



PLASPEN

UPVC WINDOW & DOOR SYSTEMS

TECHNICAL CATALOG

□ PP 240

GENERAL INFORMATION

TECHNICAL SPECIFICATIONS OF PROFILES

REINFORCEMENT PROFILES

ASSEMBLY OF PROFILES

ACCESSORIES

GENERAL INFORMATION

Exclusive specifications and benefits of UPVC doors and windows:

New UPVC windows with multi-glazed glasses are construction materials that are simply applicable with the common walls and, even, improve their functions.

The UPVC windows are easily usable, nicely depicted and in accordance with the above mentioned information, have a high grade of thermal and low sound conduction insulation.

The technical specifications of the PP624 profile series, submitted the evidence and highly efficient documents of these products to the purchasers.

1. High grade of thermal transfer resistance and low sound-conduction capability of UPVC profile, creates comfort inside. Temperature-exchange resistance for the UPVC frame profile is equal to 0.93m², grade C/W (class1), for the UPVC sash profile is equal to 0.88 m², grade C/W (class1). prevention of the infiltration of the sound of traffic flow is also 35 decibels (in class B).
2. The special specifications of manufacturing UPVC profiles, provide the possibility of numerous manufacturing of different types of windows with multi-mode sliding systems, not only with using the standard essentials but also with anti-theft equipments, these profiles are suitable for the double-glazed glasses up to 32mm in thickness.
3. Galvanized reinforcements profile is contrived in order to increase the static strength inside the frame,sash and mullion profile.
4. The cross-sectional shape of the width of the profiles and the thickness of the UPVC networks guarantee the strength of the welded profiles (weld 90°c or weld in shape of V).
5. Special canal for installing locking mechanism (13 mm) provides the possibility of installation for amplifying equipment, therefore, the security and anti-theft characteristics increases in these products
6. Complete removal of undesirable moisture for use in seals and rubber gasket.
7. Height of the part that glass is contrived to protect the edges of the object from the Ultraviolet-Ray and UVB-Ray. Moreover, it makes the possibility of darkening and cooling of the indoor space minimum.
8. Double seal (outdoor and indoor), prevents excessive dryness and provides maximum protection against the wind and rain and prevents freezing of the pipes in below zero temperatures, therefore, it guarantees the resistance of temperature exchange and sound protection to be extremely high.

9. Applying high-standard UPVC raw-materials, guarantees the physical and chemical characteristics of the products produced from these raw productions. Durability in below zero temperatures, tensional strength, considerable toughness, thermal resistance, satisfaction level of quality and long life cycle are some of these characteristics.

10. UPVC profiles have health certificate for a wide range of users and are completely safe for the human health.

11. Because of the fireproof nature of the UPVC materials, UPVC profiles are incombustible. According to the fire-fighting certificate, UPVC profiles are in accordance with the fire-fighting rules and conforms to the combustibility rate G2 (limited ignition) and burning-rate B2 (medium-ignition).

12. It is possible to produce profile with any color spectrum and laminate coating.

13. The multi-glazed glass is the main part of the raw materials of UPVC windows. Based on the technical test of life cycle of the multi-glazed glasses, the longevity of these glasses could be guaranteed upto 20 years. Application of multi-glazed glasses has many advantages, for instance: increasing the temperature-protection (B2), decreasing noisiness (reduction of audio-disturbance about 30-50 decibel), moreover, these glasses are anti-freeze and anti-steam (upto temperature 40°C).

New technology provides the possibility of manufacturing two-phase pressure insulated glasses and thereupon promotion of the quality and reliability. Suitable function of UPVC door or window is not only limited to the technical features or the quality of applied necessities but also is dependent on the montage accuracy. The Experienced and Skillful manufacturers use new connections in manufacturing the products. The relation between windows and various opening systems has its own specifications and special connections. Based on the purchaser's request, creating exclusive user connections is possible (Reinforcement of heat and thermal insulation or water-proofing). UPVC profiles surfaces don't require being covered with color-layer and they are easy to protect. Because of being smooth and having polished surface, dust does not accumulate on the profiles. The UPVC windows that successfully have been installed and operated are very suitable insulators against the environmental conditions for the residential and administrative complexes. However, this insulation leads to excessive moisture. Sometimes, this results in wet windows and the walls, especially in the cases of lack of a good ventilation inside the house. One of the actions that are applicable to prevention in this cases, is repairing the ventilation with using the tools that make the air-stream limited. The UPVC windows with the mentioned tools could create a passing air-stream with the size of 1.2 mm., and, meanwhile, preventing air-dryness and condensation in the inside space.

For increasing the longevity of UPVC windows, it's necessary to take the following preventive measures once in a year:

1. All the moving components should be lubricated by appropriate lubricants.
2. Seals must be checked to make sure that they are in an ideal mood, it shall be more attention to the tires of the glass part (all the damaged tires should be replaced).
3. Water evacuation grooves (grooves of rain water), must be checked, and if it is necessary, they should be cleaned.
4. Outer surface of the UPVC profiles should be cleaned with water, and if it is needed, with detergent. Avoid using oil, petrol and other similar materials which are oil-based.

Heat Protection:

The UPVC windows guarantee a high level of thermal protection in order to ensure inside comfort. PP624-240 Multi-hole profiles, they provide excellent heat insulation. The rate of these profiles is 1.3 Wt. /m².

Sound Protection:

Audio-insulation depends on the manufacturing factors of UPVC windows to a large extent, nevertheless, not only the frame, sash and mullion profile, but also the type of glass and execution of its function has a high importance.

Humidity and Ventilation:

The UPVC windows also provide air-circulation in the buildings. Room ventilation is necessary in order to ensure keeping fresh air inside (in order to eliminating the causes of pollution like CO₂) and to create natural heat ventilation (stream outlet). The human beings are one of the main sources of moisture in the building. The moisture increases with their breathing. It is completely obvious that, breathing of this air once happened and then the moisture should get out of the room, otherwise, could lead to density of humidity in the internal surface of the windows and the edge of the walls.

Constant humidity concentration in the air could lead to growth of fungus on the furniture, walls and ceiling. UPVC profiles are suitable heat protectors and usually don't sweat or freeze.

The specifications of the UPVC Profiles provide using the standard and anti-theft equipments and essentials. Moreover, filling the holes and grooves doesn't need any special equipment.

Maintenance of the UPVC Profile:

Maintaining the UPVC profiles is very easy. They don't need any special repair or care but several simple rules should be considered in order to save the life cycle of these windows.

Annual care of the UPVC windows:

Periodically, check the outer side of the windows and if necessary, clean the outer sides. Water drain slots must be checked and if necessary, they must be patched. The caulk rubbers should be checked. Pay attention to the rubbers which are associated with glass and ,in case of damage, they must be changed. All the mobile components must be lubricated using suitable lubrication.

Cleaning of UPVC Profiles:

The UPVC profiles can be cleaned with regular water and detergent. Do not use any detergent that can cause wear, including powerful organic compounds.

The dust from the production process as well as the installation of the window on which it is accumulated can easily be eliminated by ordinary water and warm water. The use of oil, petrol and other substances should be strictly avoided.

Damages caused by machining and unwanted holes can be repaired with special adhesives and then filled. Different filling tools can be used for this purpose, but the filled space should be as small as possible. The filled surface should then be polished using a roller. Surface roughness and small scratches can be eliminated by finishing the surface.

Damaged UPVC profiles caused by machining can be repaired with parts of the same damaged profile. A small piece of the same profile should be turned into dough in the boiling process with hot air and to be used to cover the damaged part. This operation must be performed after all the steps mentioned above have been applied.

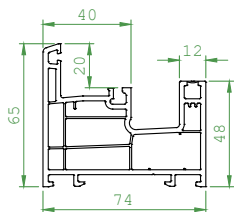
Well-installed UPVC windows provide a high degree of insulation against environmental factors. However, this insulation leads to excessive moisture. Occasionally, the lack of proper ventilation leads to wet walls and windows.

The only way to prevent this condensation is to improve ventilation conditions. Improvement of ventilation by means of fittings that limit the air flow to a limited extent. The UPVC windows with the mentioned specifications can create as much as 1-2 mm airflow space and prevent indoor air from condensation.

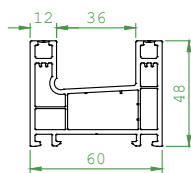
Specification of PLASPEN UPVC Profiles:

PLASPEN UPVC Windows are produced using high-quality PVC compound in the best structural condition. In the production of PLASPEN profiles, the production method is used in extrusion mode. Continuous monitoring of production not only ensures the dimensional quality but also the quality of the produced profiles. Production profiles are in accordance with the RAL RG 716/1 requirements.

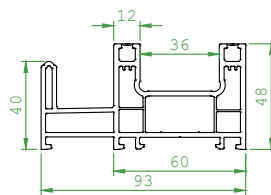
| | |
|--|--|
| UPVC compound used in production: | ADOPEN UPVC compound in compliance with EN 7748 |
| Density: | 1.46 g/cm ³ |
| Impact Strength (up to -40 °C): | no crack or rupture |
| Resistance to windloads: | Class C4/B4 according to EN 12210 |
| Resistance to driving rain: | Class 9A according to EN 12208 |
| Permeability of air: | Class 4 according to EN 12207 |
| Tensile strength: | ≥ 40 N/mm ² |
| Elasticity of Modulus: | ≥ 2500 N/mm ² |
| Coefficient of linear thermal expansion: | $0.8 \cdot 10^{-4}$ K ⁻¹ |
| Thermal conductivity: | 0.16 W/mK |
| Specific resistance: | 1016 Ω cm |
| Fire behaviour: | self extinguishing, flame retardant |
| Resistant to: | acids, salts, salt solutions, bases, sea water, benzene, oil, lime, cement, fumes of all sorts |
| Wall thickness: | up to 2.5 mm |
| Possible processing techniques: | boring, milling, sawing, filing, welding, grinding |
| Corner joints: | welded |
| Types of openings: | turn, turn and tilt, tilt, sliding, folding |
| Possible glass types: | insulating or non-insulating glass types with all common glass thicknesses between 4 and 32 mm. |
| Seals: | EPDM-TPV and TPE |
| Seal Color: | BLACK |
| Main application areas: | residential houses, high-rise buildings, schools, administrative buildings, industrial buildings |
| Coefficient of heat transfer: | k = between 2.6 - 1.4 W/m ² K depending on the insulating glass used. |



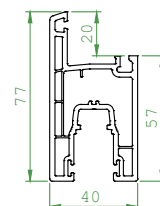
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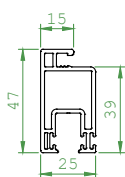
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Code: 41340-01000



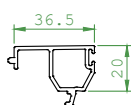
Sliding Fly Screen Frame Profile
Code: 41340-01100



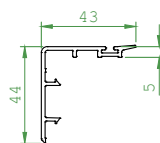
Sliding Sash Profile
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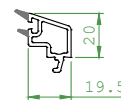
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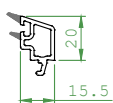
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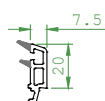
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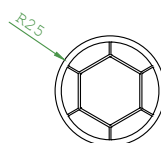
Single Glazed Bead Profile (6 mm)
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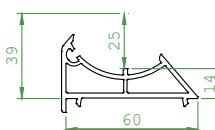
Single Glazed Bead Profile (10mm)
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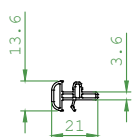
Double Glazed Bead Profile (18mm)
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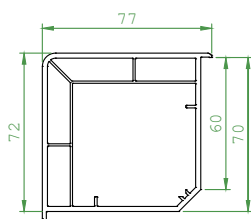
Pipe Angular Profile
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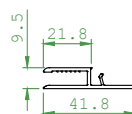
Angled Pipe Adaptor Profile
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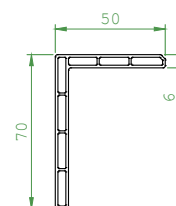
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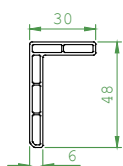
Corner Profile
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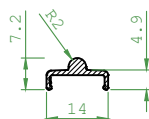
Holder Profile
Code: 40106-04000



Sill (border) Profile 50x70 mm
Code: 40108-02000

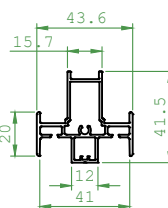


Sill (border) Profile 30x48 mm
Code: 40108-01000

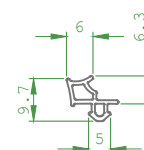


Scale= 2:1

Aluminum Rail Profile
Code: 34025-11030



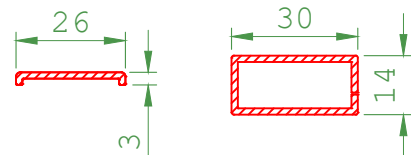
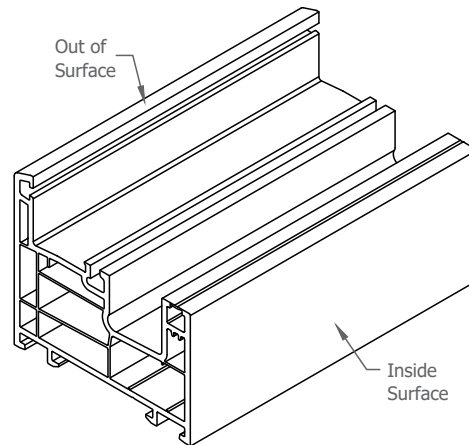
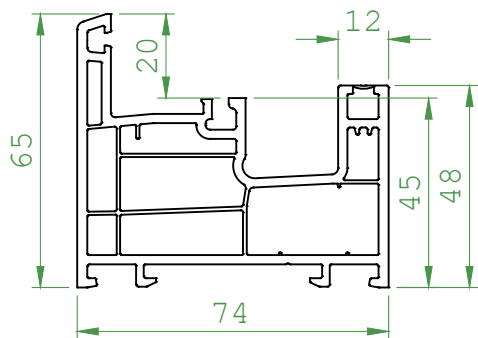
Aluminum Adaptor Profile
Code: 34025-12030 (White)



Rubber seals (Universal) :
Code: 34024-11010

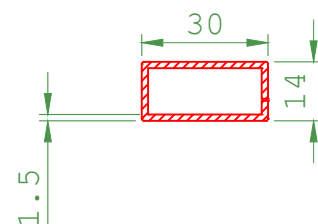
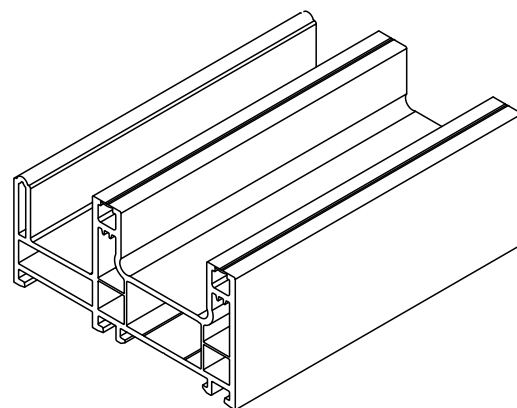
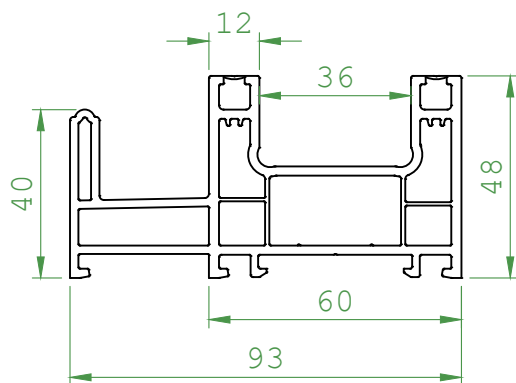


Sliding Frame Profile (Single Rail)



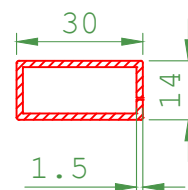
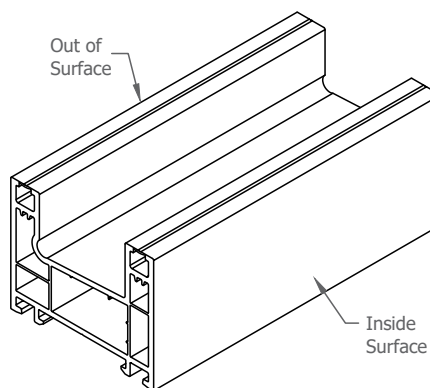
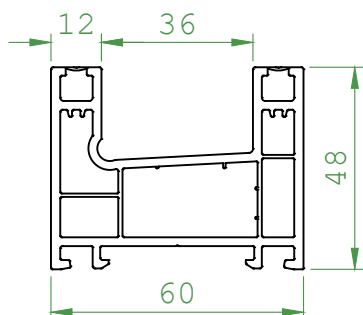
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| | Brown Laminate / Golden Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
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Sliding Fly Screen Frame Profile (Double Rail)



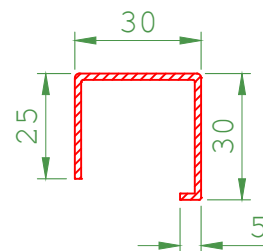
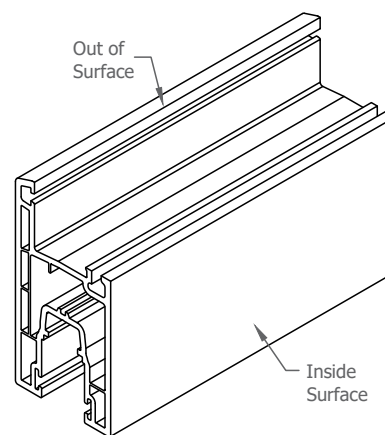
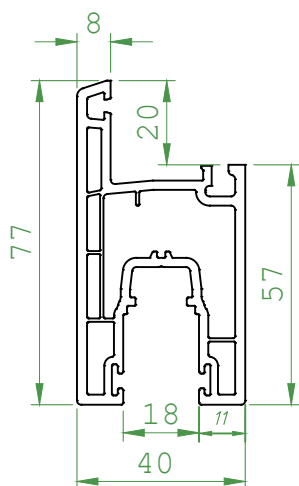
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| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
| ○ Without Rubber ● With Rubber | | | | | |

Sliding Frame Profile (Double Rail)



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| | Brown Laminate / Golden Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
| ○ Without Rubber ● With Rubber | | | | | |

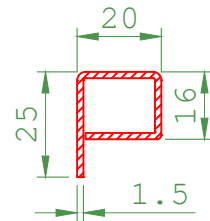
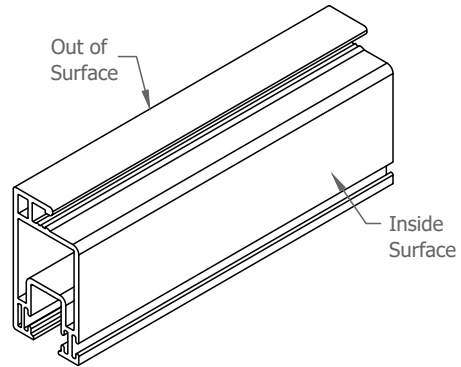
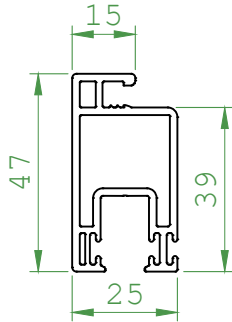
Sliding Sash Profile



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| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
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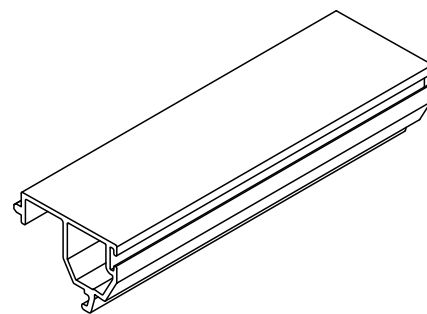
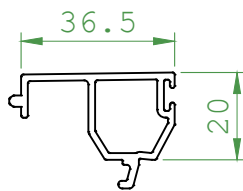


Sliding Fly Screen Sash Profile



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|-----------------------------------|---------------------------------|---|--------------|----------|----------|
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| | Brown Laminate / Golden Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
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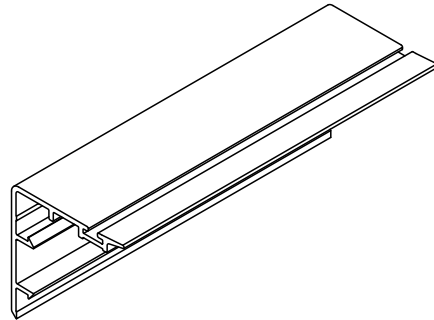
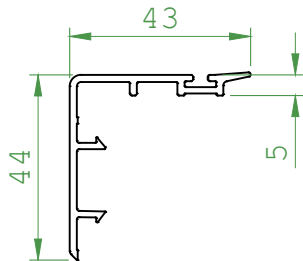
Frame Cover Profile (Single Rail)



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| | Brown Laminate / Golden Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
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Sash Cover Profile

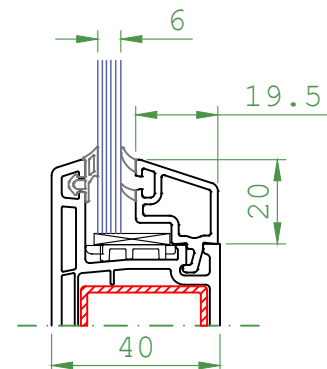
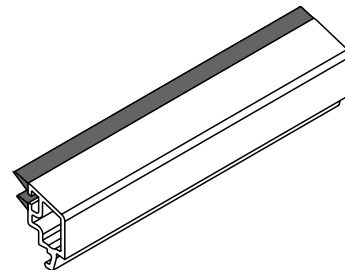
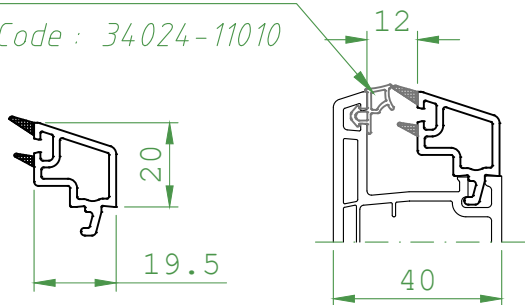


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| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
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Single Glazing Bead Profile (4-6 mm)

Rubber Gasket EPDM

Code : 34024-11010

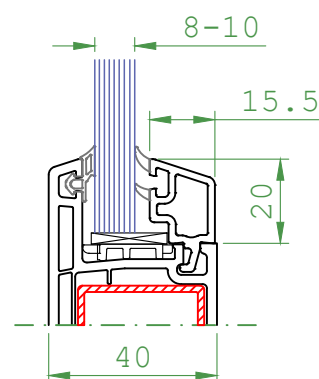
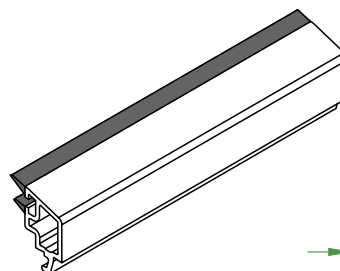
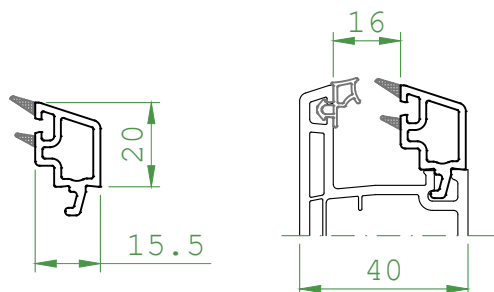


| | | | | | |
|----------------------------------|---------------------------------|---|--------------|----------|----------|
| Profile Code | White / Without Rubber | ○ | ***** | Inside | Outside |
| | White / With Rubber | ● | 40403- 96200 | Lmainate | Lmainate |
| | Brown Laminate / Golden Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
| ○ Without Rubber ● With Rubber | | | | | |

Galvanized Reinforcing Profile

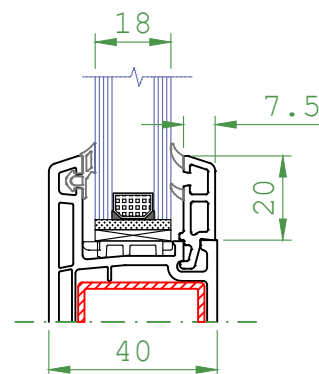
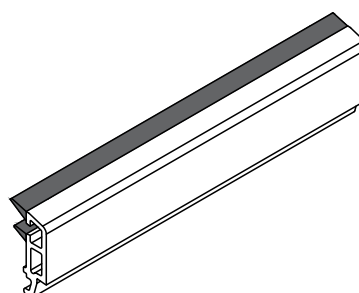
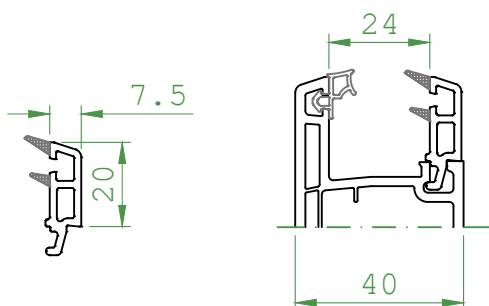


Single Glazing Bead Profile (10 mm)



| | | | | | |
|--------------------------------|---------------------------------|---|--------------|-----------------|------------------|
| Profile Code | White / Without Rubber | ○ | ***** | Inside Lmainate | Outside Lmainate |
| | White / With Rubber | ● | 40403- 96500 | | |
| | Brown Laminate / Golden Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
| ○ Without Rubber ● With Rubber | | | | | |

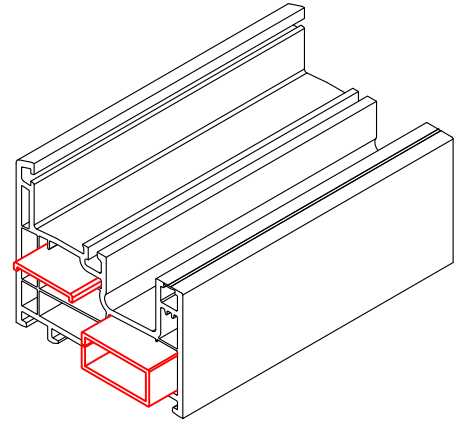
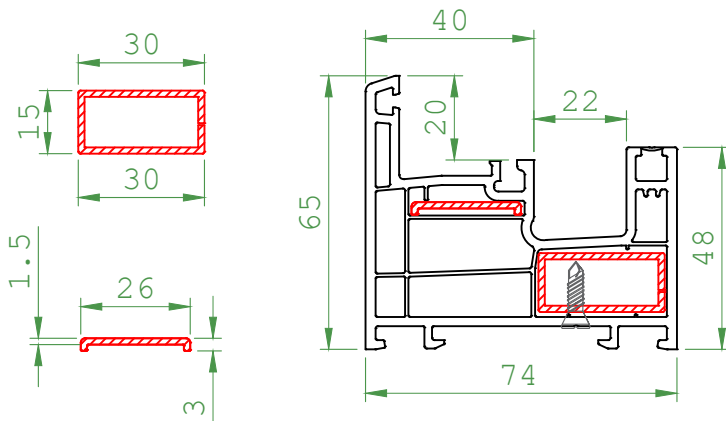
Double Glazing Bead Profile (18 mm)



| | | | | | |
|--------------------------------|---------------------------------|---|--------------|-----------------|------------------|
| Profile Code | White / Without Rubber | ○ | ***** | Inside Lmainate | Outside Lmainate |
| | White / With Rubber | ● | 40403- 96300 | | |
| | Brown Laminate / Golden Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Dark Oak | ● | ***** | ***** | ***** |
| | Brown Laminate / Charcoal Brown | ● | ***** | ***** | ***** |
| | Gray Laminate / Wintech Gray | ● | ***** | ***** | ***** |
| ○ Without Rubber ● With Rubber | | | | | |



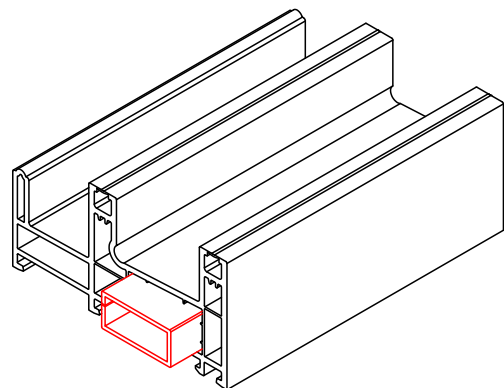
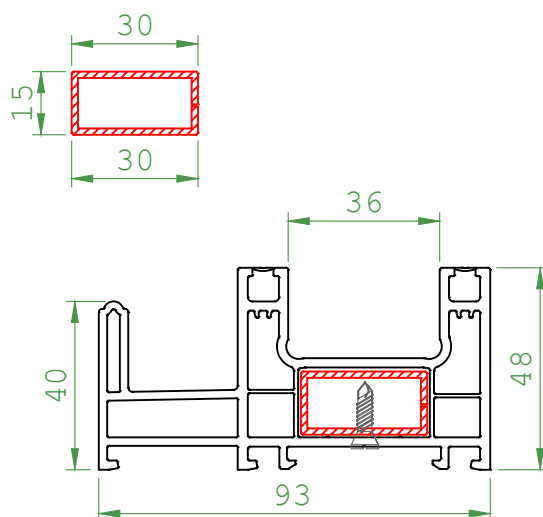
Galvanized Reinforcing Profile Systems



| Thickness | $I_x \text{ (cm)}^4$ | $I_y \text{ (cm)}^4$ | Area | Weight |
|-----------|----------------------|----------------------|-------|-------------|
| 1.25 mm | 0.38 | 1.15 | 103 | 808 gr /mt |
| 1.5 mm | 0.44 | 1.34 | 123 | 965 gr /mt |
| 2 mm | 0.54 | 1.70 | 161.1 | 1264 gr /mt |

Reinforced profiles with a thickness of less than 1.25 mm are not approved.

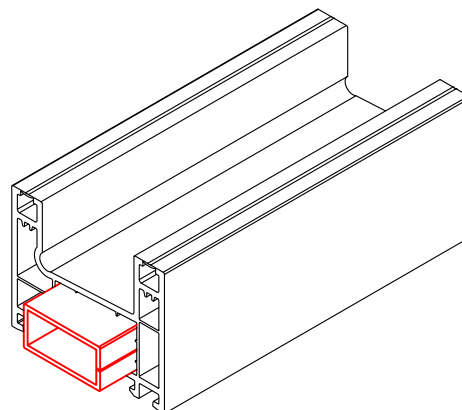
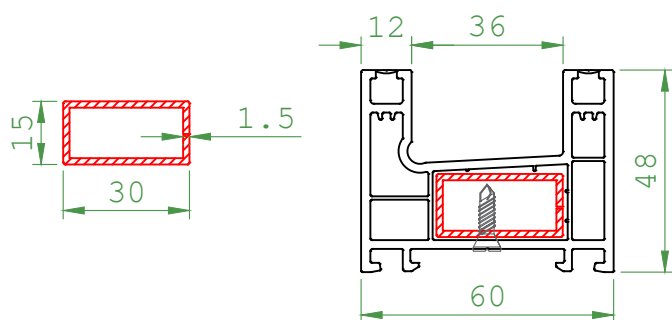
Galvanized Reinforcing Profile Systems



| Thickness | $I_x \text{ (cm)}^4$ | $I_y \text{ (cm)}^4$ | Area | Weight |
|-----------|----------------------|----------------------|-------|-------------|
| 1.25 mm | 0.38 | 1.15 | 103 | 808 gr /mt |
| 1.5 mm | 0.44 | 1.34 | 123 | 965 gr /mt |
| 2 mm | 0.54 | 1.70 | 161.1 | 1264 gr /mt |

Reinforced profiles with a thickness of less than 1.25 mm are not approved.

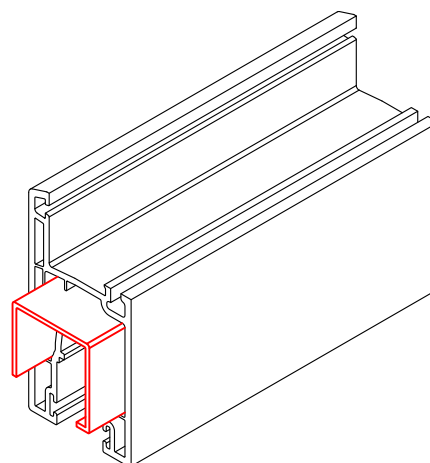
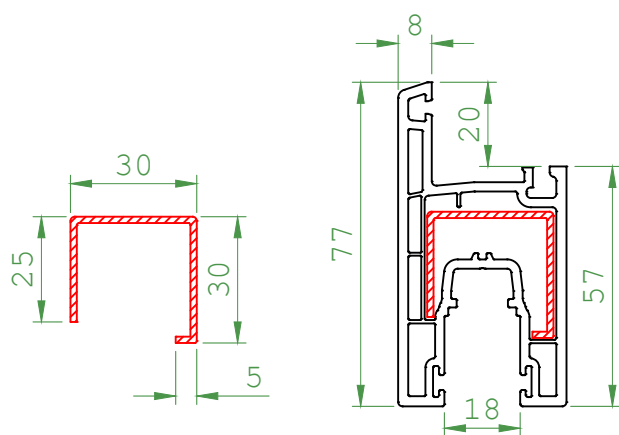
Galvanized Reinforcing Profile Systems



| Thickness | $I_x \text{ (cm)}^4$ | $I_y \text{ (cm)}^4$ | Area | Weight |
|-----------|----------------------|----------------------|-------|-------------|
| 1.25 mm | 0.38 | 1.15 | 103 | 808 gr /mt |
| 1.5 mm | 0.44 | 1.34 | 123 | 965 gr /mt |
| 2 mm | 0.54 | 1.70 | 161.1 | 1264 gr /mt |

Reinforced profiles with a thickness of less than 1.25 mm are not approved.

Galvanized Reinforcing Profile Systems

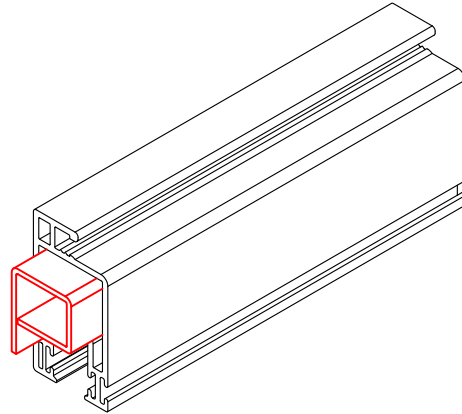
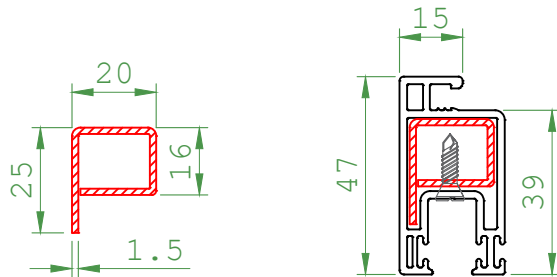


| Thickness | $I_x \text{ (cm)}^4$ | $I_y \text{ (cm)}^4$ | Area | Weight |
|-----------|----------------------|----------------------|-------|-------------|
| 1.25 mm | 0.91 | 1.71 | 105.5 | 828 gr /mt |
| 1.5 mm | 1.07 | 2.01 | 125.8 | 987 gr /mt |
| 2 mm | 1.37 | 2.56 | 165.4 | 1298 gr /mt |

Reinforced profiles with a thickness of less than 1.25 mm are not approved.



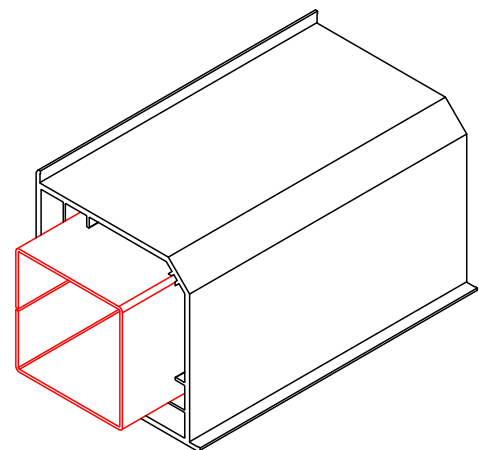
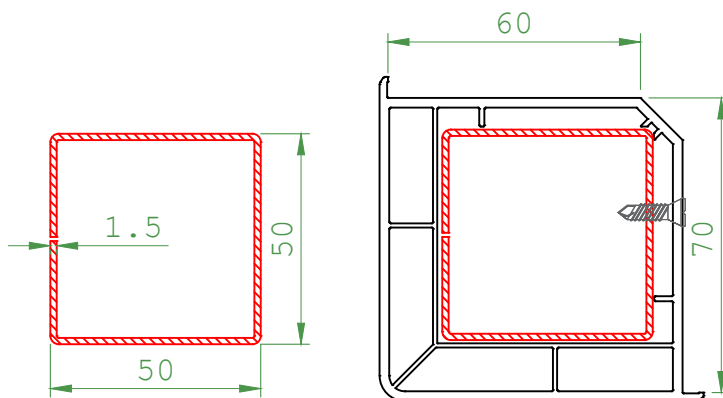
Galvanized Reinforcing Profile Systems



| Thickness | $I_x \text{ (cm)}^4$ | $I_y \text{ (cm)}^4$ | Area | Weight |
|-----------|----------------------|----------------------|-------|-------------|
| 1.25 mm | 0.37 | 0.61 | 92 | 722 gr /mt |
| 1.5 mm | 0.43 | 0.71 | 109.2 | 857 gr /mt |
| 2 mm | 0.54 | 0.9 | 142.5 | 1118 gr /mt |

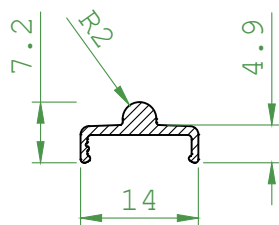
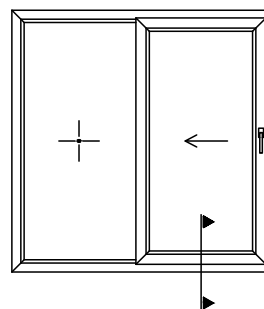
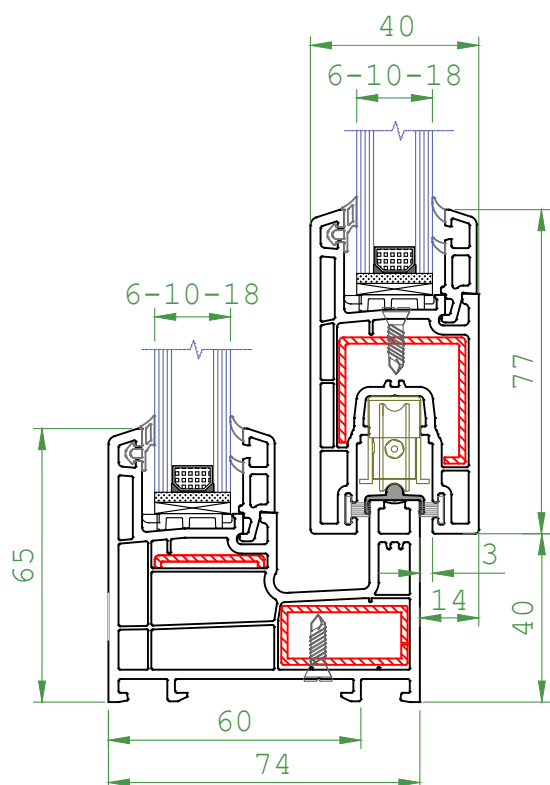
Reinforced profiles with a thickness of less than 1.25 mm are not approved.

Galvanized Reinforcing Profile Systems

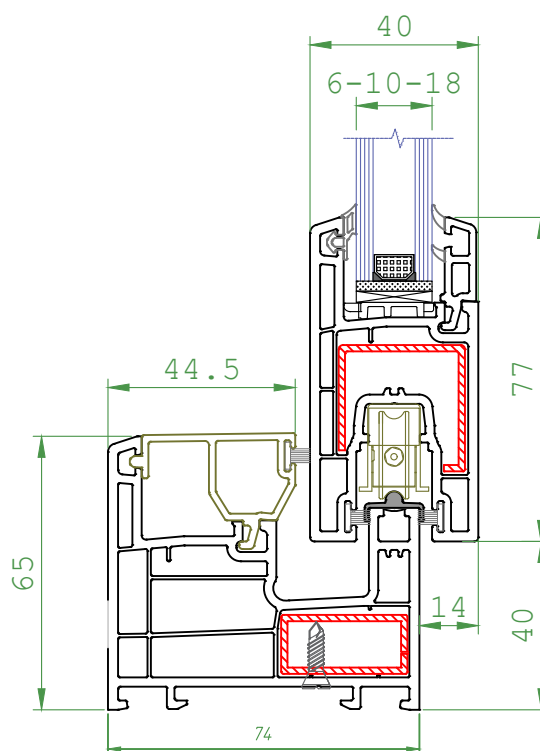
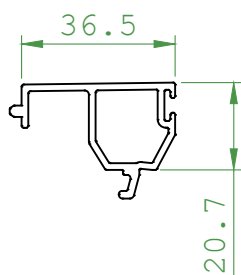


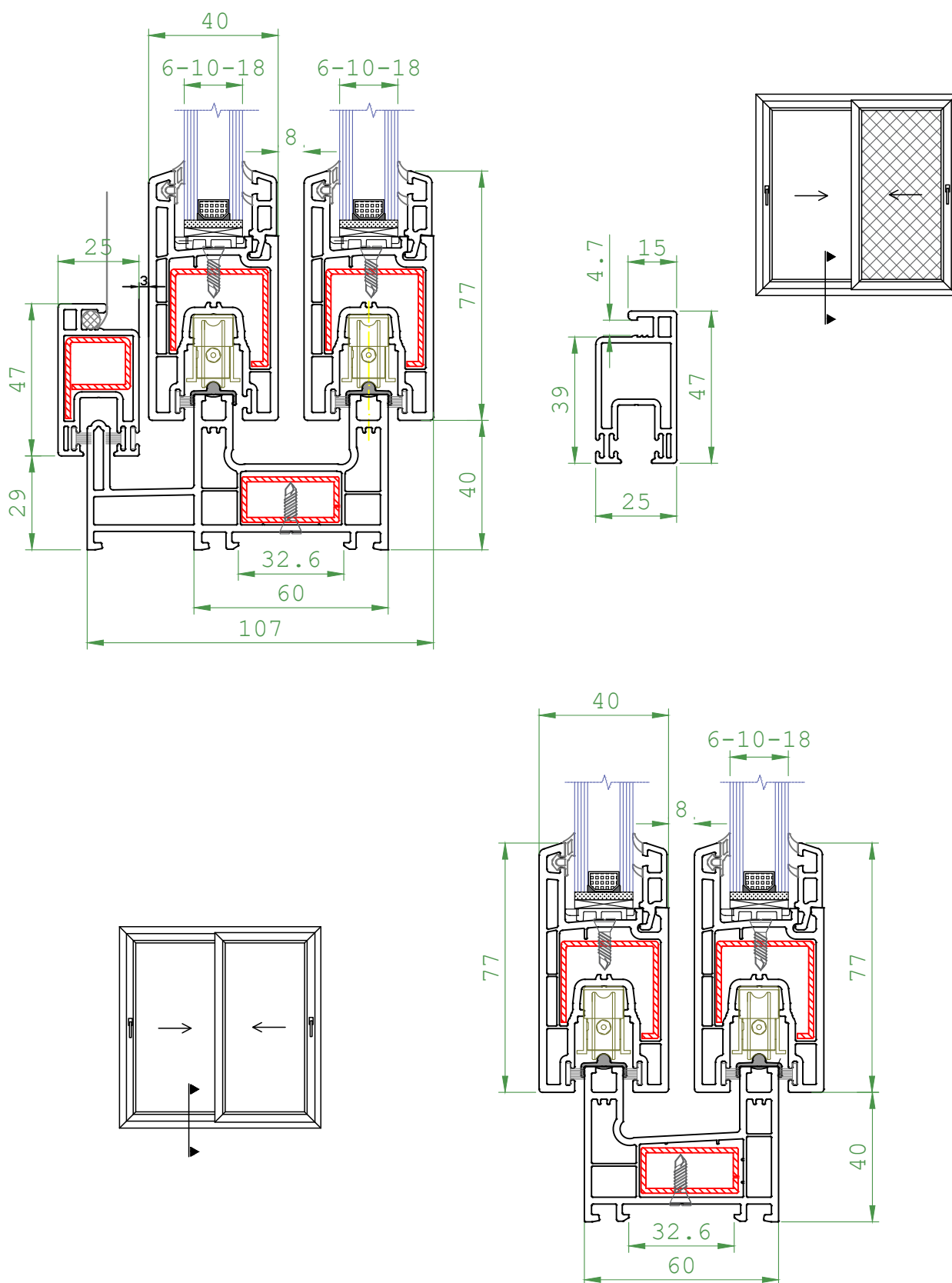
| Thickness | $I_x \text{ (cm)}^4$ | $I_y \text{ (cm)}^4$ | Area | Weight |
|-----------|----------------------|----------------------|-------|-------------|
| 1.25 mm | 9.51 | 9.43 | 240 | 1884 gr /mt |
| 1.5 mm | 11.22 | 11.13 | 286.2 | 2246 gr /mt |
| 2 mm | 14.46 | 14.34 | 376 | 2951 gr /mt |

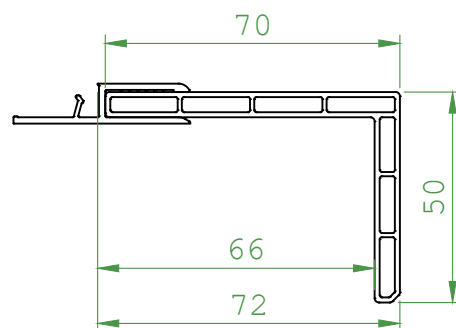
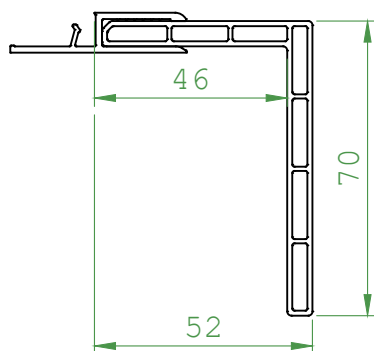
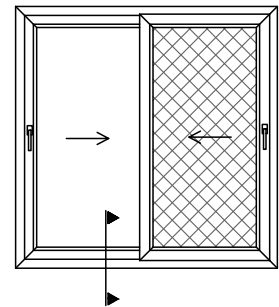
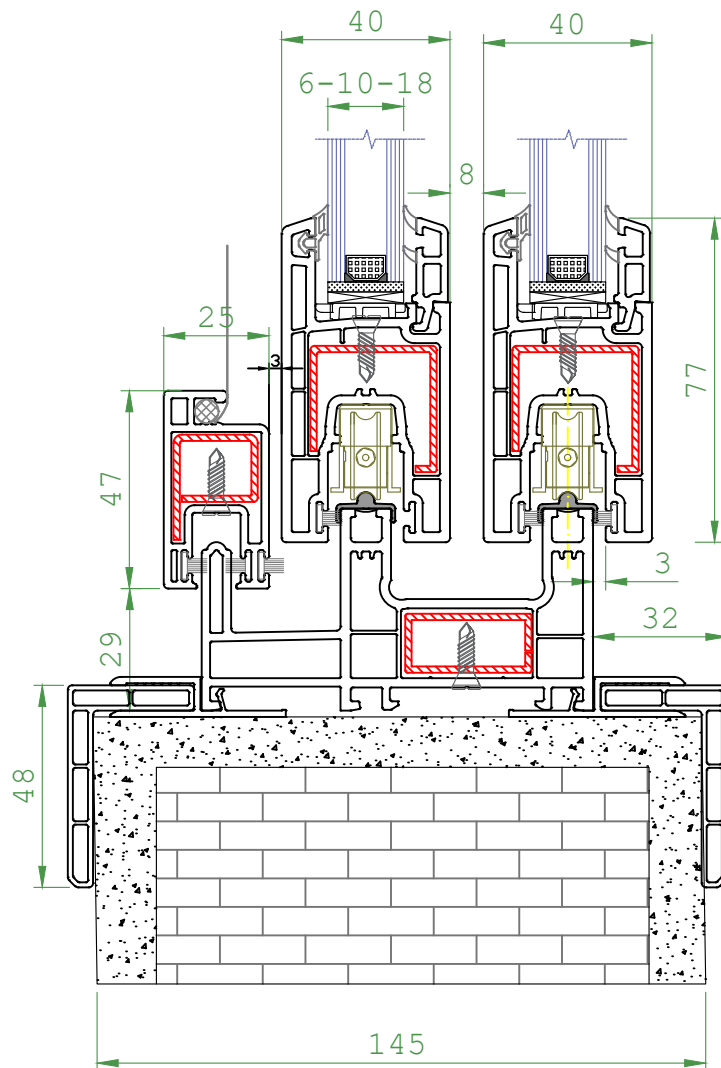
Reinforced profiles with a thickness of less than 1.25 mm are not approved.

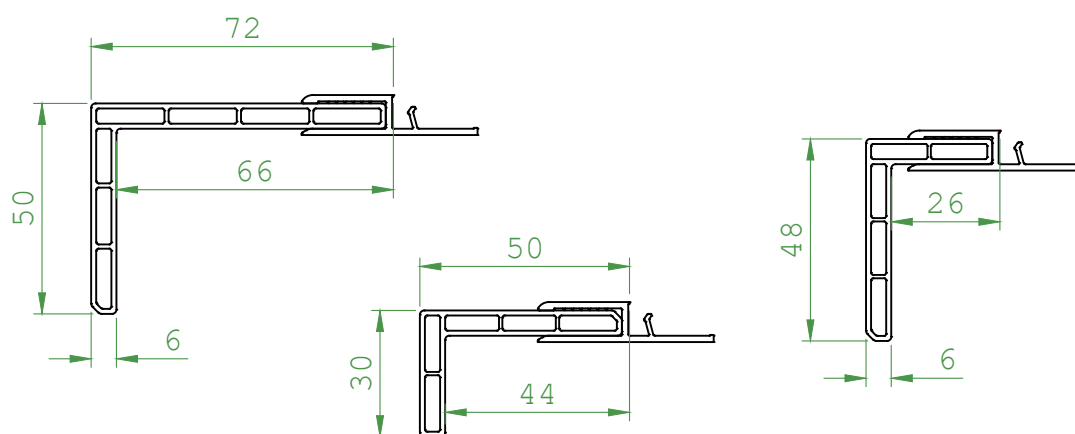
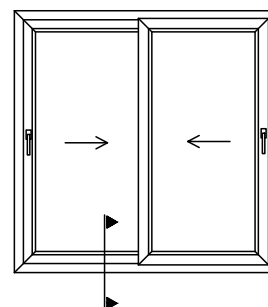


Scale= 2:1

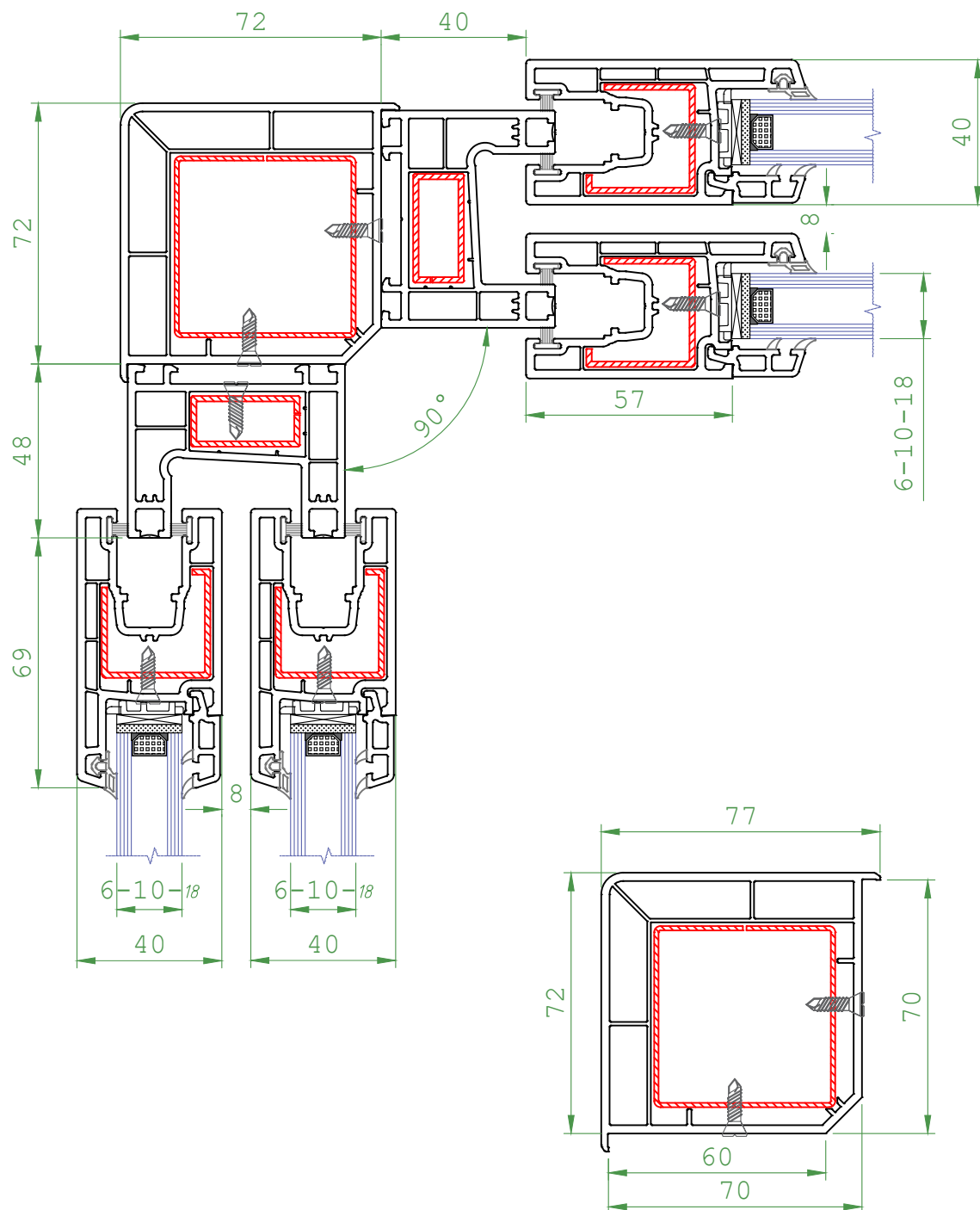


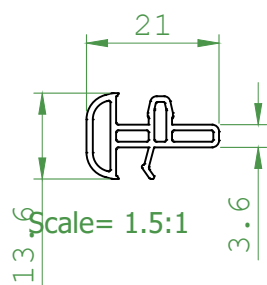
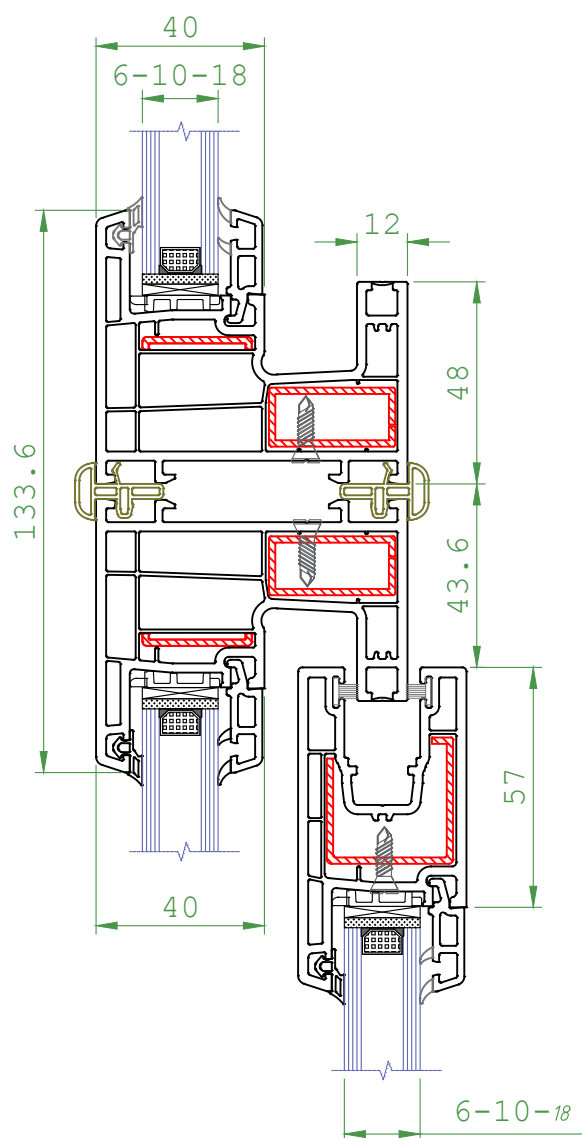




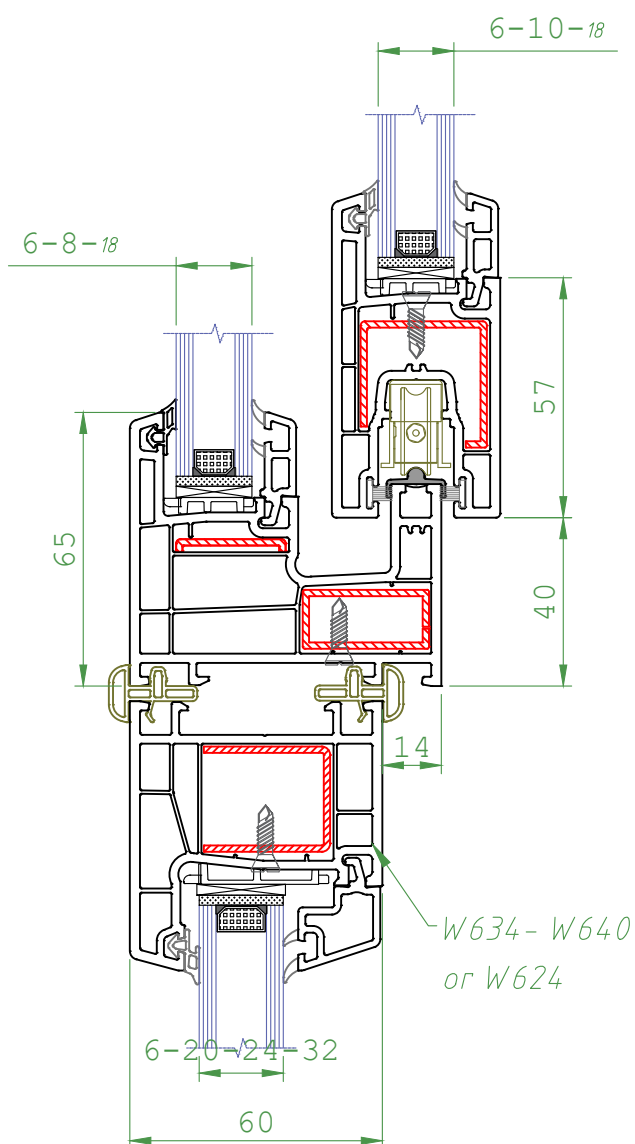








Scale= 1.5:1



W634- W640
or W624

