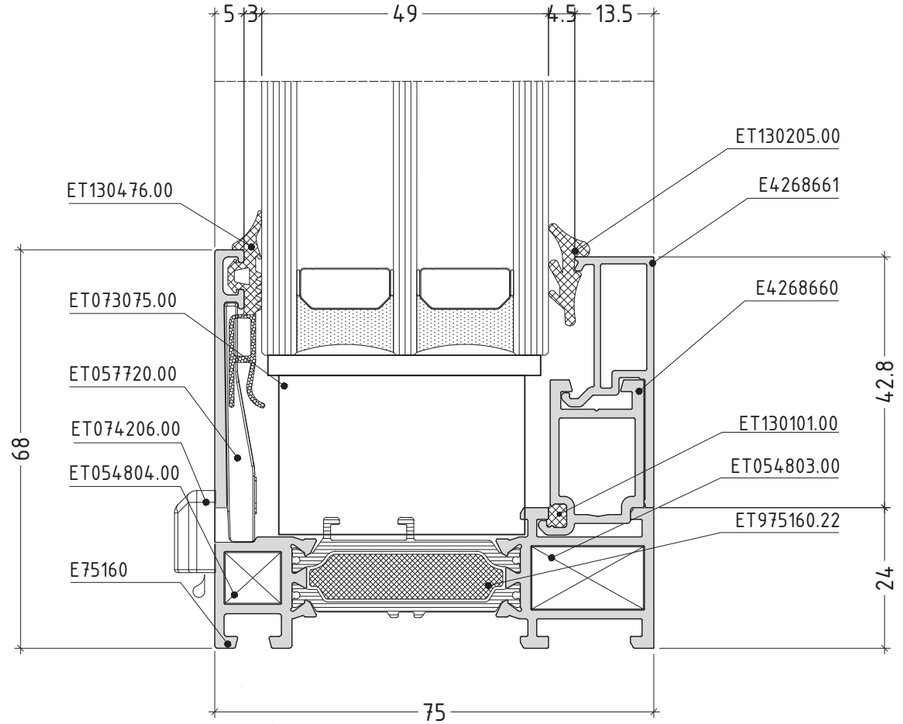
P75HV-06

SECTIONS

SECTIONS / DETAILS





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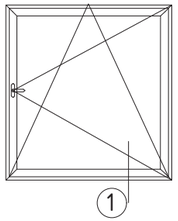
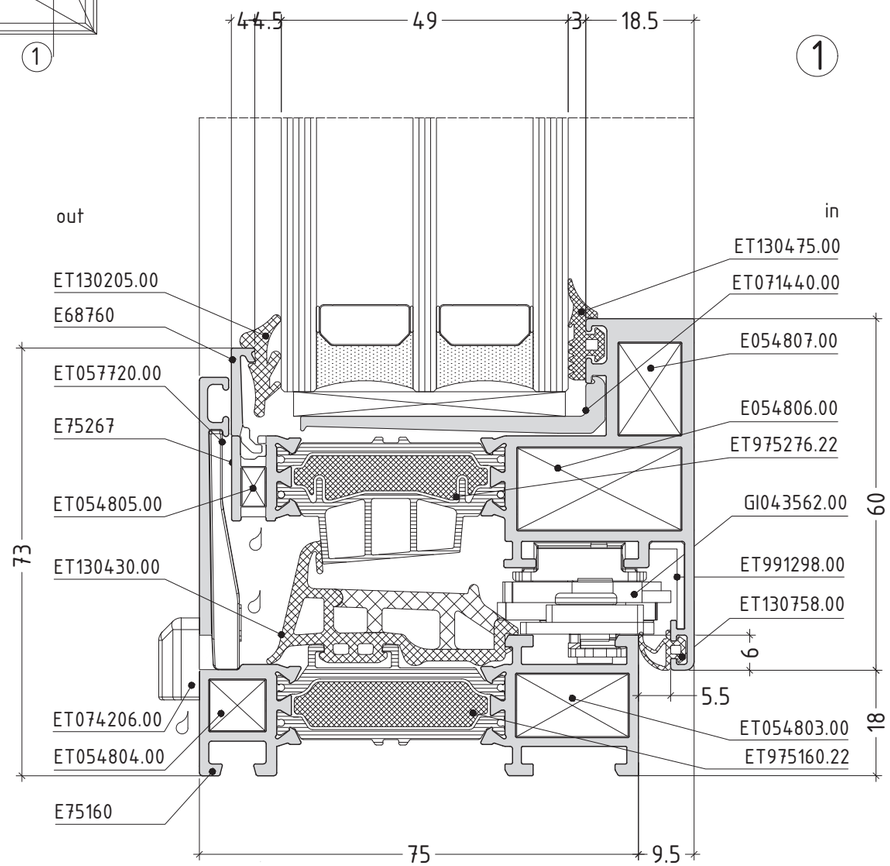
D75HV-01





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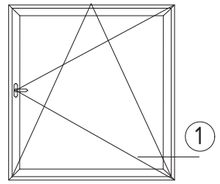
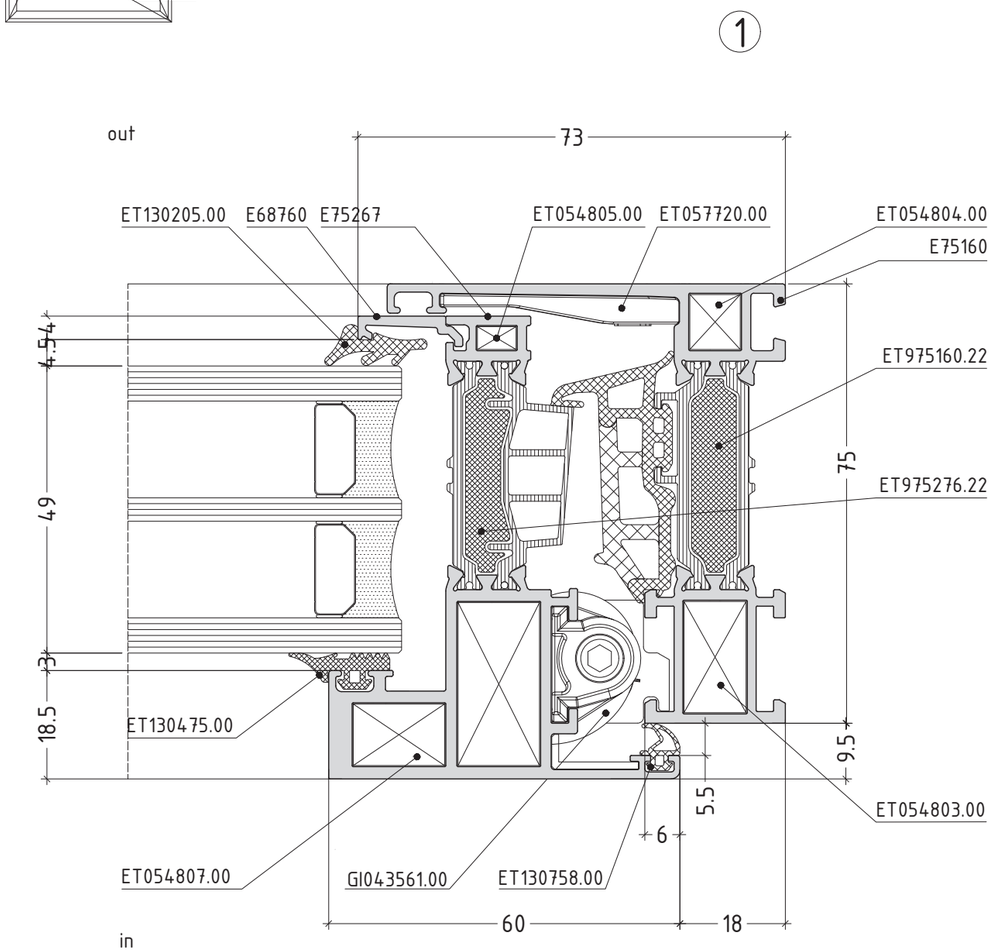
D75HV-02

opening system with thermal break E75HV





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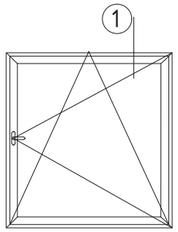
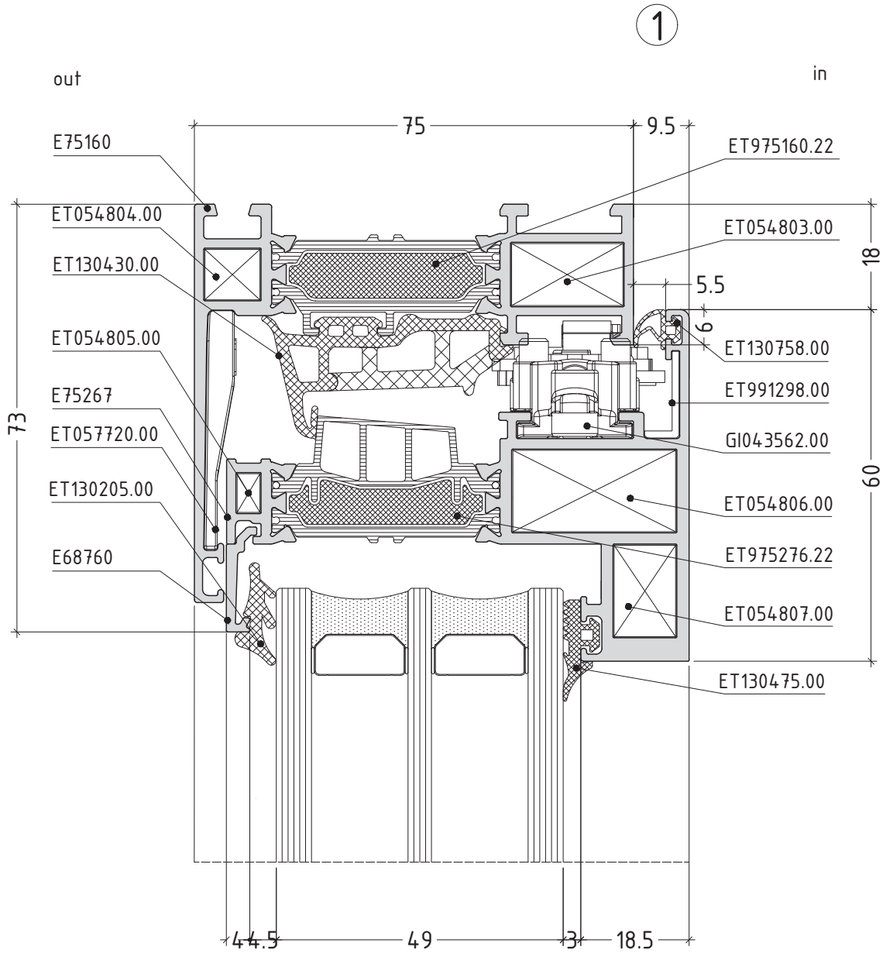
D75HV-03





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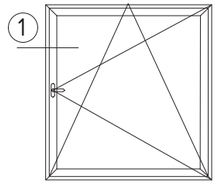
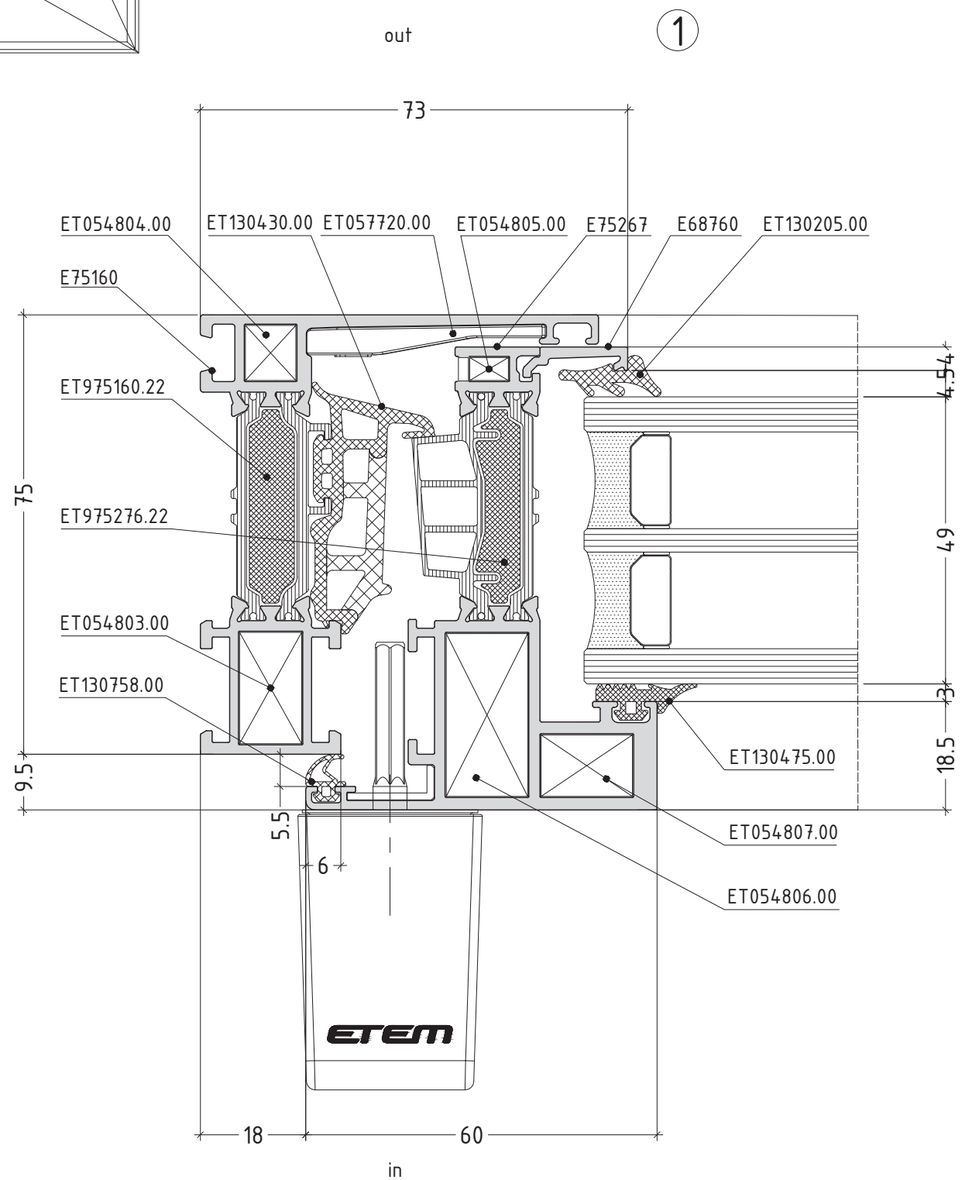
D75HV-04

opening system with thermal break E75HV





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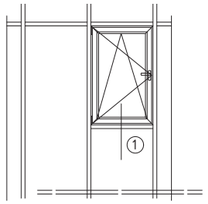
D75HV-05



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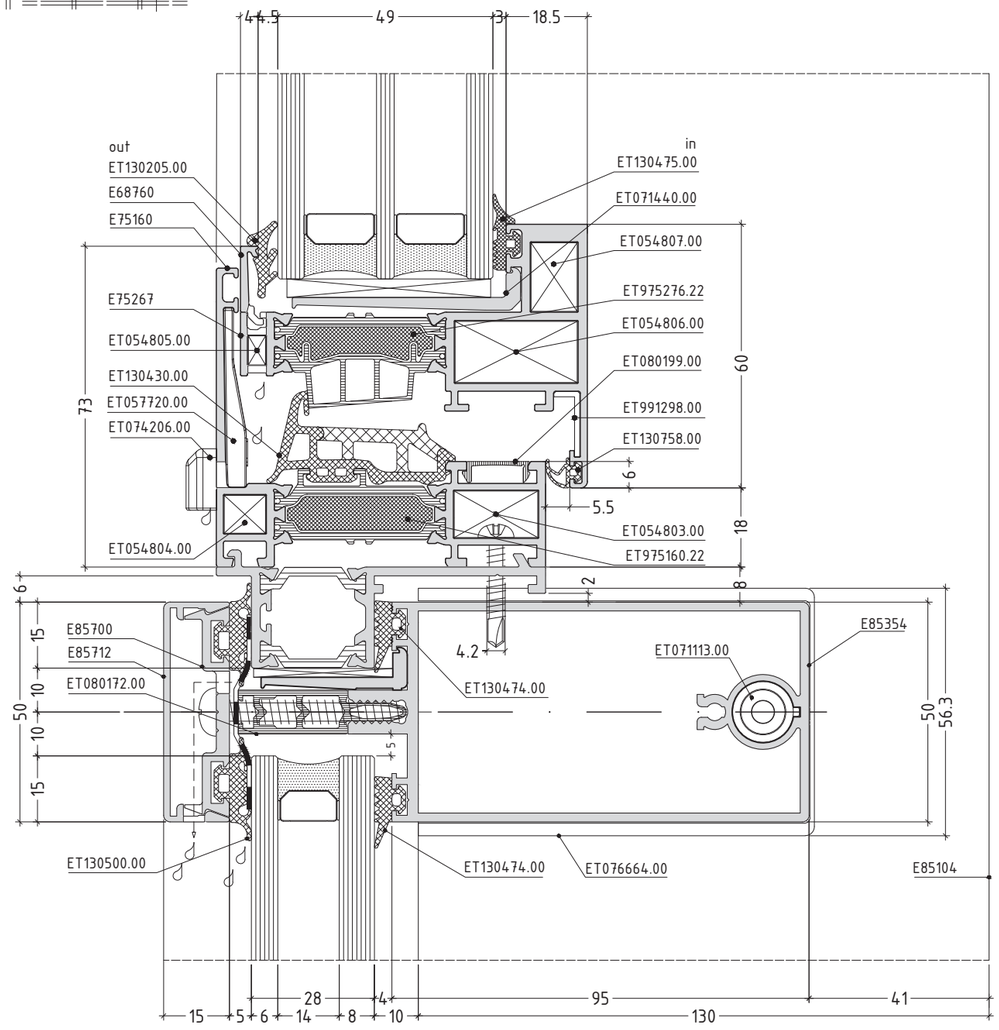

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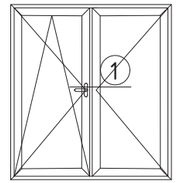

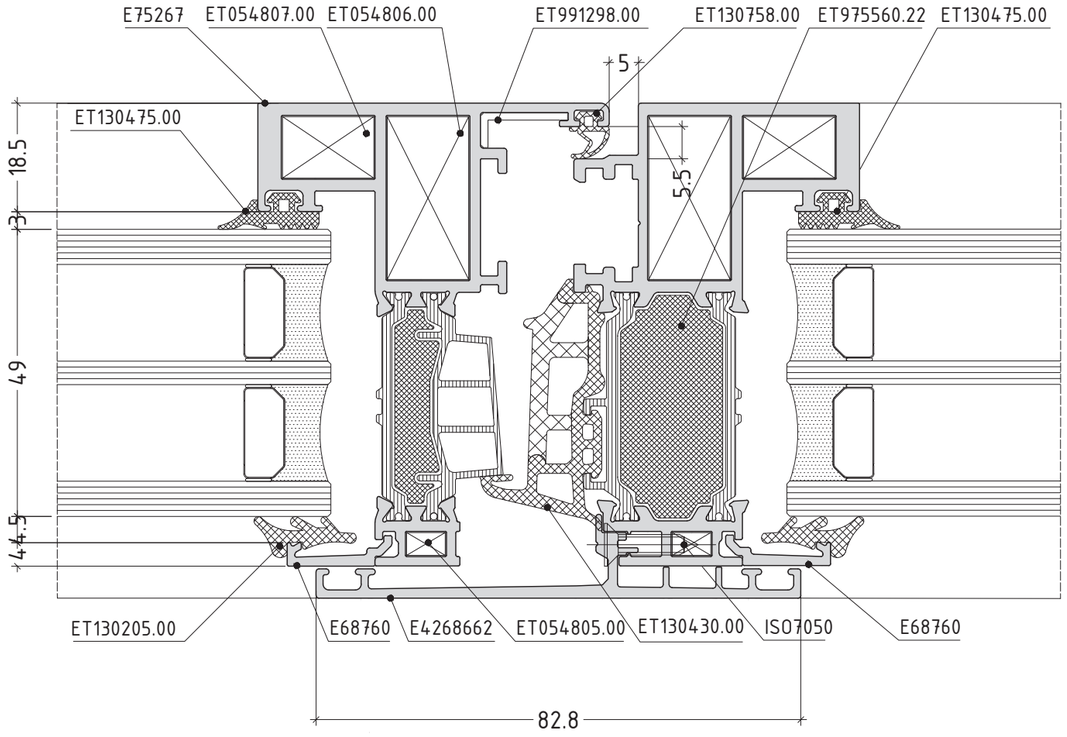

scale : 1:1

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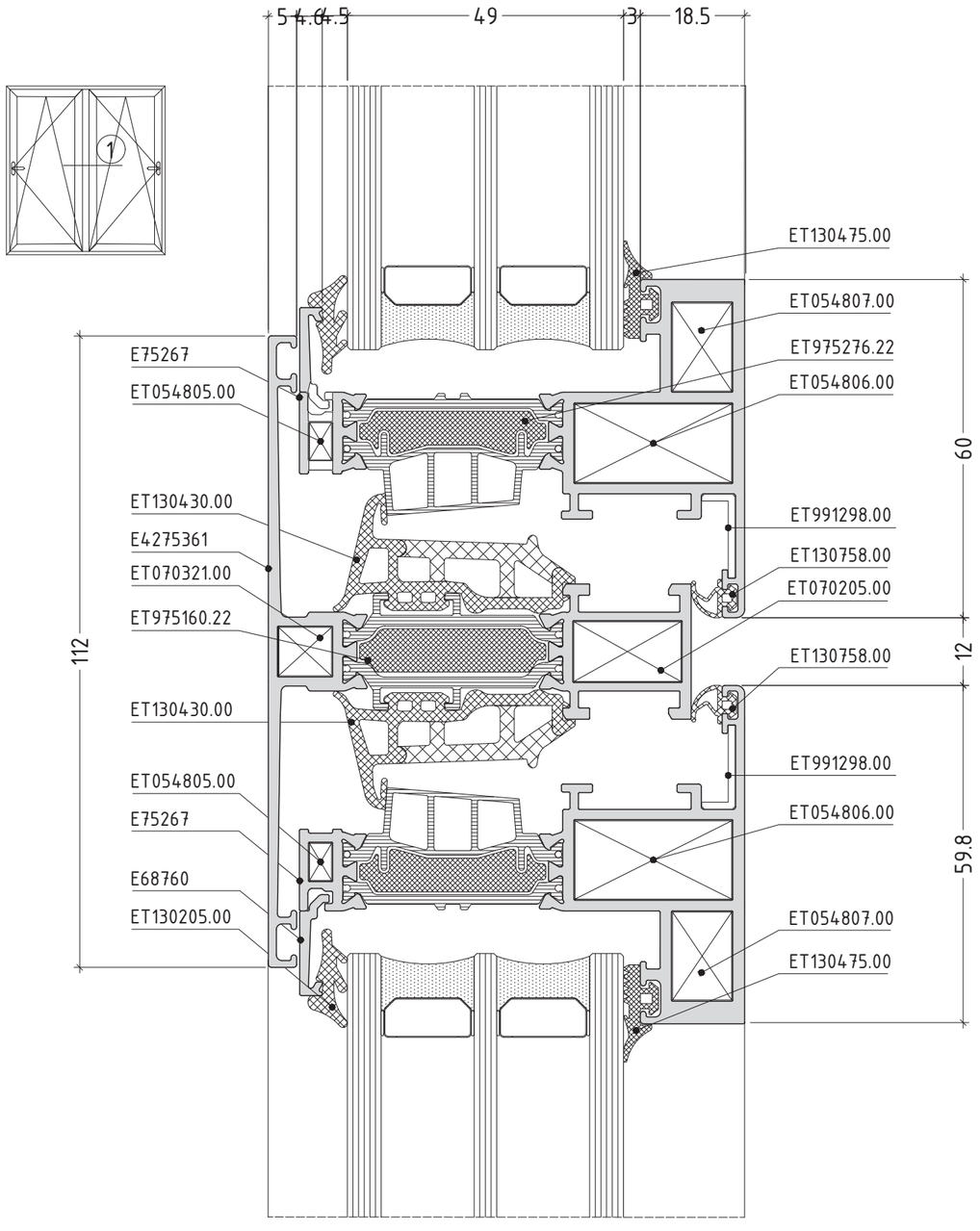

scale : 1:1

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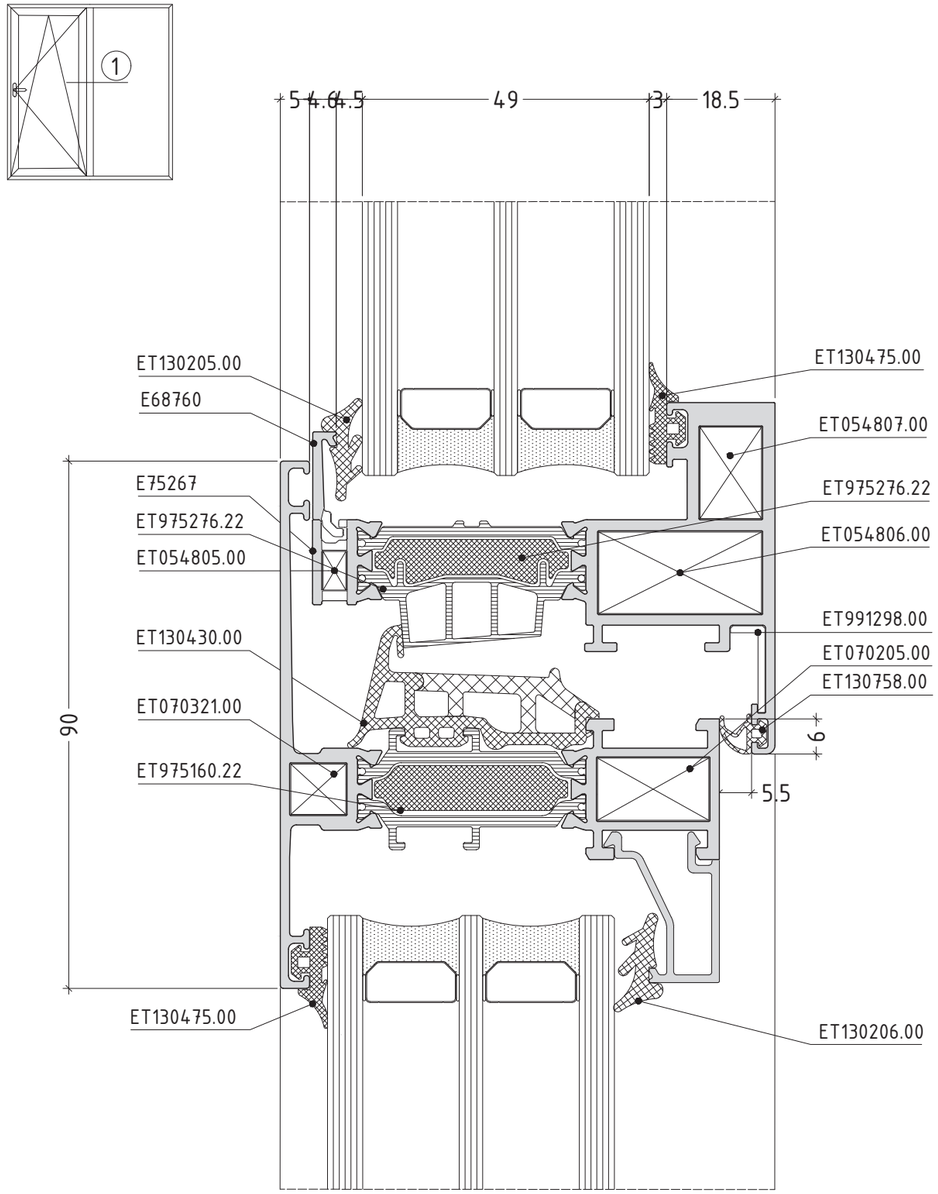
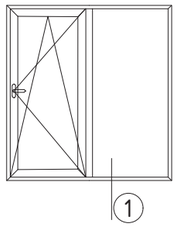
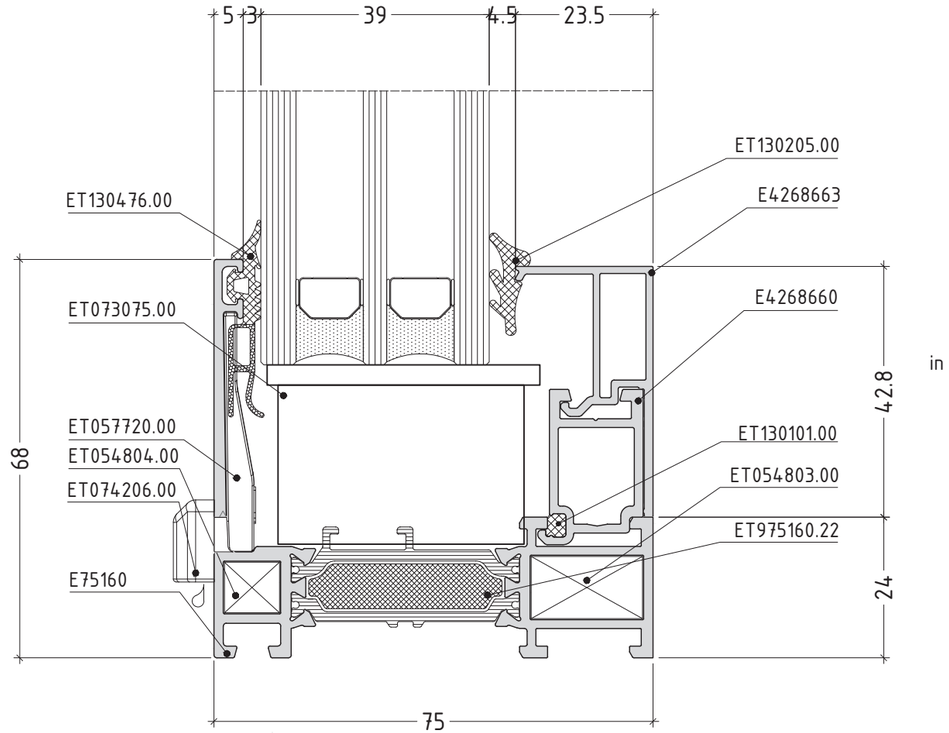


scale : 1:1

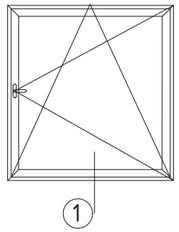
D75HV-09

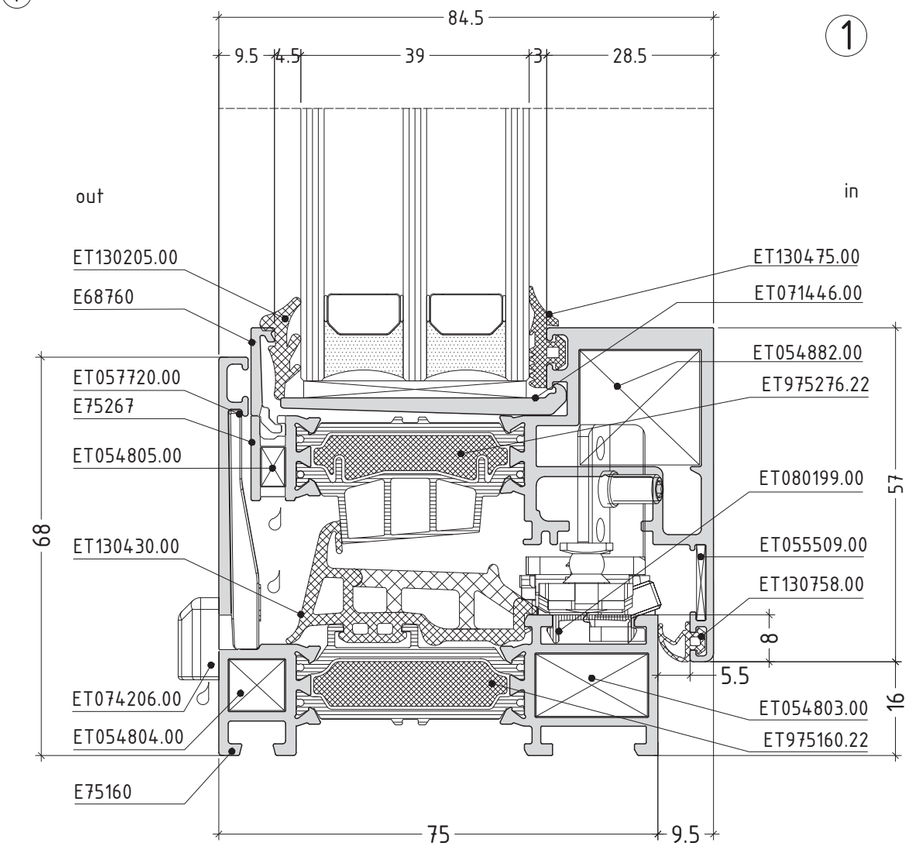




scale : 1:1

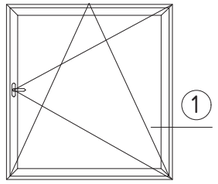
opening system with thermal break E75HV

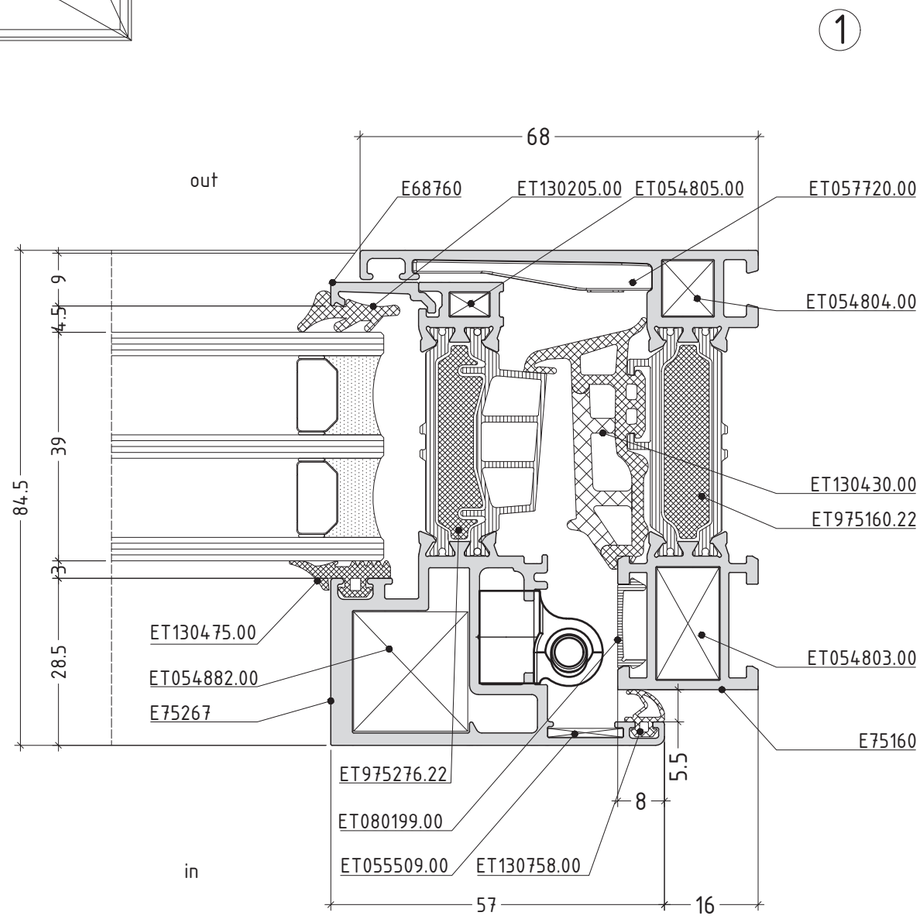




NOTE:
* Only with hidden hardware!

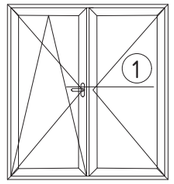
scale : 1:1





NOTE:
* Only with hidden hardware!

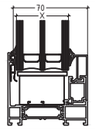
scale : 1:1

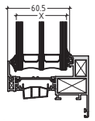


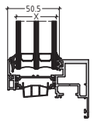
scale : 1:1

GLAZING OPTIONS

SECTIONS / DETAILS

GLAZING OPTIONS										
external gaskets	INTERNAL GASKETS					GLAZING BEADS				
3 mm ET130475.00		5 - 6 mm ET130176.00		7 - 8 mm ET130177.00						
	5 mm ET130205.00	6 mm ET130206.00	7 mm ET130207.00	8 mm ET130208.00	10 mm ET130210.00					
	X mm					4268XXX				
ET130475.00	49	48	47	46	44	13.5 E4268661 E4268660				
ET130475.00	39	38	37	36	34	23.5 E4268663 E4268660				

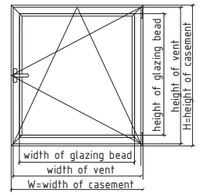
GLAZING OPTIONS										
external gaskets	INTERNAL GASKETS					GLAZING BEADS				
3 mm ET130475.00		5 - 6 mm ET130176.00		7 - 8 mm ET130177.00		EURO groove 				
	5 mm ET130205.00	6 mm ET130206.00	7 mm ET130207.00	8 mm ET130208.00	10 mm ET130210.00					
	X mm					E687xx				
ET130475.00	49	48	47	46	44	E68760 4				

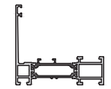
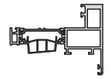
GLAZING OPTIONS										
external gaskets	INTERNAL GASKETS					GLAZING BEADS				
3 mm ET130475.00		5 - 6 mm ET130176.00		7 - 8 mm ET130177.00		PVC groove 				
	5 mm ET130205.00	6 mm ET130206.00	7 mm ET130207.00	8 mm ET130208.00	10 mm ET130210.00					
	X mm					E687xx				
ET130475.00	39	38	37	36	34	E68760 4				

G75HV_01

CUTTING LISTS

calculation of cutting length for one leaf window

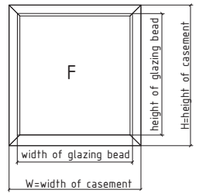


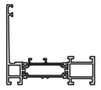
E75160 frame 	width of frame	W	2X45°
	height of frame	H	2X45°
E75267 vent 	width of vent	W - 37	2X45°
	height of vent	H - 37	2X45°
E68760 glazing bead	width of blazing bead	W - 81	2X90°
	height of blazing bead	H - 111	2X90°

scale : 1:1

CL75HV-01

calculation of cutting length for fix part

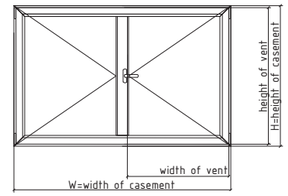


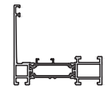
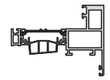
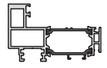
E75160 frame 	width of frame	W	2X45°
	height of frame	H	2X45°
E4268660 	width of pad	W - 39	2X90°
	height of pad	H - 112	2X90°
E4268661/E4268663 	width of glazing bead	W - 48	2X90°
	height of glazing bead	H - 134	2X90°

scale : 1:1

CL75HV-02

calculation of cutting length for dobble leaf window

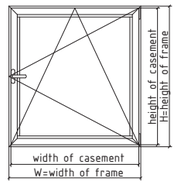


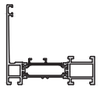
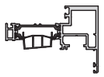
E75160 frame 	width of frame	W	2X45°
	height of frame	H	2X45°
E75267 vent 	width of vent	$\frac{W - 20}{2}$	2X45°
	height of vent	H - 36	2X45°
E4275560 			
	height of overhung	H - 59.5	2X45°+ additional treatment
E4268662 			
	height of vent	H - 147	2X90°

scale : 1:1

CL75HV-03

calculation of cutting length for one casement window PVC grove

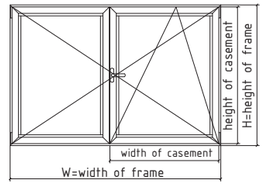


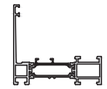
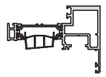
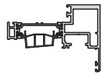
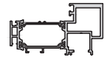
E75160 frame		width of frame	W	2X45°
		height of frame	H	2X45°
E4275268		width of casement	W - 32	2X45°
		height of casement	H - 32	2X45°

scale : 1:1

CL75HV-04

calculation of cutting length for double casement window PVC grove



E75160 frame		width of frame	W	2X45°
		height of frame	H	2X45°
E4268268 active casement		width of casement	$\frac{W - 11}{2}$	2X45°
		height of casement	H - 32	2X45°
E4268268 passive casement		width of casement	$\frac{W - 11}{2}$	2X45°+ additional treatment
		height of casement	H - 32	2X45°
E4275560				
		height of overhung	H - 58.5	2X45°+ additional treatment
E4268662				
		height of adapter	H - 146	2X90°

Note:
option with equal glass pane

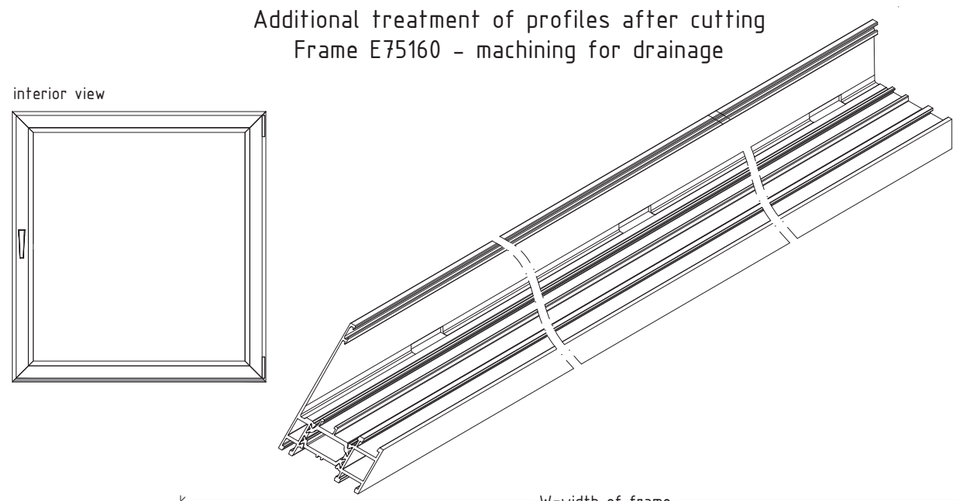
scale : 1:1

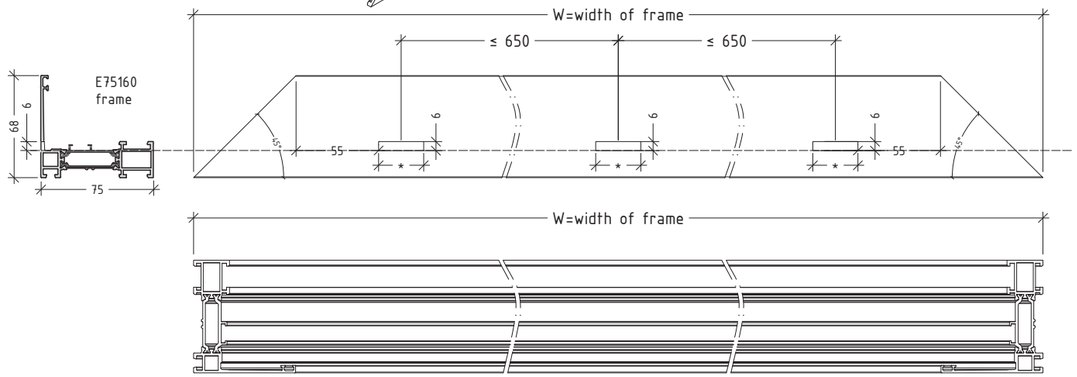
CL75HV-05

MACHININGS

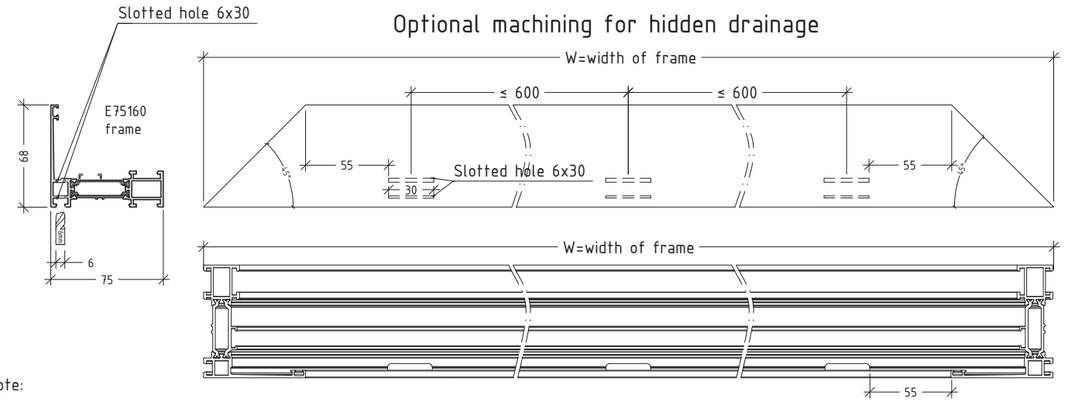
Additional treatment of profiles after cutting
Frame E75160 – machining for drainage

interior view

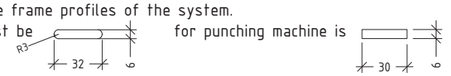




Optional machining for hidden drainage



Note:
*This machining is valid for all the frame profiles of the system.
For CNC machine drainage hole must be for punching machine is

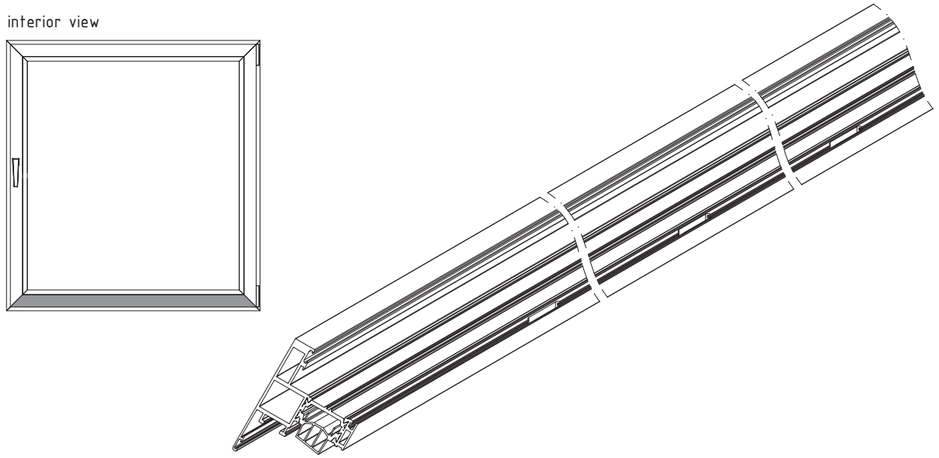


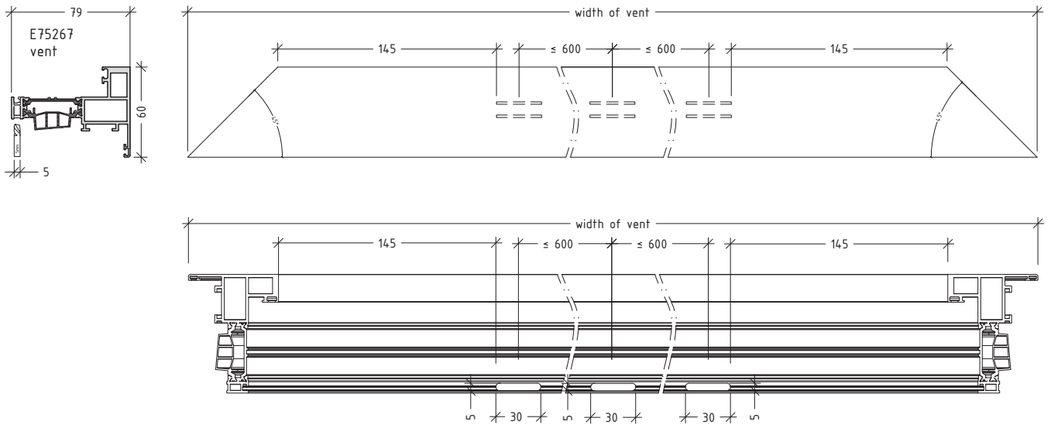
scale : 1:1

M75HV-01

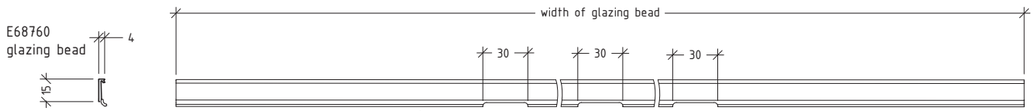
Additional treatment of profiles after cutting
vent E75267 - machining for drainage

interior view





Optional machining for glazing bead



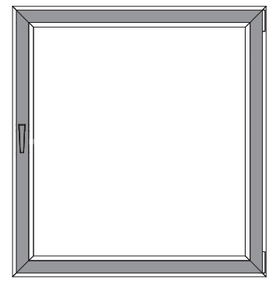
scale : 1:1

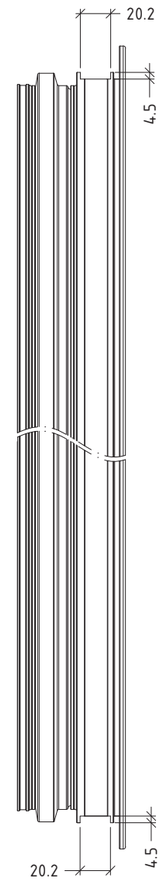
M75HV-02

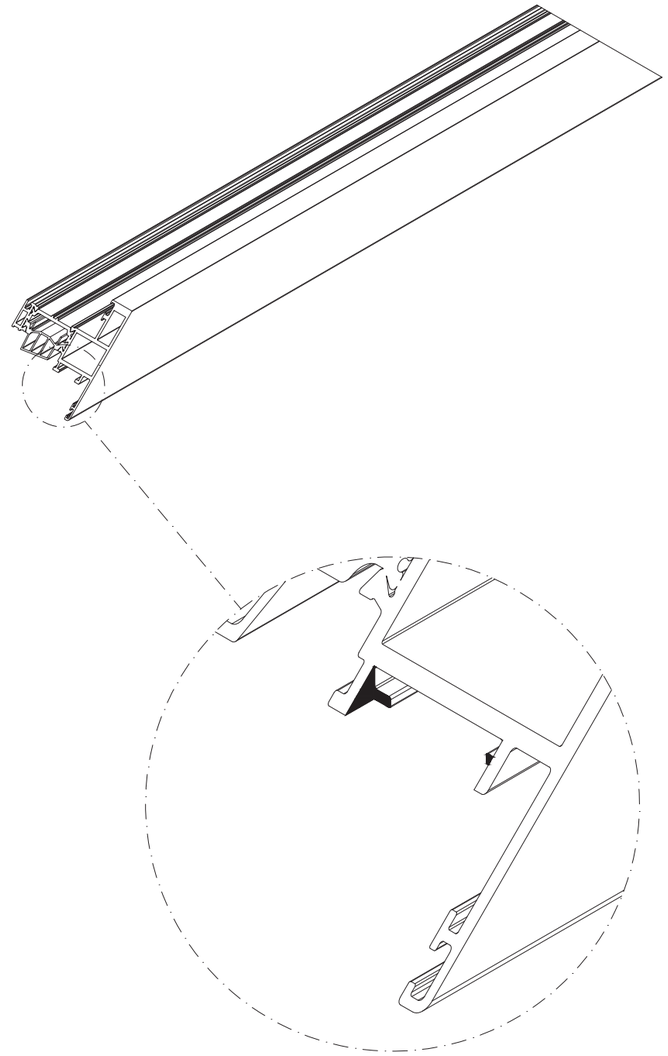
opening system with thermal break E75HV

Additional treatment of profiles after cutting
vent E75267 - machining for connecting rod E2308

interior view





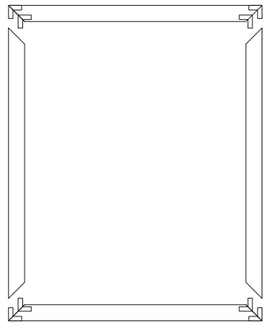


Note:
This machining's is valid for all the vent profiles with Euro groove in the system

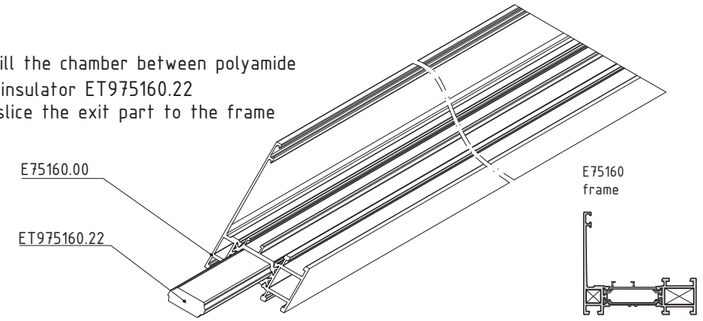
scale : 1:1

M75HV-03

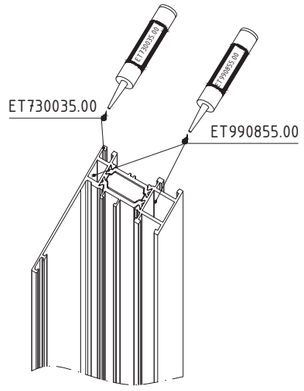
Sequence for assembly the frame E75160



1 - Fill the chamber between polyamide with insulator ET975160.22 and slice the exit part to the frame face

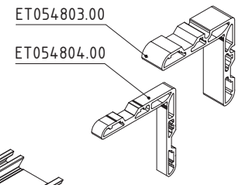


2 - clean the surface of the cut and the grooves for the joints by using ET994356.00

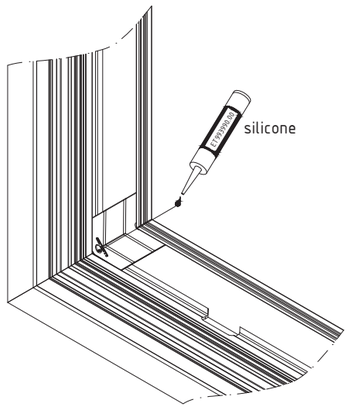


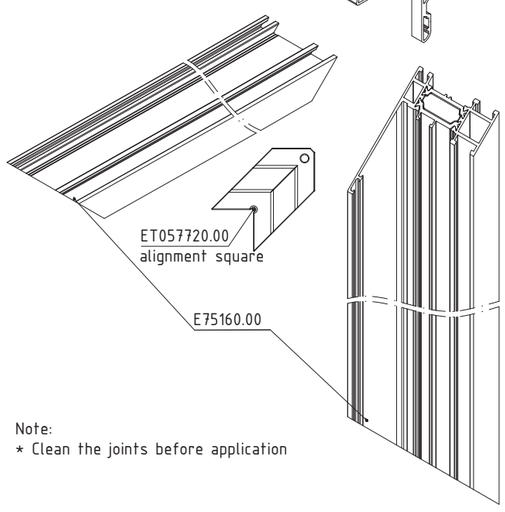
3 - apply ET730035.00 on the surface of the cut and ET990855.00 in the grooves for the joints

4 - put the joints in the chambers of frame E75267



5 Insert silicone to specific point



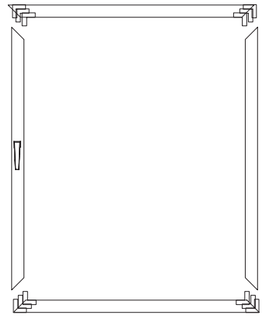


Note:
* Clean the joints before application

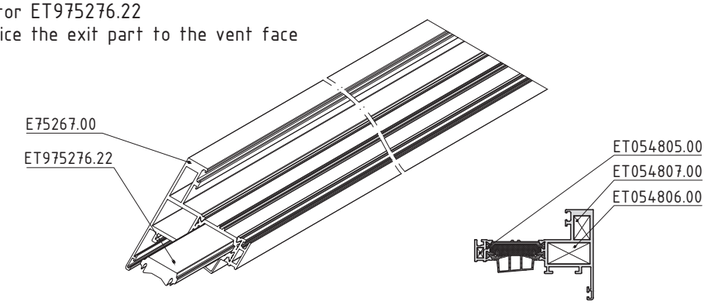
scale : 1:1

M75HV-04

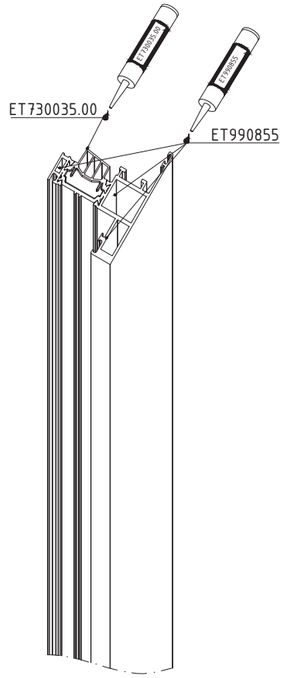
Sequence for assembly the vent E75267



1 - Fill the chamber between polyamide with insulator ET975276.22 and slice the exit part to the vent face

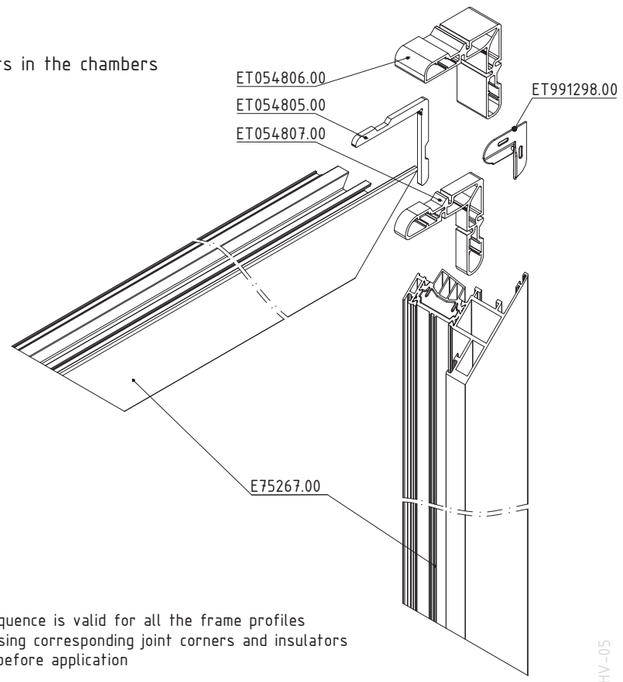


2 - clean the surface of the cut and the grooves for the joints by using cleaner ET994356.00



3 - apply ET730035.00 on the surface of the cut and ET990855 in the grooves for the joints

4 - put the joints in the chambers of frame E75267

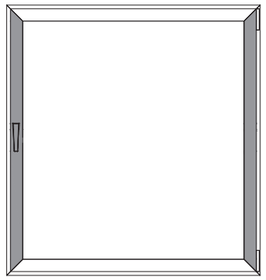


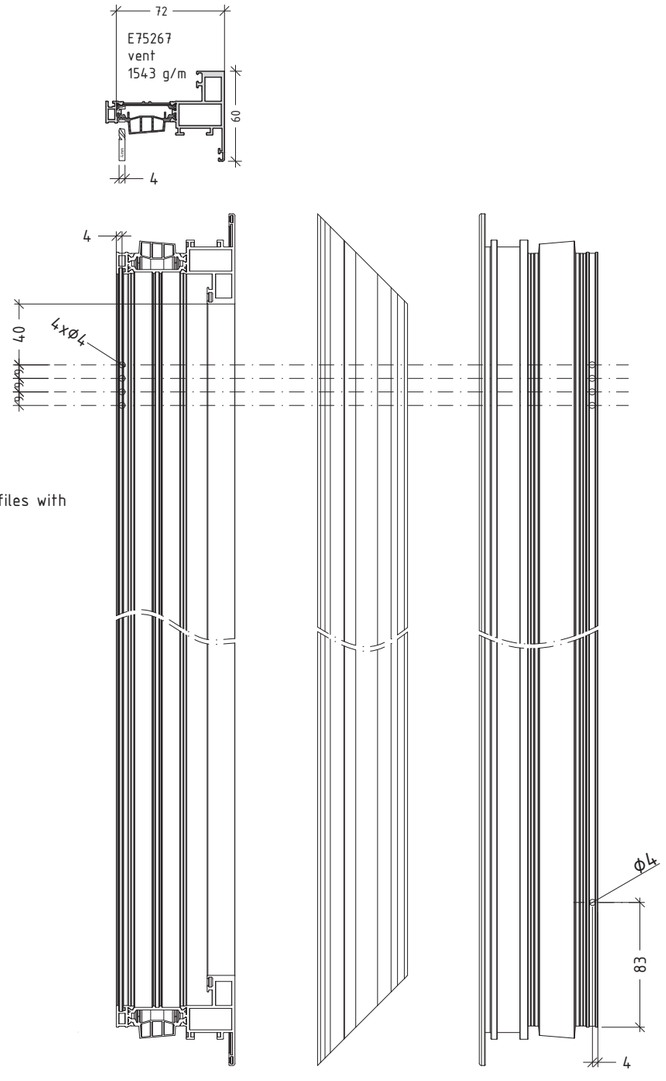
Note:
* This mounting sequence is valid for all the frame profiles in the system by using corresponding joint corners and insulators
* Clean the joints before application

M75HV-05

Additional treatment of profiles after cutting
vent E75267 - machining for ventilation

interior view



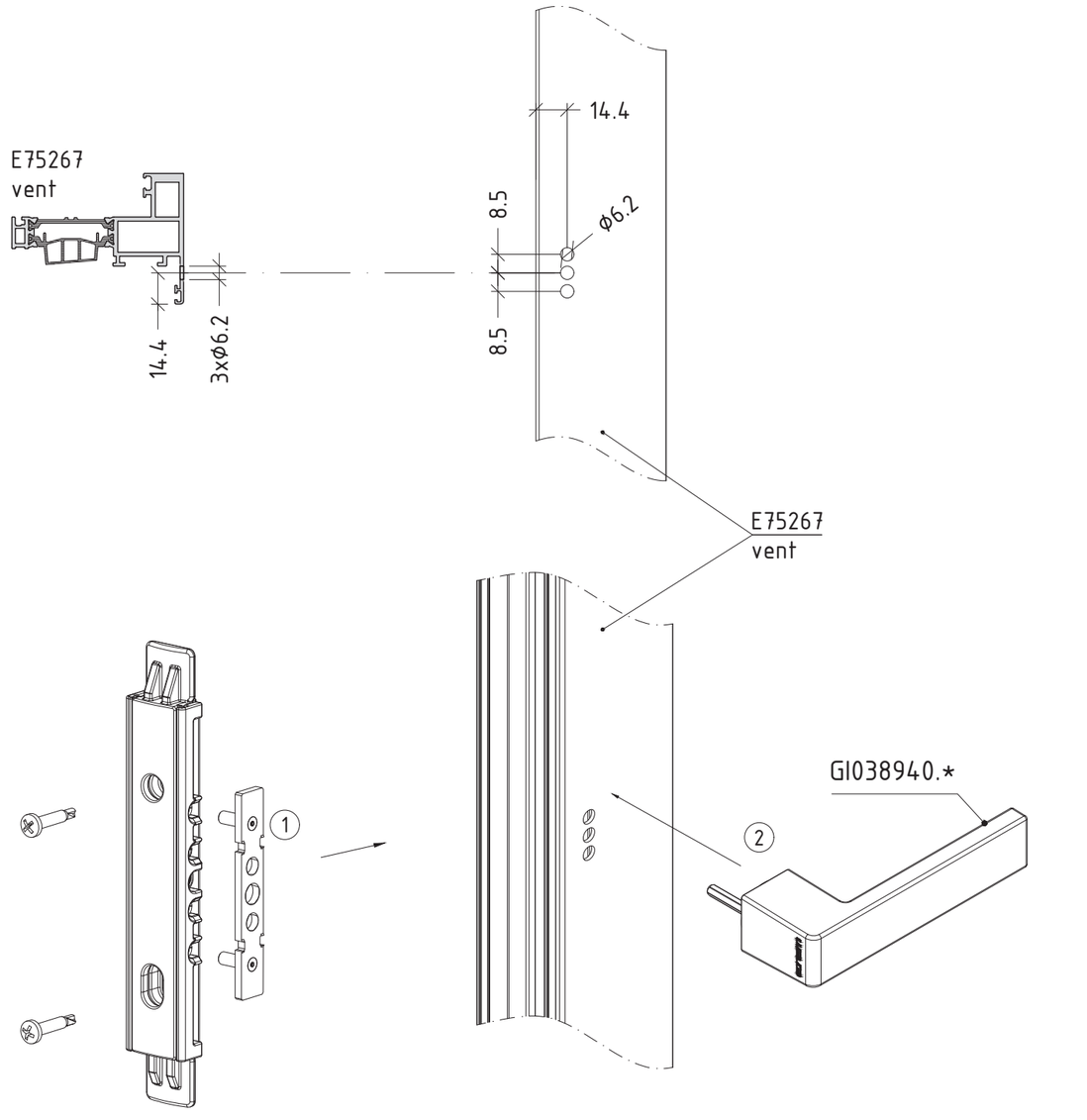


Note:
This machining's is valid for all the vent profiles with Euro groove in the system

scale : 1:1

M75HV-06

Additional treatment of profiles after cutting
vent E75267 - machining for handle on active vent



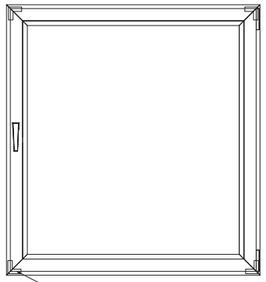
Note:
This machining's is valid for all the sash profiles with Euro groove in the system

scale : 1:1

M75HV-07

Sequence for mounting central EPDM gasket to the frame for E75 Hidden Vent

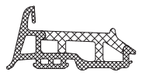
interior view



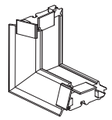
ET991327.00
EPDM vulcanised corner

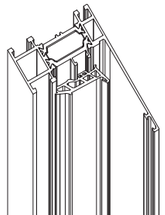
For E75HV

ET130430.00
co-extruded EPDM gasket for E75 and E75HV



ET991327.00
EPDM vulcanised corner for gasket ET130430.00

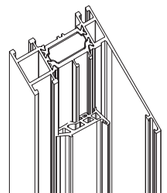


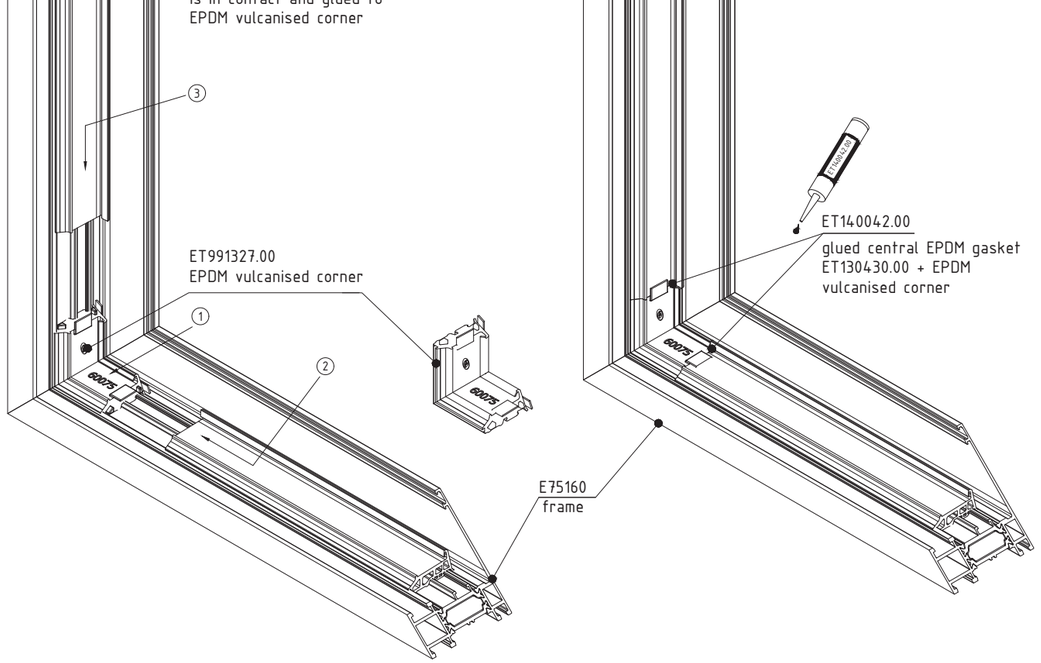


Note:

- use cleaner ET994356.00
- use primer ET140045.00
- use glue ET140042.00

- Make sure central EPDM gasket ET130430.00 is in contact and glued to EPDM vulcanised corner



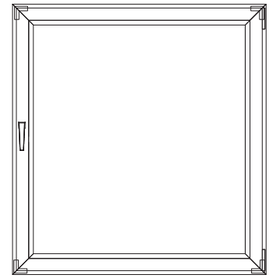


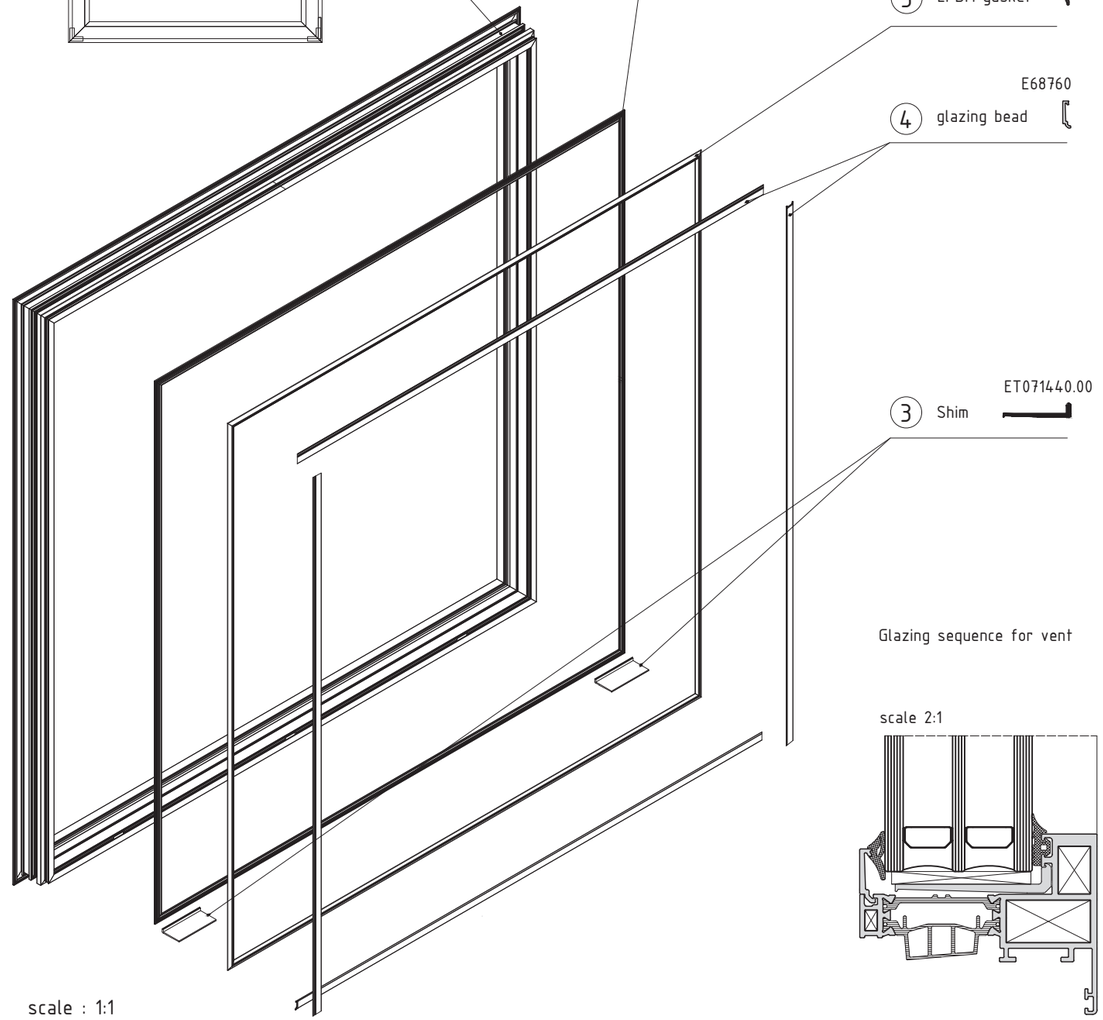
scale : 1:1

M75HV-08

Sequence for mounting glass pane; glazing bead and gasket

interior view





Glazing sequence for vent

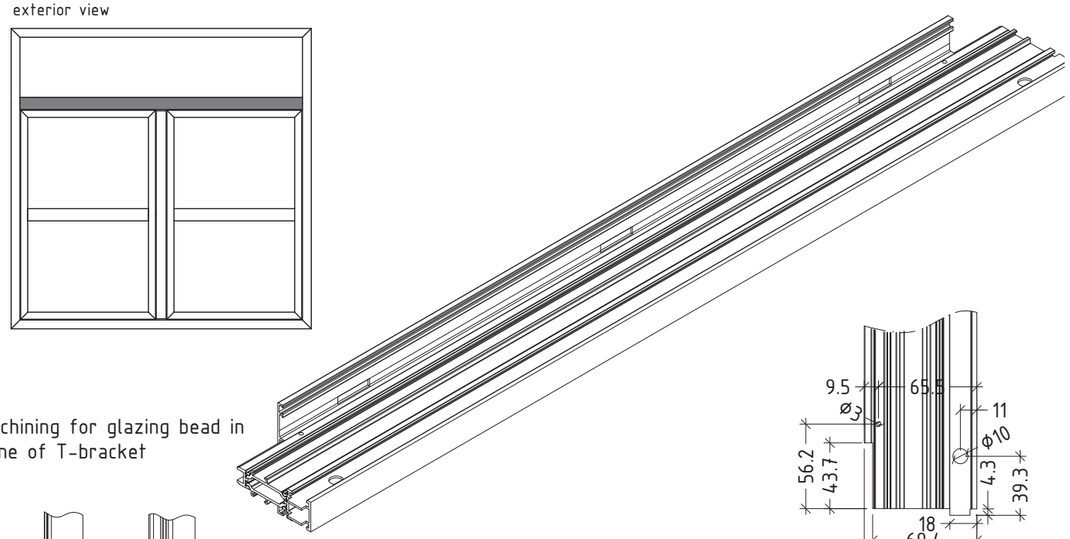
scale 2:1

scale : 1:1

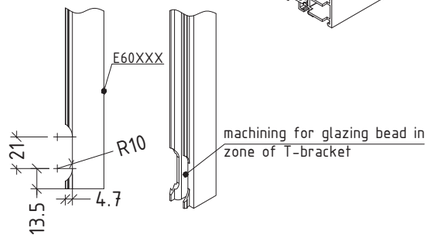
M75HV-09

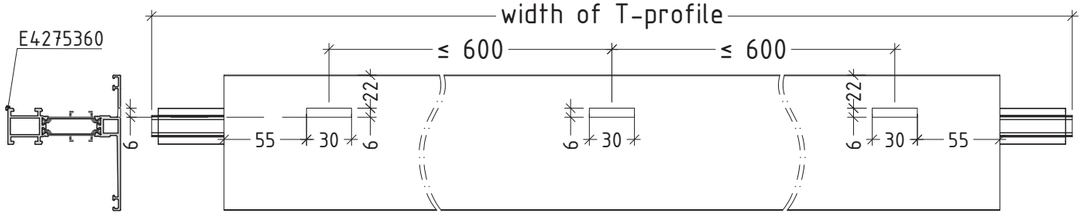
Additional treatment of profiles after cutting
T profile E4275360 – machining for visible drainage and connecting to the frame

exterior view

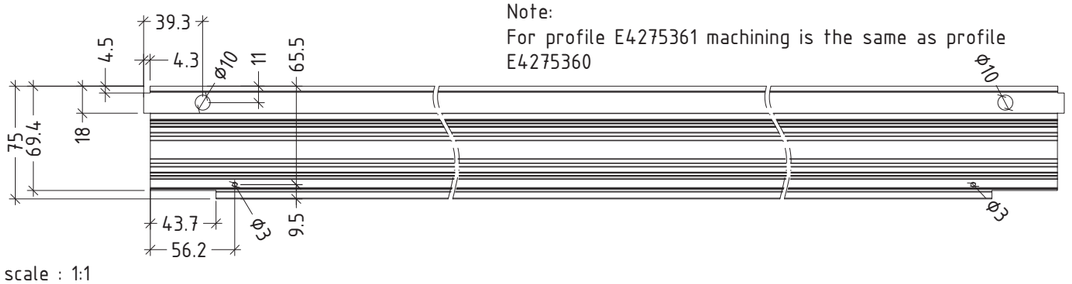


machining for glazing bead in zone of T-bracket





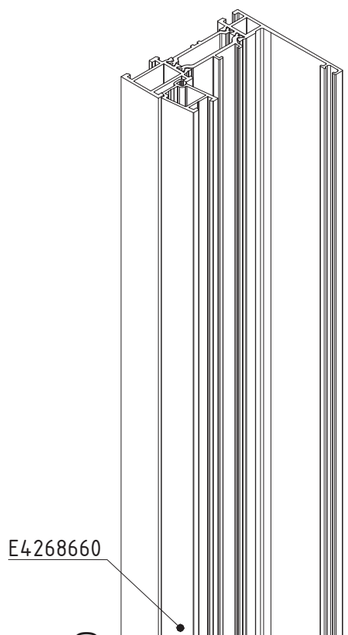
Note:
For profile E4275361 machining is the same as profile E4275360

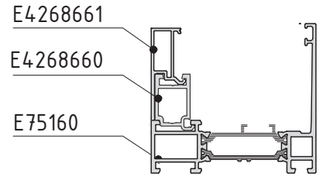


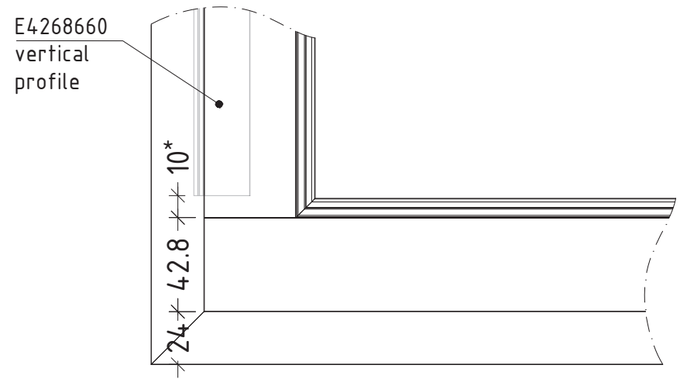
scale : 1:1

M75HV-10

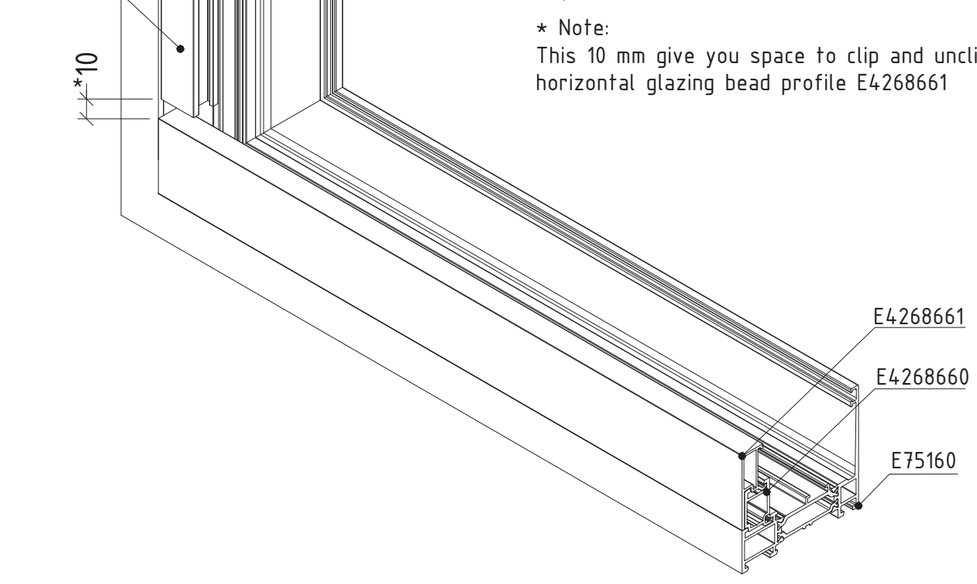
Sequence for assembly the glazing beads E4268660 + E4268661 for fixing part







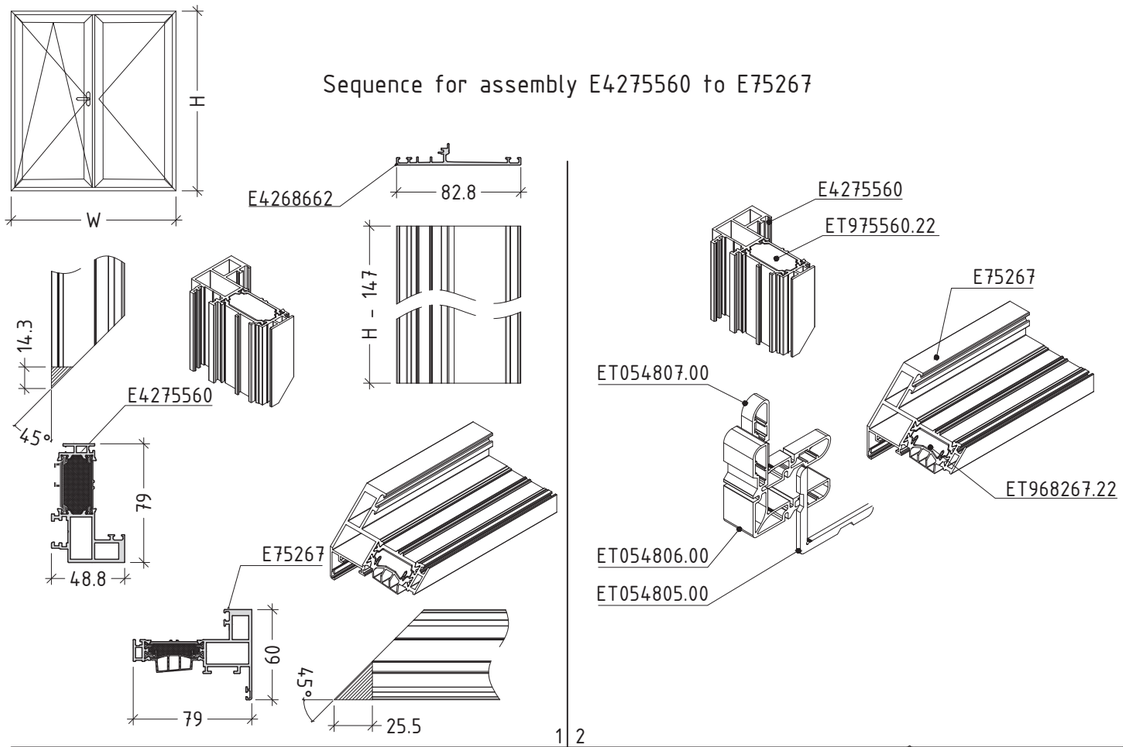
* Note:
This 10 mm give you space to clip and unclip the horizontal glazing bead profile E4268661



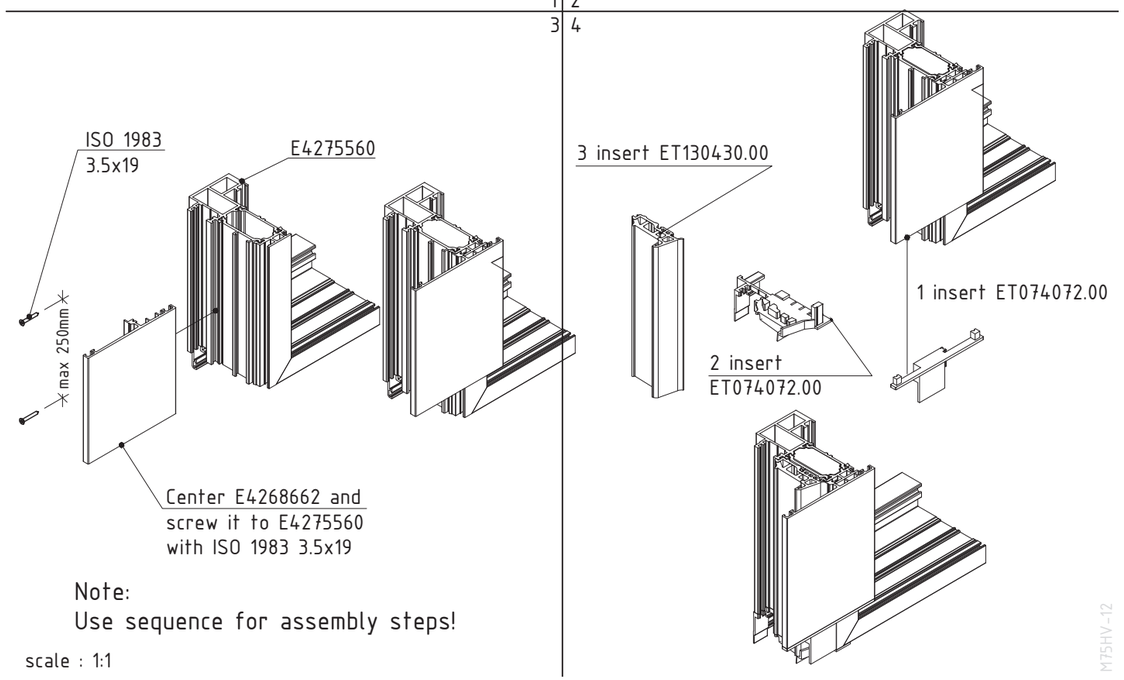
scale : 1:1

M75HV-11

Sequence for assembly E4275560 to E75267



1 2
3 4

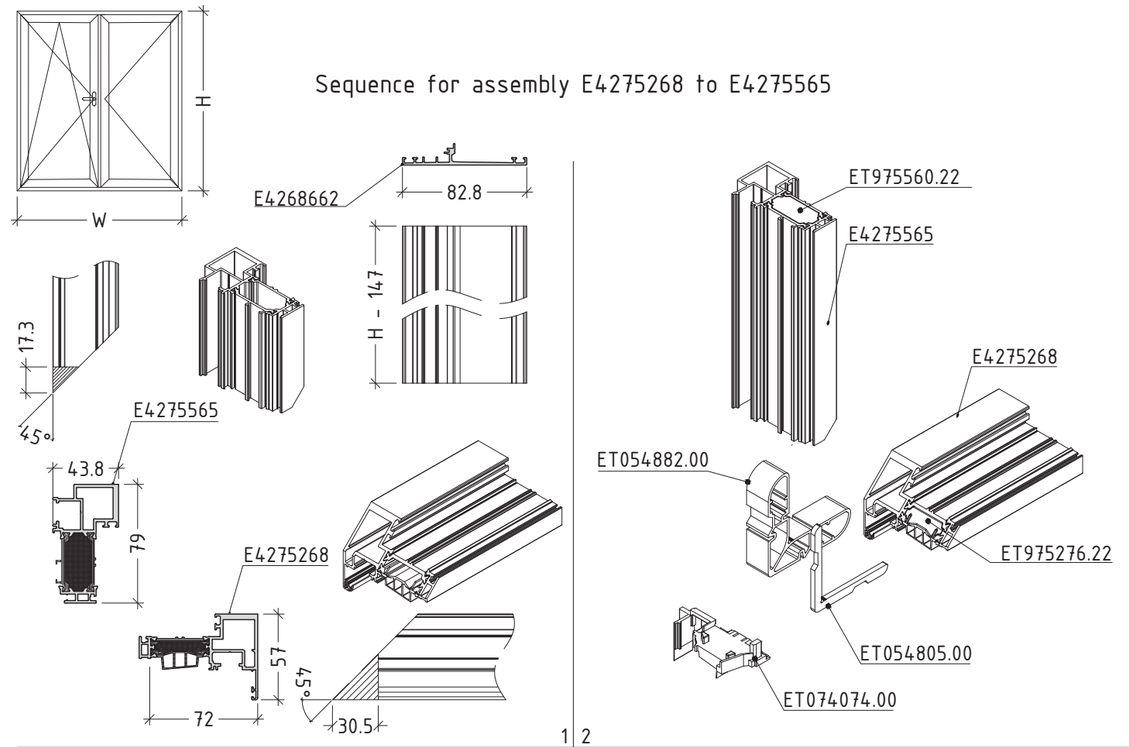


Note:
Use sequence for assembly steps!

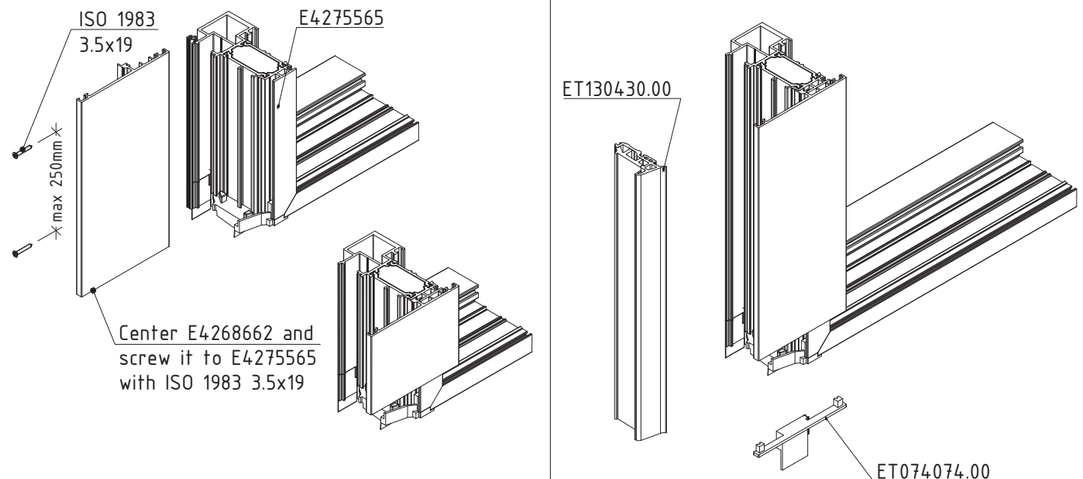
scale : 1:1

M75HV-12

Sequence for assembly E4275268 to E4275565



1 2
3 4



Note:
Use sequence for assembly steps!

scale : 1:1

M75HV-13

ACCESSORIES

IMAGES / DESCRIPTIONS

code/description	package/pcs	colour
ET **130475.00**	50	

additional EPDM gasket for
E75 HV

ET **130476.00**	50	

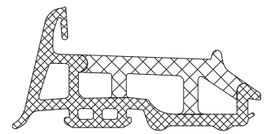
additional EPDM gasket for
E68

ET **130758.00**	50	

interior EPDM gasket
TOPLINE

ET **130430.00**	50	

central EPDM gasket for
E75 HV



A75HV-01

code/description	package/pcs	colour
ET **130176.00**	80	●

glazing EPDM gasket
press-in 5-6 mm

ET **130177.00**	60	●

glazing EPDM gasket
press-in 7-8 mm

ET **990619.00**	125	●

glazing EPDM gasket
press-in 5 mm

ET **990620.00**	125	●

glazing EPDM gasket
press-in 6 mm

A75HV-02

code/description	package/pcs	colour
ET **130207.00**	75	●

glazing EPDM gasket
press-in 7 mm

ET **130208.00**	40	●

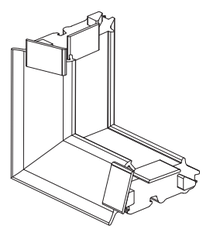
glazing EPDM gasket
press-in 8 mm

ET **130210.00**	40	●

glazing EPDM gasket
press-in 10 mm

ET **991327.00**	–	

angle gasket for E75



A75HV-03

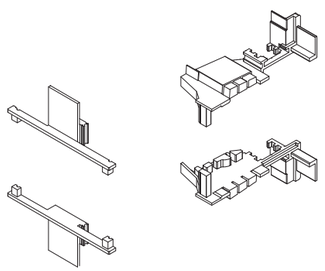
code/description	package/pcs	colour
ET **130101.00**	–	●

insulation rope

upon customer's request

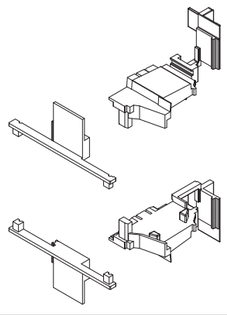
ET **074072.00**	–	●

set of caps for E4275560
and E4268662



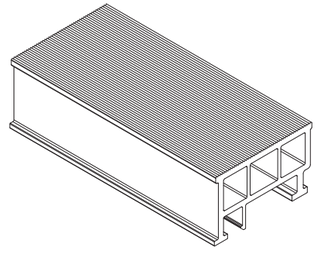
ET **074074.00**	–	●

set of caps for E4275565and
E4275662



ET **073075.00**	–	–

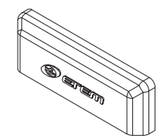
alignment glazing shim for
E75HV



A75HV-04

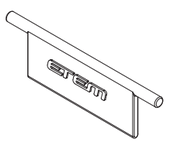
code/description	package/pcs	colour
ET **074306.00**	50	●

plastic drainage cap 30x6mm



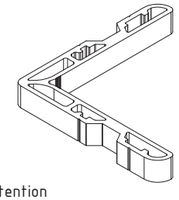
ET **074307.00**	50	●

flap for dreinage cap



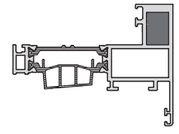
ET **054807.00**	50	MF

extruded aluminium corner
bracket

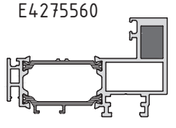


attention
always use epoxy resin
for long lasting joining

E75267

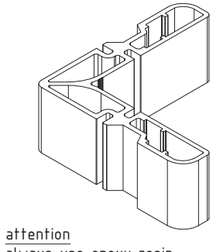


E4275560



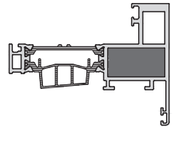
ET **054806.00**	50	MF

extruded aluminium corner
bracket

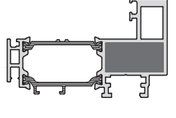


attention
always use epoxy resin
for long lasting joining

E75267



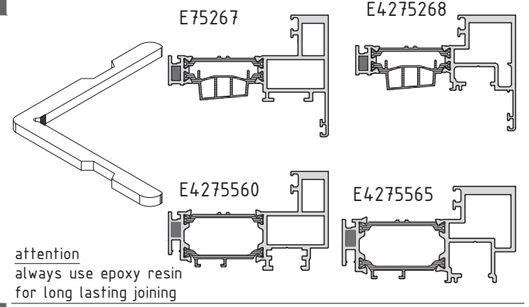
E4275560



A75HV-05

code/description	package/pcs	colour
ET **054805.00**	20	MF

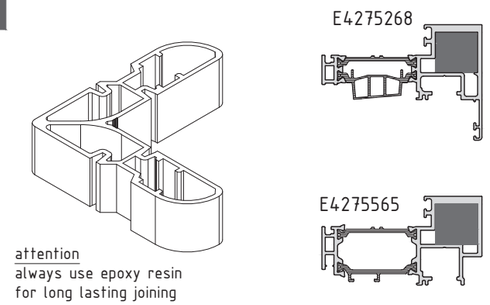
extruded aluminium corner bracket



attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054882.00**	20	MF

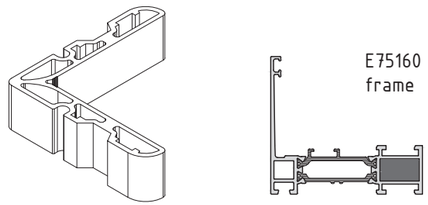
extruded aluminium corner bracket



attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054803**	50	MF

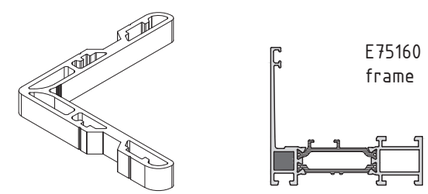
extruded aluminium corner bracket



attention
always use epoxy resin
for long lasting joining

code/description	package/pcs	colour
ET **054804.00**	50	MF

extruded aluminium corner bracket

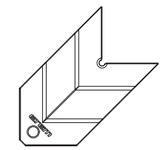


attention
always use epoxy resin
for long lasting joining

A75HV-06

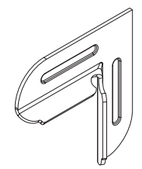
code/description	package/pcs	colour
ET **057720.00**	50	–

alignment angle for E75 HV



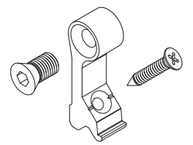
code/description	package/pcs	colour
ET **991298.00**	20	–

alignment square

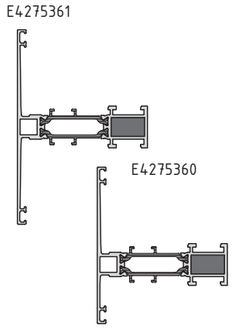


code/description	package/pcs	colour
ET **070205.00**	10	MF

T-BRACKET (E75900) for
E4275360; E4275361
screwing ''T'' bracket for
mullions/transoms
- 10.5 mm

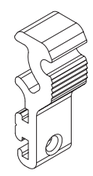


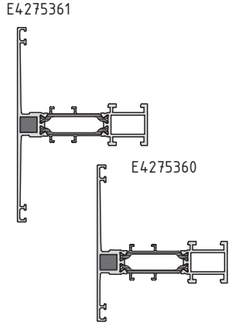
attention
always use epoxy resin
for long lasting joining



code/description	package/pcs	colour
ET **070321.00**	10	MF

T-BRACKET (E75900) for
E4275360; E4275361

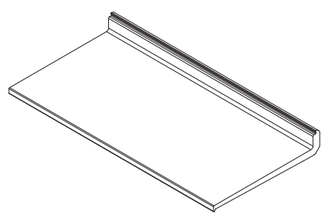




A75HV-07

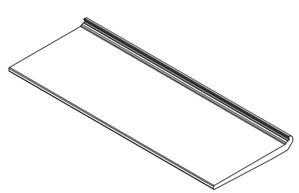
code/description	package/pcs	colour
ET **071440.00**	100	MF

glazing shim for casement E75267
EURO grove



ET **071446.00**	–	MF

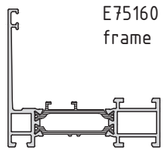
glazing shim for E4275268
casement PVC grove



ET **975160.22**	10	–

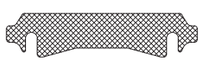
ADDITIONAL INSULATOR 1000mm
FOR E75160

E75160
frame

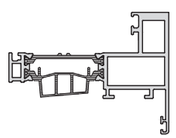


ET **975276.22**	10	–

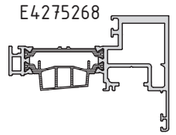
ADDITIONAL INSULATOR 1000mm
FOR E75267



E75267



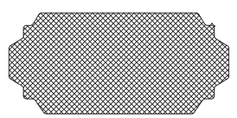
E4275268



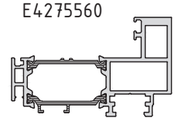
A75HV-08

code/description	package/pcs	colour
ET **975560.22**	10	–

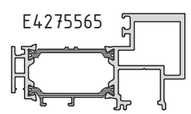
ADDITIONAL INSULATOR 1000mm
FOR E4275560



E4275560

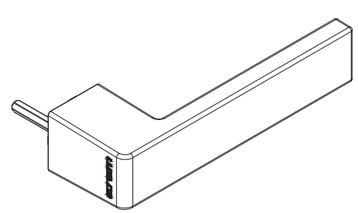


E4275565



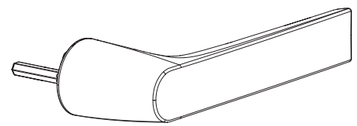
GI **38940.02**	1	●
GI **38940.06**	1	●
GI **38940.12**	1	BRUSHED BV1

HANDLE NP ULTRA ETEM



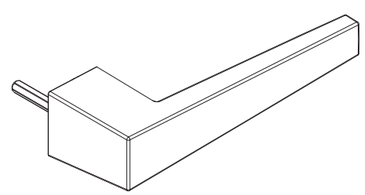
GI **039610.01**	10	●
GI **039610.02**	10	●
GI **039610.06**	10	●

handle NP ULTRA
(rounded)



GI **039600.01**	10	●
GI **039600.02**	10	●
GI **039600.06**	10	●

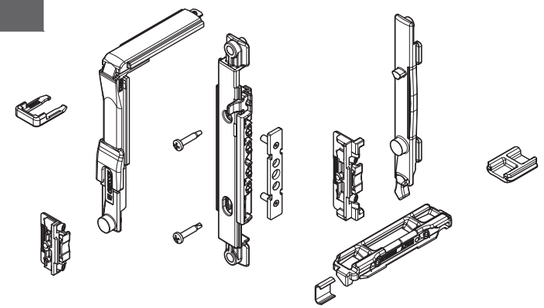
handle NP ULTRA
(squared)



A75HV-09

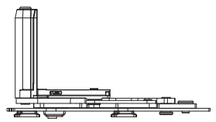
code/description	package/pcs	colour
GI039520.00	1	–

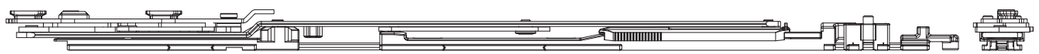
NP ULTRA - T/T MECHANISM



GI043562.00	1	–

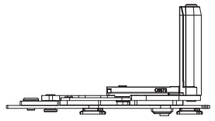
CHIC-T/T KIT HINGES ARM
LEFT 600 - 1500mm

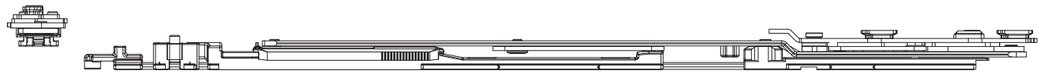




GI043561.00	1	–

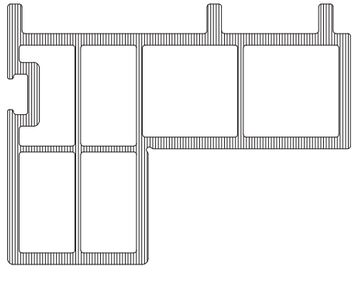
CHIC-T/T KIT HINGES ARM
RIGHT 600 - 1500mm





ET **080075.00**	6m	●

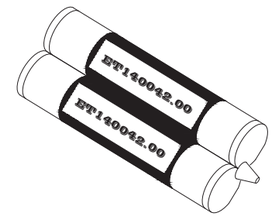
mounting PVC profile for E75



A75HV-10

code/description	package/pcs	colour
ET **140042.00**	1	–

adhesive for corner brackets
ETEM 600ml



ET **140044.00**	1	–

pistol

ET **140043.00**	1	–

mixer

ET **140045.00**	1	–

primer super bond 30ml

A75HV-11

code/description	package/pcs	colour
ET **730035.00**	1	–

Vario protect

ET **750016.00**	1	–

cleaner for Vario protect
1l

A75HV-12

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 accessment (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

STANDARDS

GENERAL

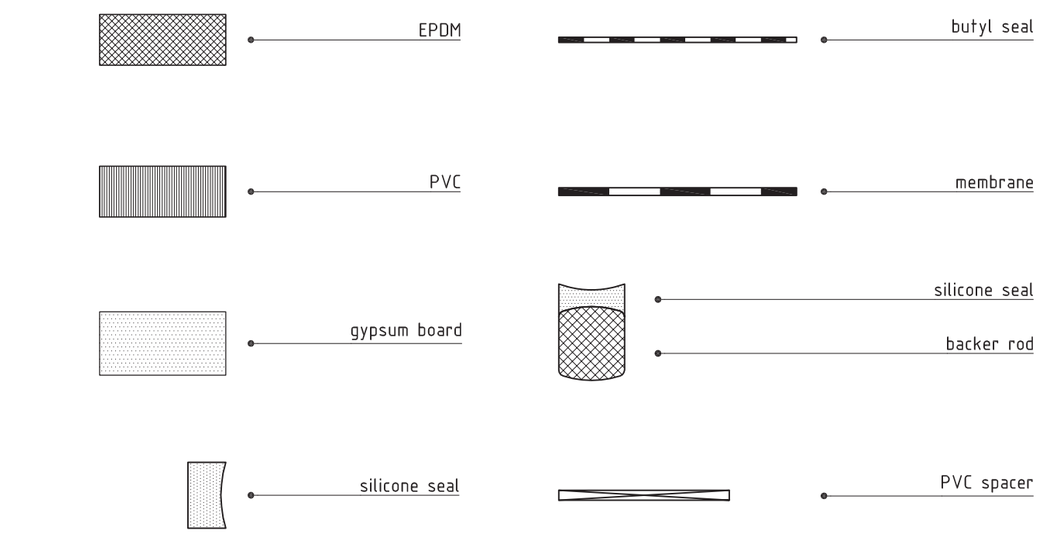
- EN 12020 (1÷2) – ALUMINIUM AND ALUMINIUM ALLOYS – EXTRUDED PRECISION PROFILES IN ALLOYS EN AW-6060 AND EN AW-6063
- EN 755 (1÷9)– ALUMINIUM AND ALUMINIUM ALLOYS – EXTRUDED ROD/BAR, TUBE AND PROFILES
- EN 573 (1÷3) – ALUMINIUM AND ALUMINIUM ALLOYS – CHEMICAL COMPOSITION AND FORM OF WROUGHT PRODUCTS
- 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

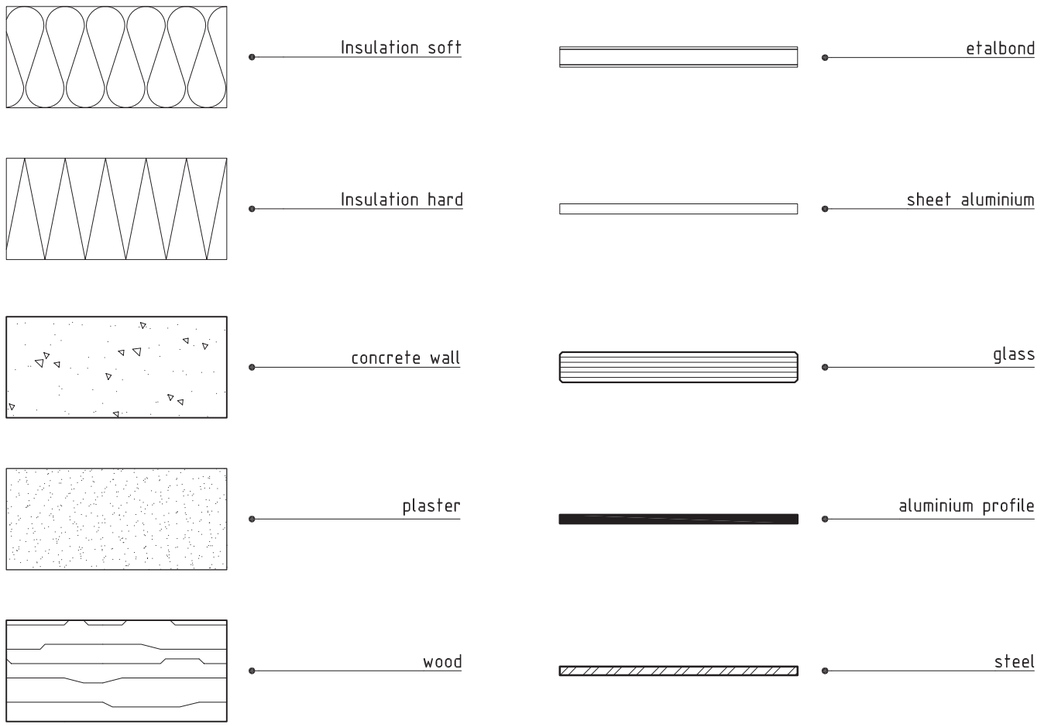
WINDOWS AND DOORS

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





LIABILITY

The stated data and calculating methods are provided by ETEM as a guideline only.
The information given in this catalogue does not substitute all applicable regulations – Eurocodes, harmonized European standards, national or regional building codes.

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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