



Review of wooden and wood-alu systems in BERTRAND company



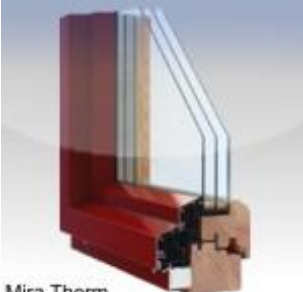



Wooden systems

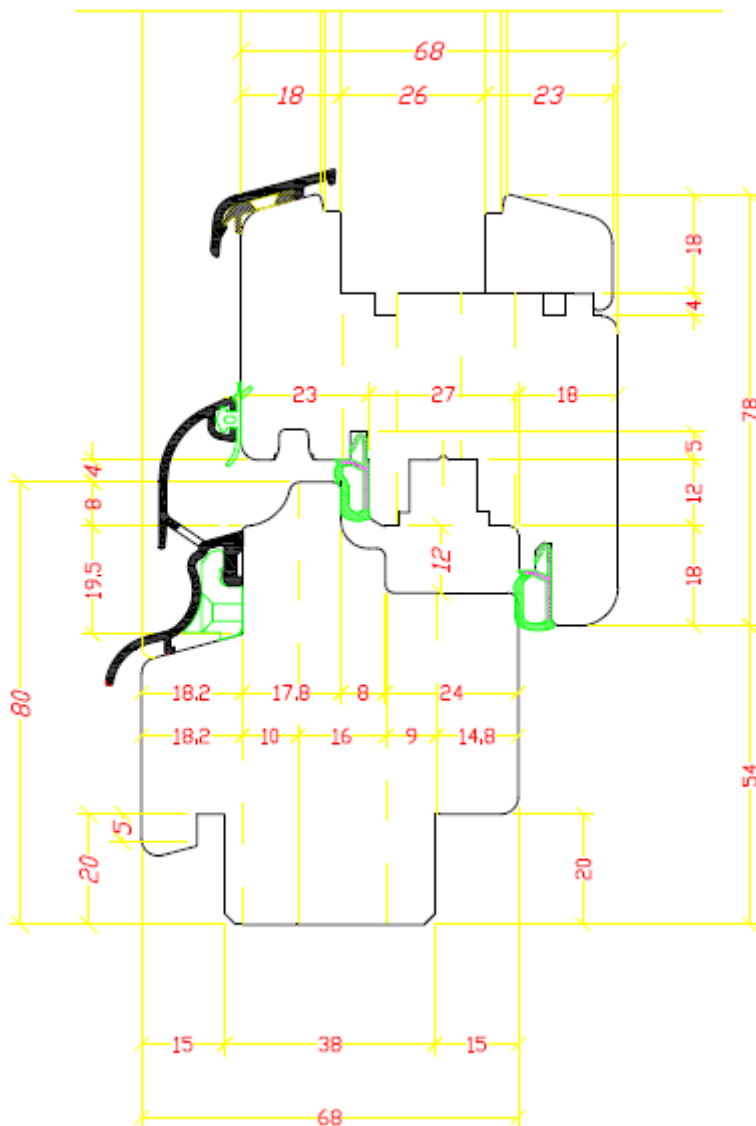
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Wood-alu systems

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Softline 68 Perfect



class
C5/C3



class
5A



class
4

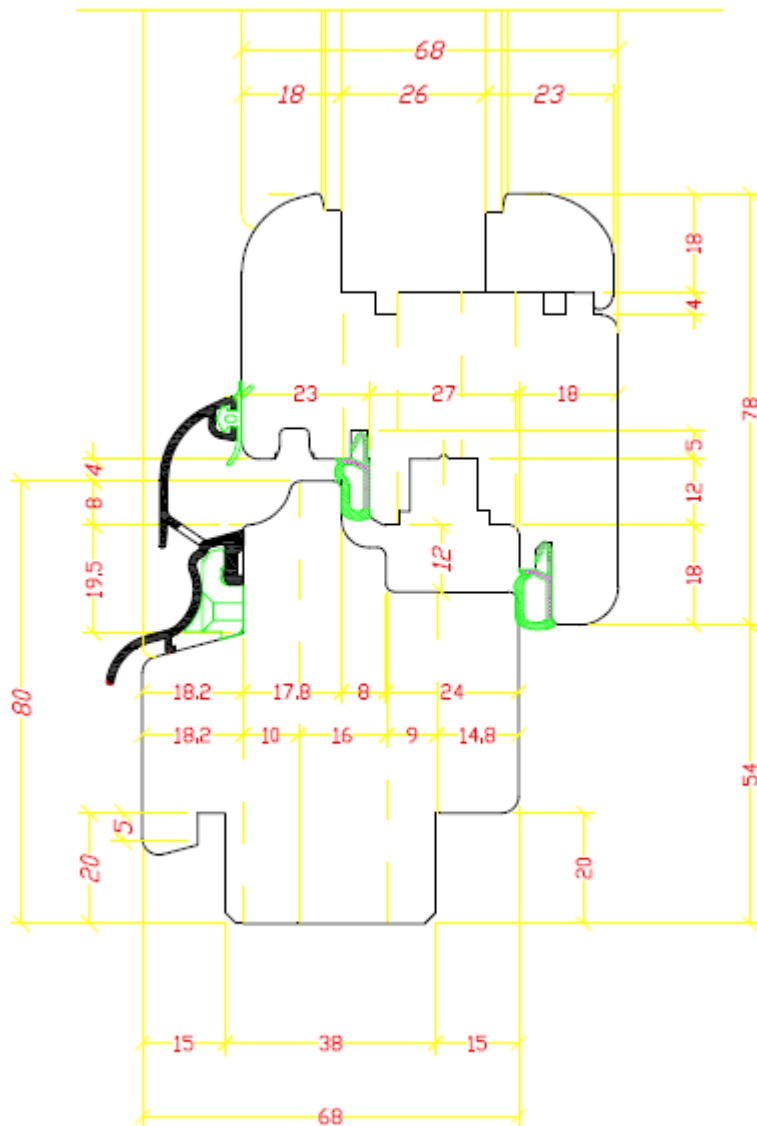


Uf=1,4*
*applies to
softwood

Specifications:

- simple modern shape
- 68 mm thickness
- glass thickness available 26 – 36 mm
- 2 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Softline 68 Elegant



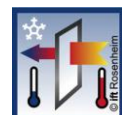
class
C5/C3



class
5A



class
4

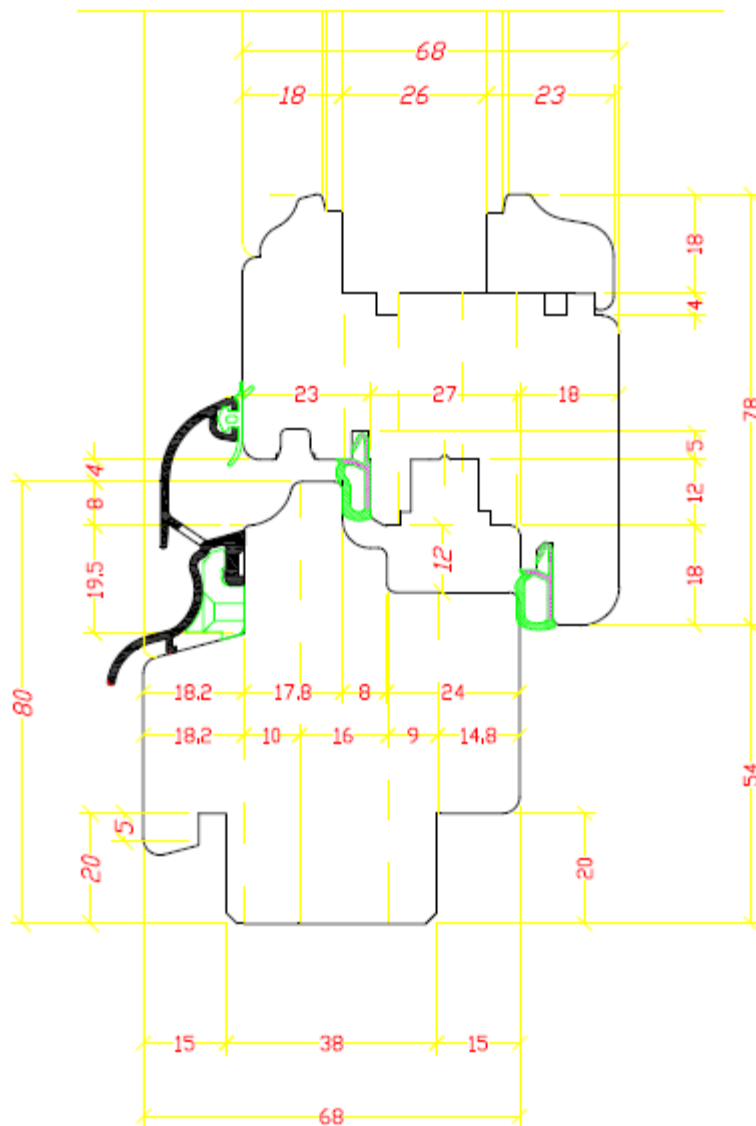


Uf=1,4*
*applies to
softwood

Specifications:

- smooth round shape
- 68 mm thickness
- glass thickness available 26 – 36 mm
- 2 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Softline 68 Prestige



class
C5/C3



class
5A



class
4

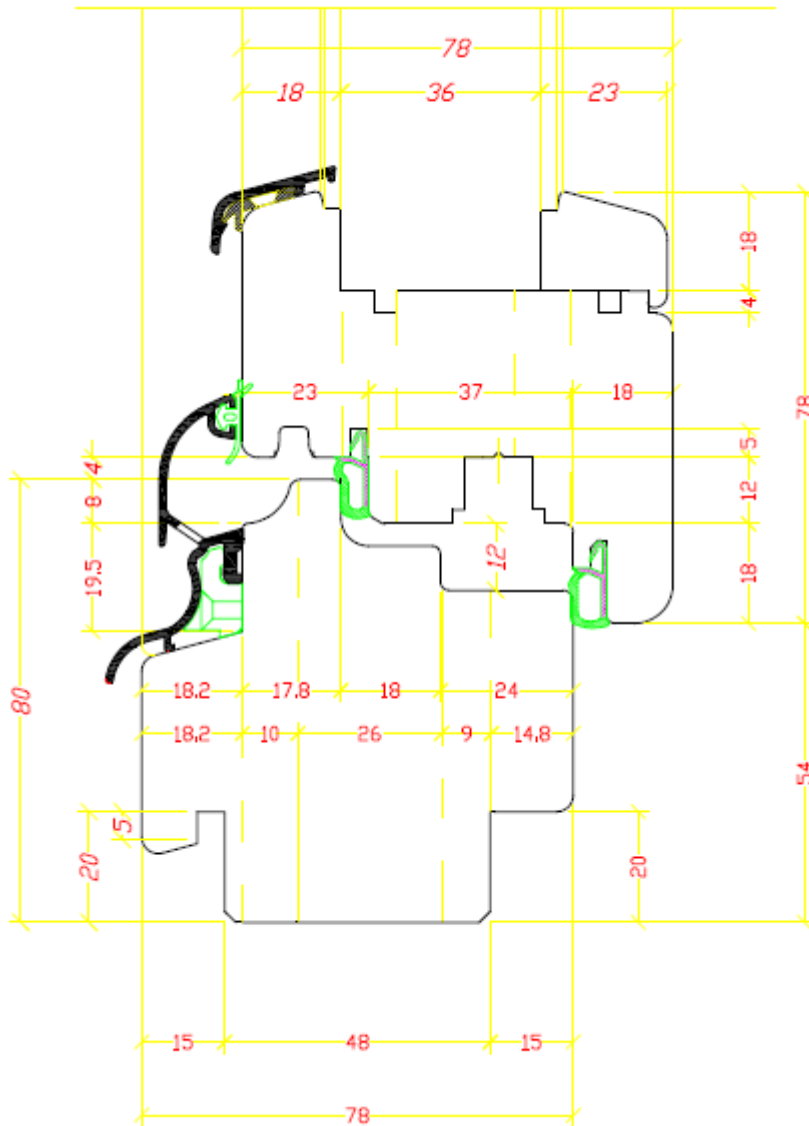


Uf=1,4*
*applies to
softwood

Specifications:

- historical design
- 68 mm thickness
- glass thickness available 26 – 36 mm
- 2 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Softline XL 78 Perfect



class
C4



class
9A



class
4

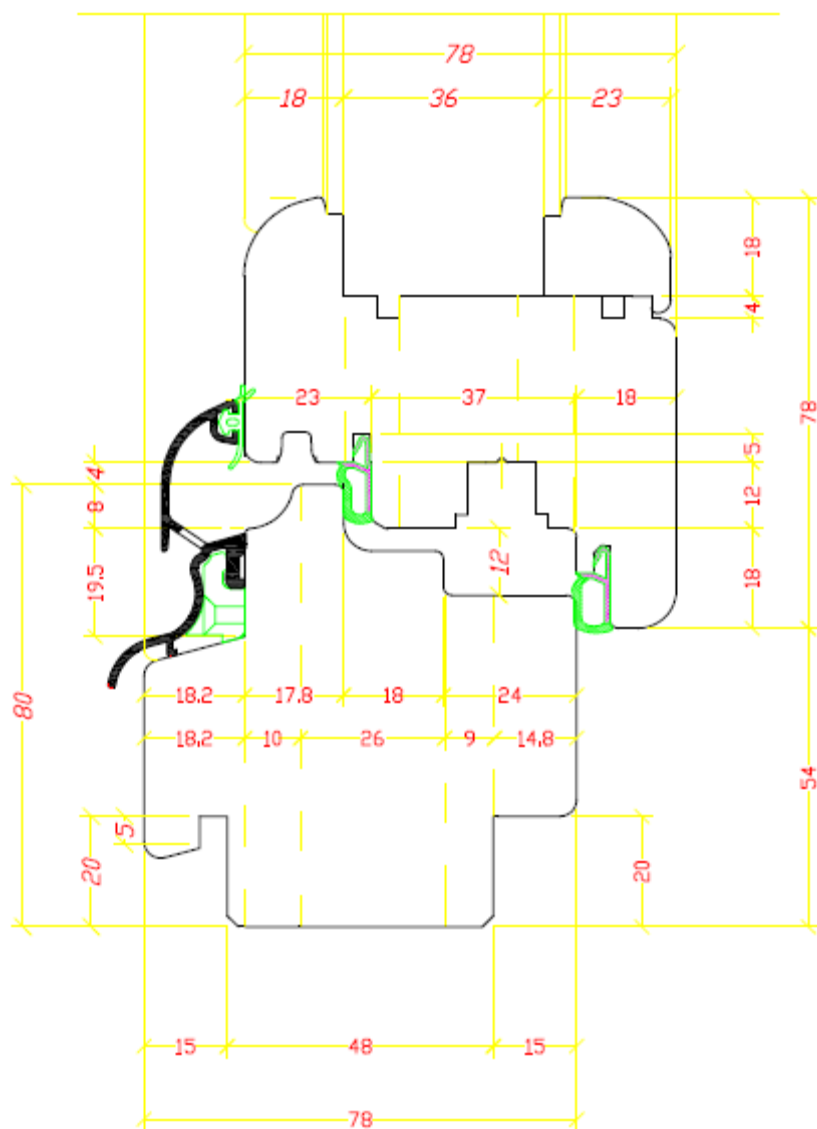


Uf=1,3*
*applies to
softwood

Specifications:

- simple modern shape
- 78 mm thickness
- glass thickness available 26 – 46 mm
- 2 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Softline XL 78 Elegant



class
C4



class
9A



class
4

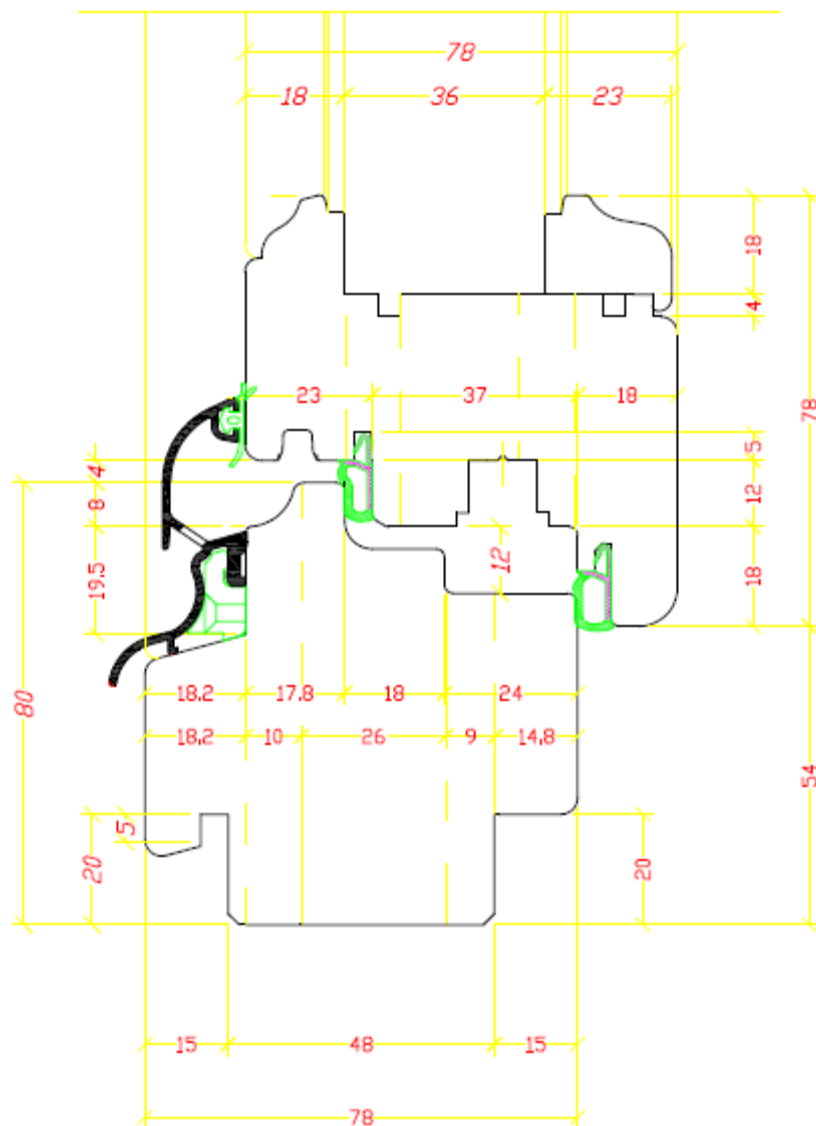


Uf=1,3*
*applies to
softwood

Specifications:

- smooth round shape
- 78 mm thickness
- glass thickness available 26 – 46 mm
- 2 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Softline XL 78 Prestige



class
C4



class
9A



class
4

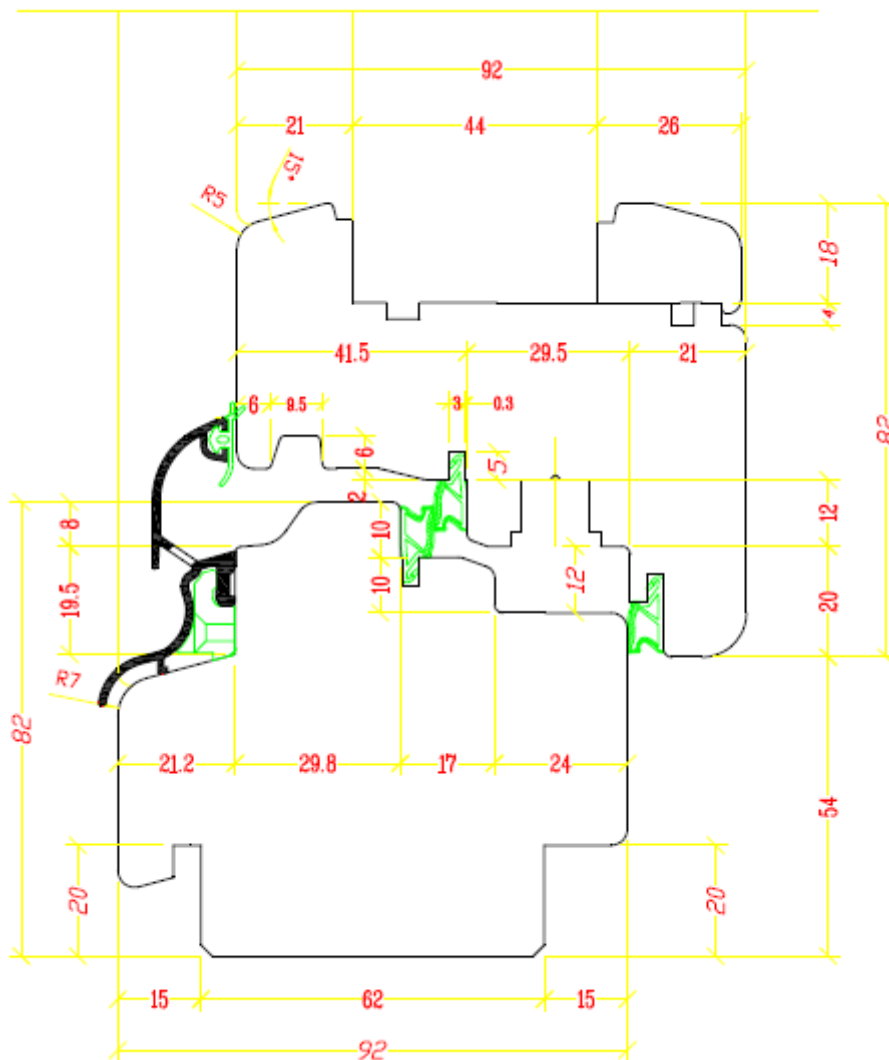


Uf=1,3*
*applies to
softwood

Specifications:

- historical design
- 78 mm thickness
- glass thickness available 26 – 46 mm
- 2 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Strongline 92 Master



class
C4/C2



class
E1350



class
4

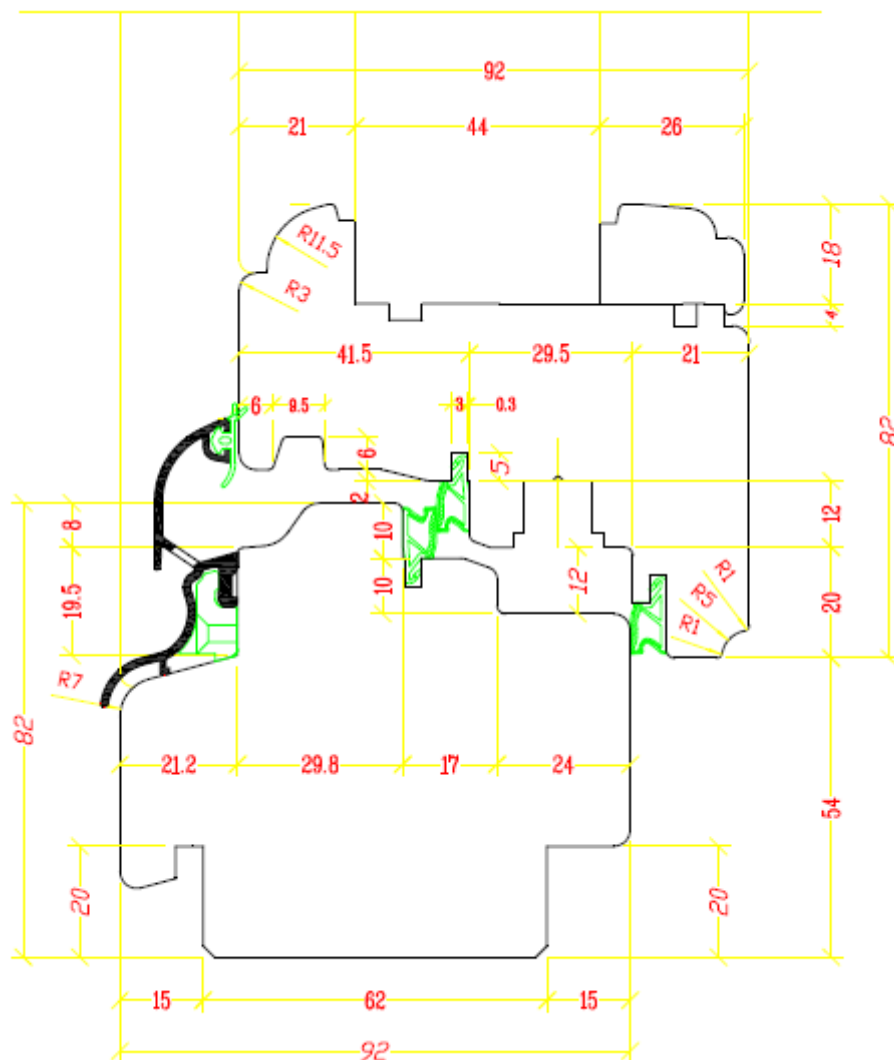


Uf=1,1*
*applies to
softwood

Specifications:

- simple modern shape
- 92 mm thickness
- glass thickness available 36 – 50 mm
- 4 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Strongline 92 Retro



class
C4/C2



class
E1350



class
4



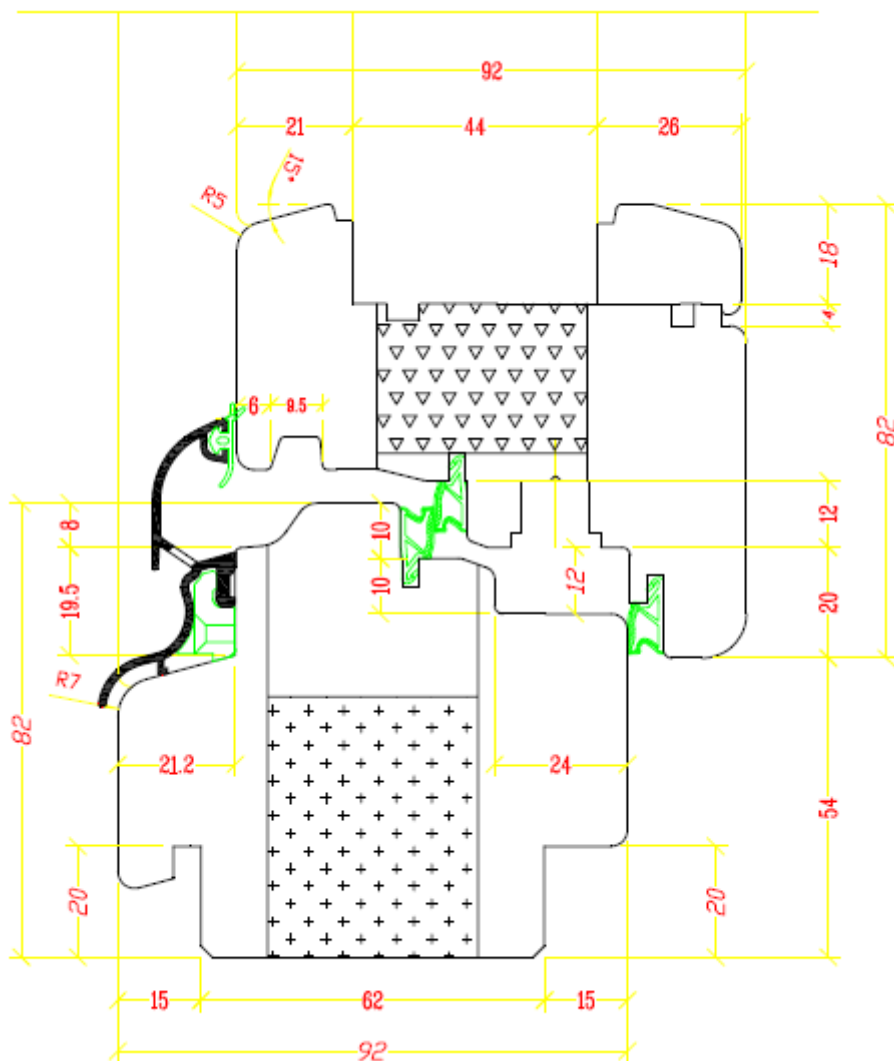
Uf=1,1*
*applies to
softwood

Specifications:

- historical design
- 92 mm thickness
- glass thickness available 36 – 50 mm
- 4 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Thermoline 92

Passiv



class
C4/C2



class
E1350



class
4

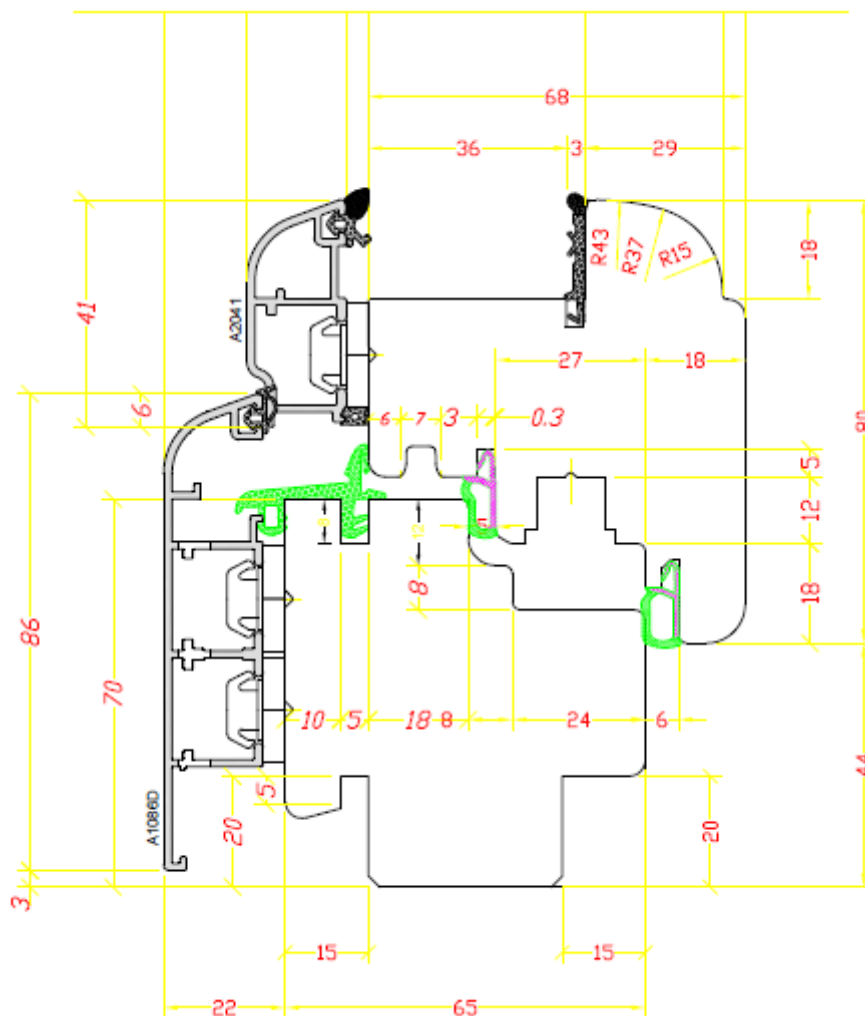


Uf=0,9*
*applies to
softwood

Specifications:

- PUR/PURENIT insulators makes system in Passiv standard
- 92 mm thickness
- glass thickness available 36 – 50 mm
- 4 round seals for better isolation
- external alu drip with no thermal bridges
- 13 mm axis for hardware improves closure

Alutrend 68 Softline



class
C5/B5



class
E1050



class
4

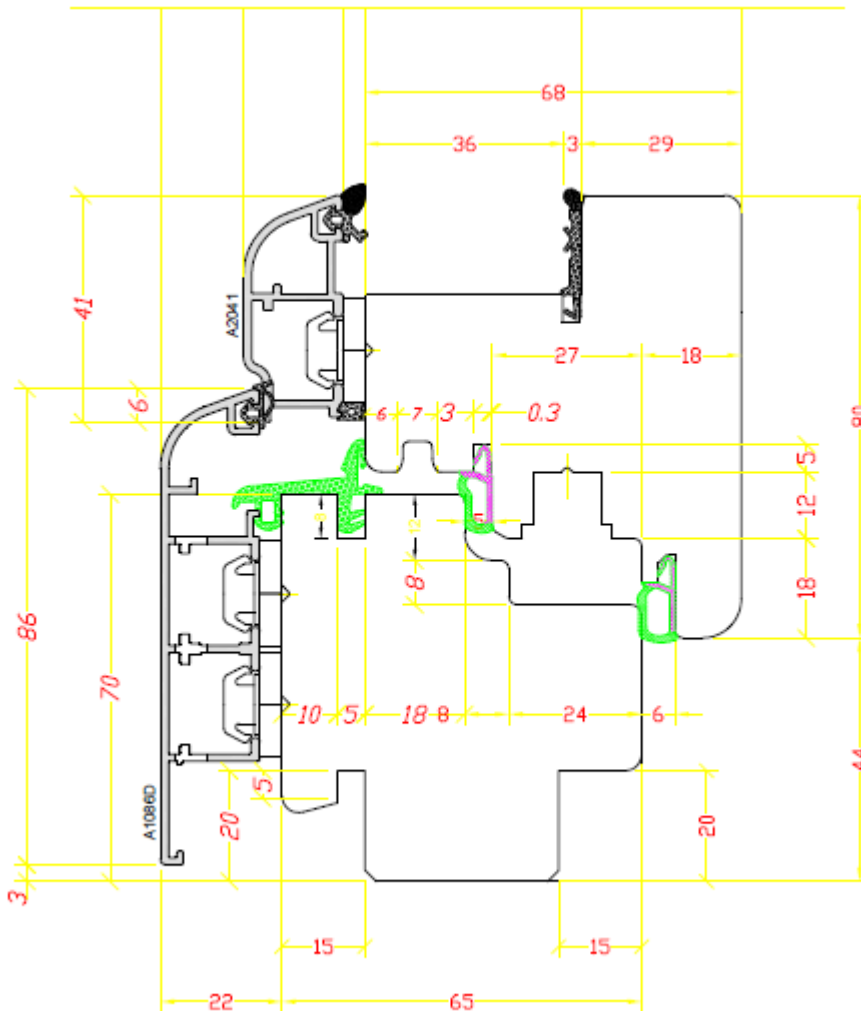


Uf=1,3*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 87 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- curved shaped alu-cladding
- 13 mm axis for hardware improves closure

Alutrend Qube 68 Softline



class
C5/B5



class
E1050



class
4

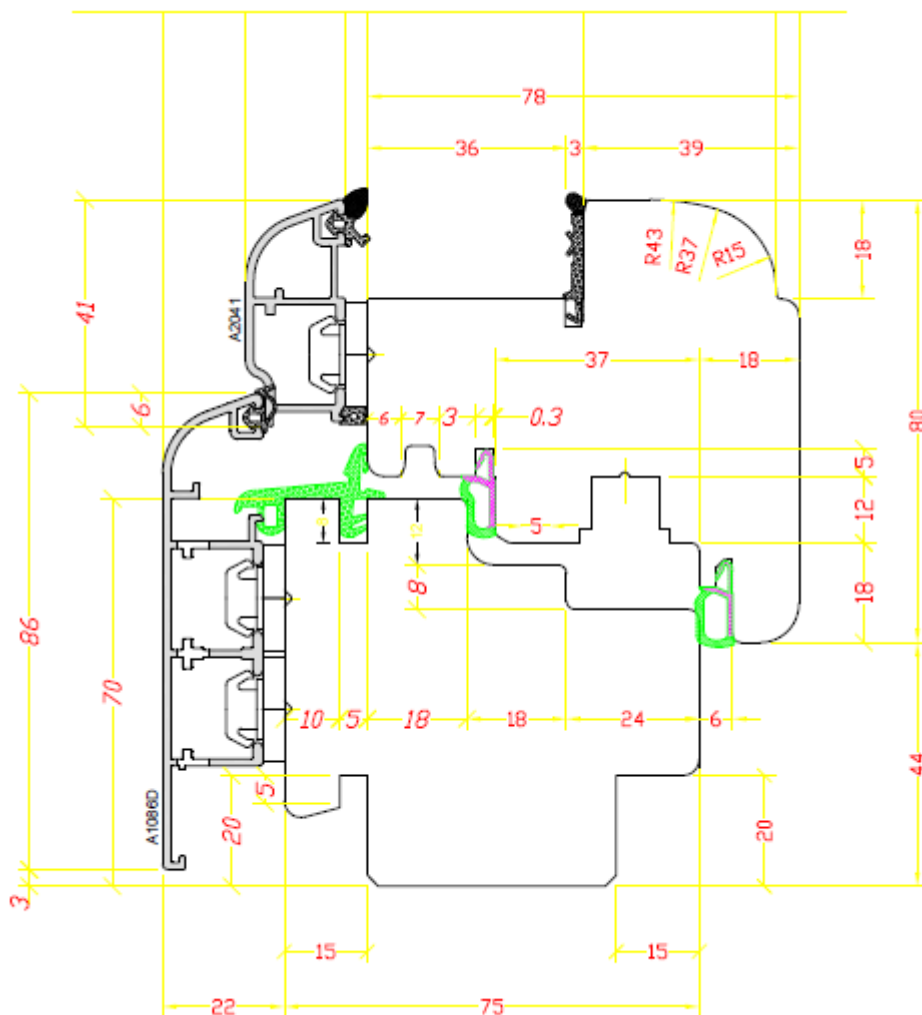


Uf=1,3*
*applies to
softwood

Specifications:

- squared form of wooden part
- 87 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- curved shaped alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL 78 Softline



class
C5/B5



class
E1050



class
4

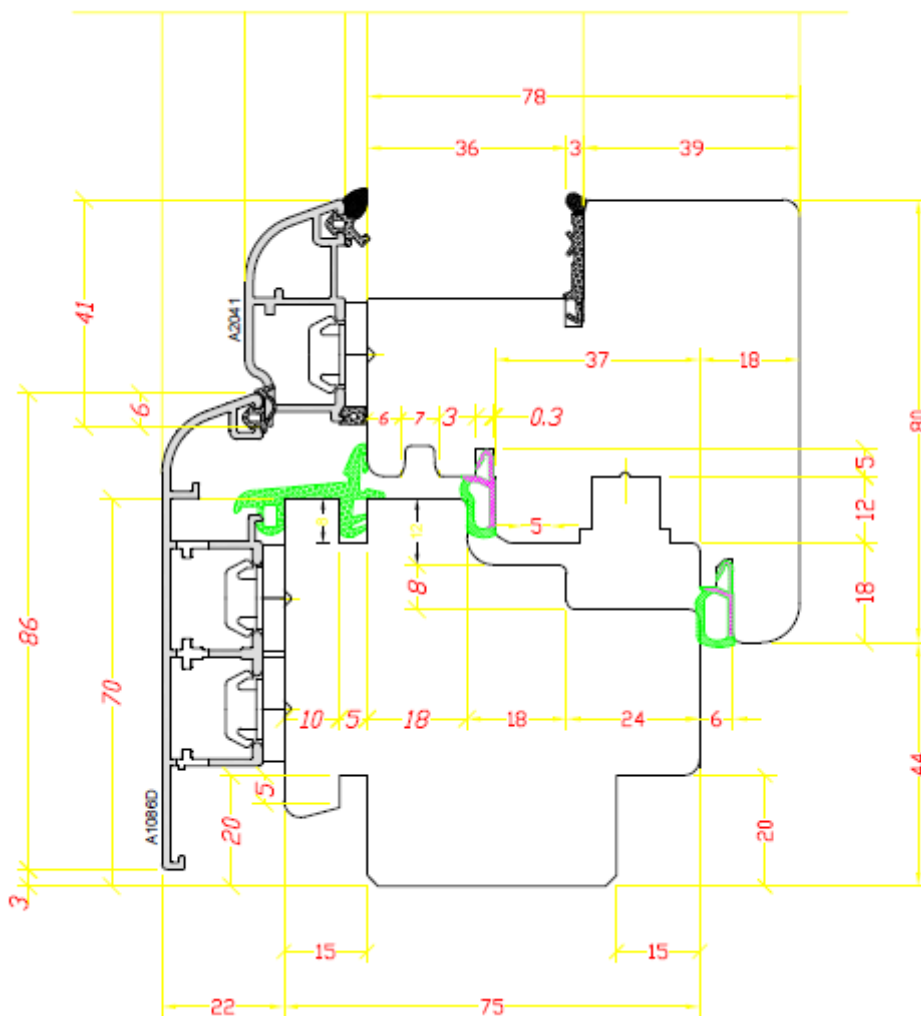


Uf=1,2*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 97 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- curved shaped alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Softline



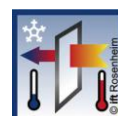
class
C5/B5



class
E1050



class
4

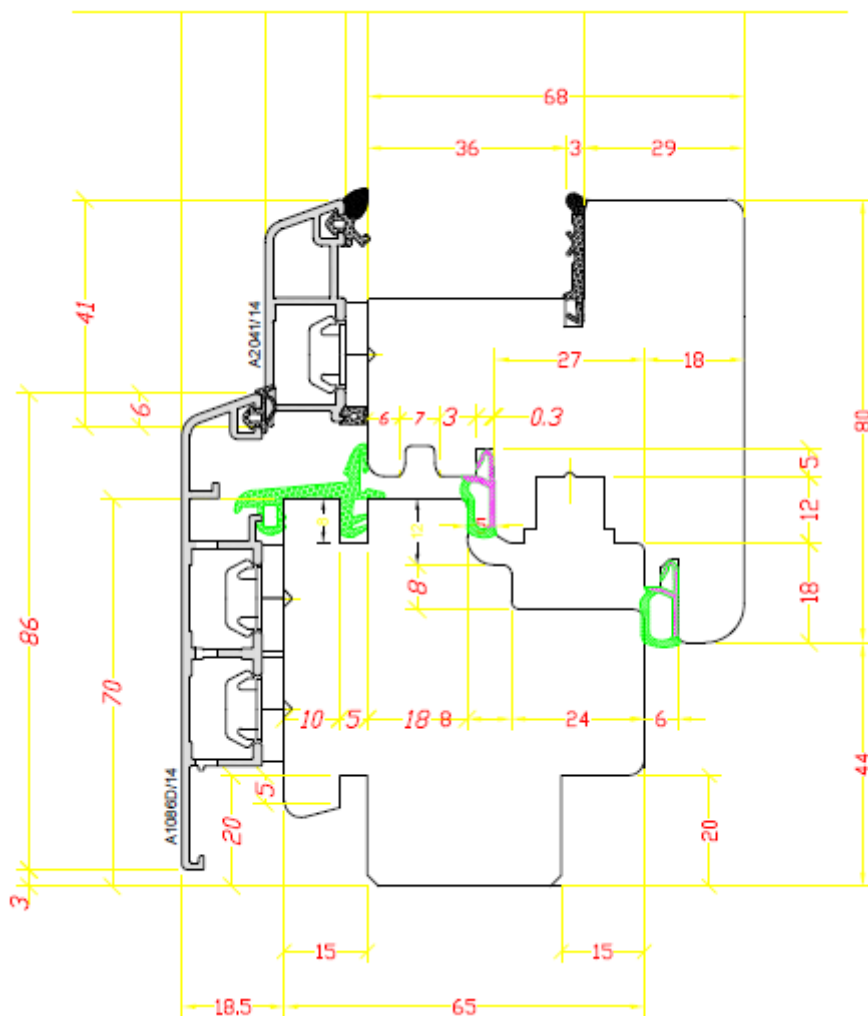


Uf=1,2*
*applies to
softwood

Specifications:

- squared form of wooden part
- 97 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- curved shaped alu-cladding
- 13 mm axis for hardware improves closure

Alutrend Qube 68 Classic



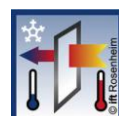
class
C5/B5



class
E1050



class
4

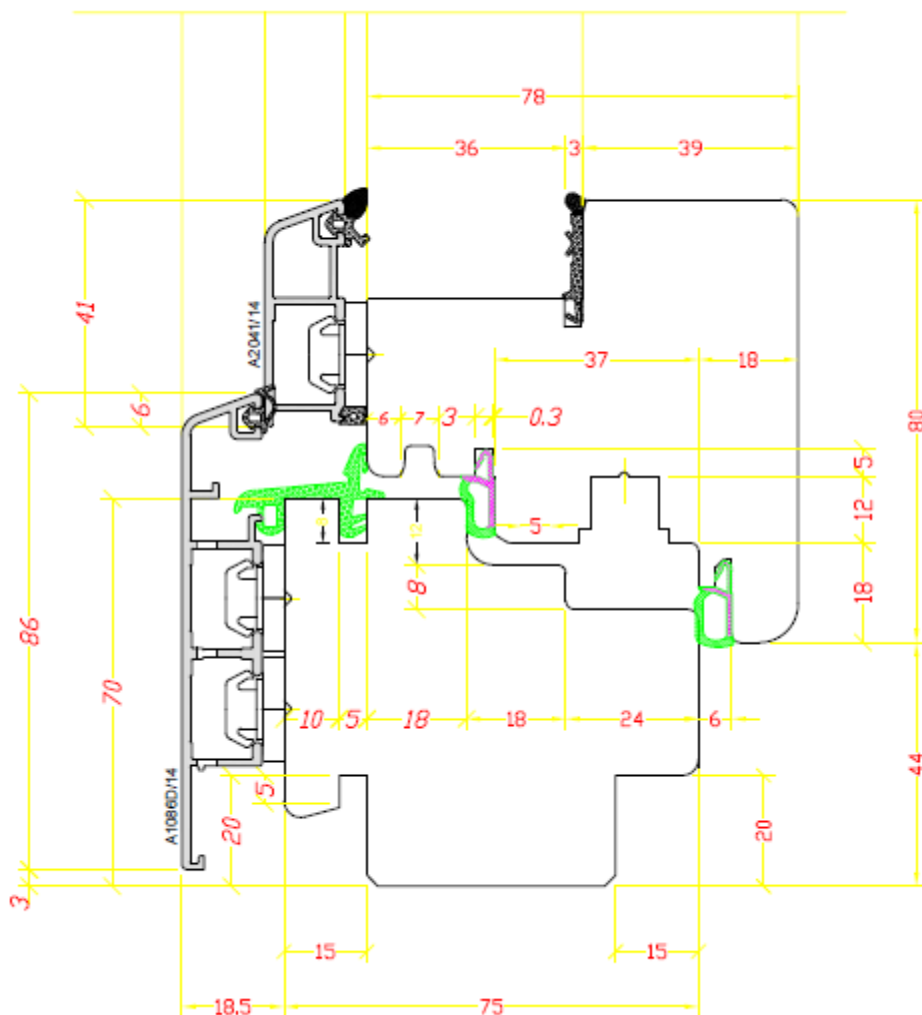


Uf=1,3*
*applies to
softwood

Specifications:

- squared form of wooden part
- 83,5 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- simple design of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Classic



class
C5/B5



class
E1050



class
4

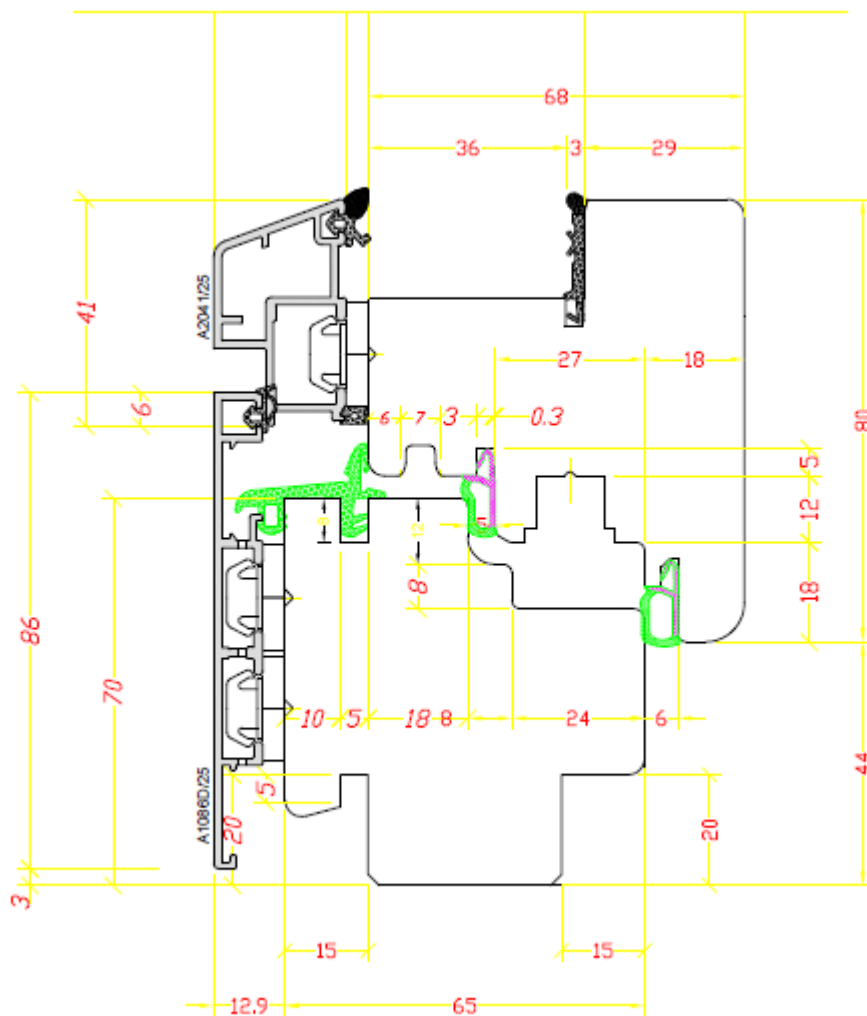


Uf=1,2*
*applies to
softwood

Specifications:

- squared form of wooden part
- 93,5 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- simple design of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend Qube 68 Linear



class
C5/B5



class
E1050



class
4

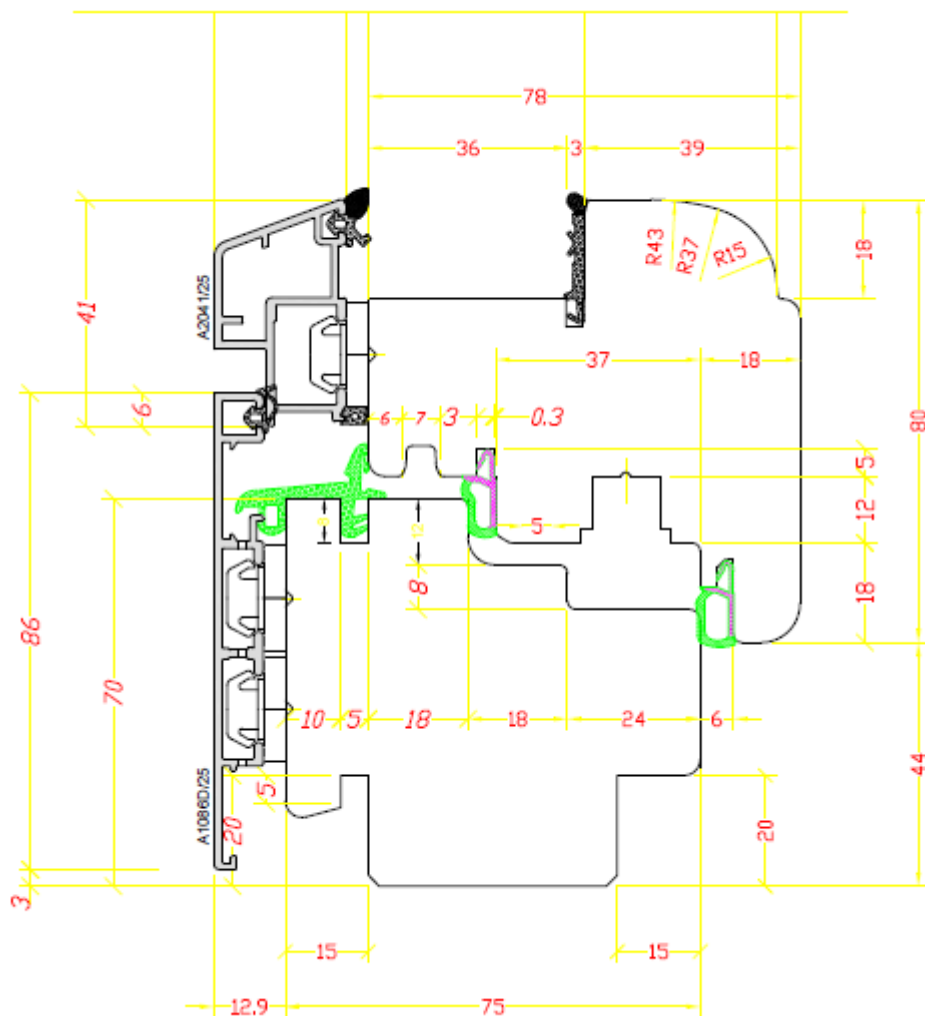


Uf=1,3*
*applies to
softwood

Specifications:

- squared form of wooden part
- 77,9 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- modern aligned profiles of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL 78 Linear



class
C5/B5



class
E1050



class
4

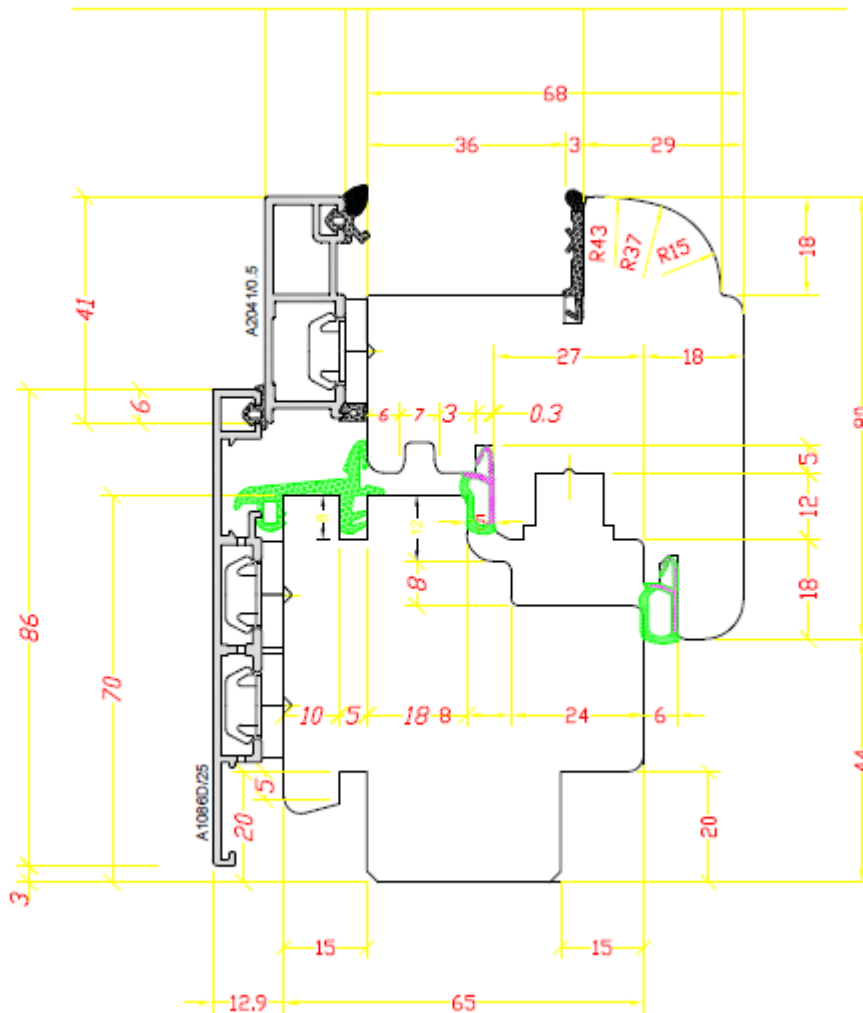


Uf=1,2*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 87,9 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- modern aligned profiles of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend 68 Quadrat



class
C5/B5



class
E1050



class
4

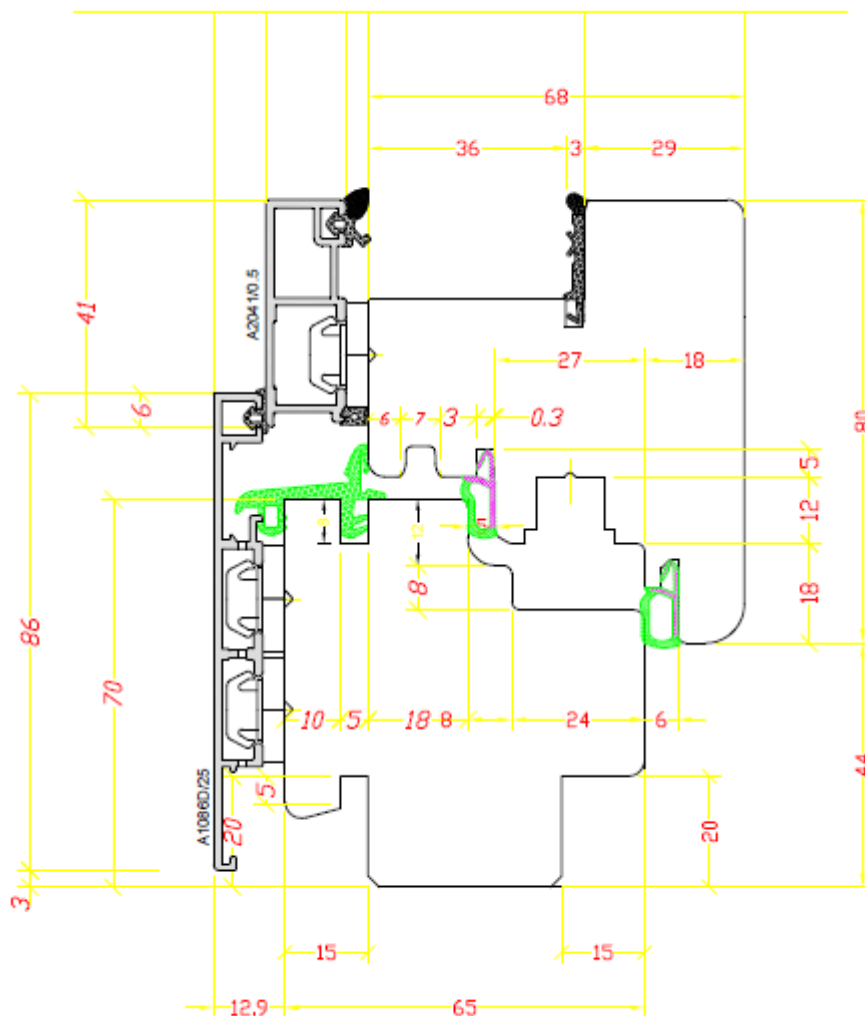


Uf=1,3*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 77,9 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- modern squared profiles of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend Qube 68 Quadrat



class
C5/B5



class
E1050



class
4

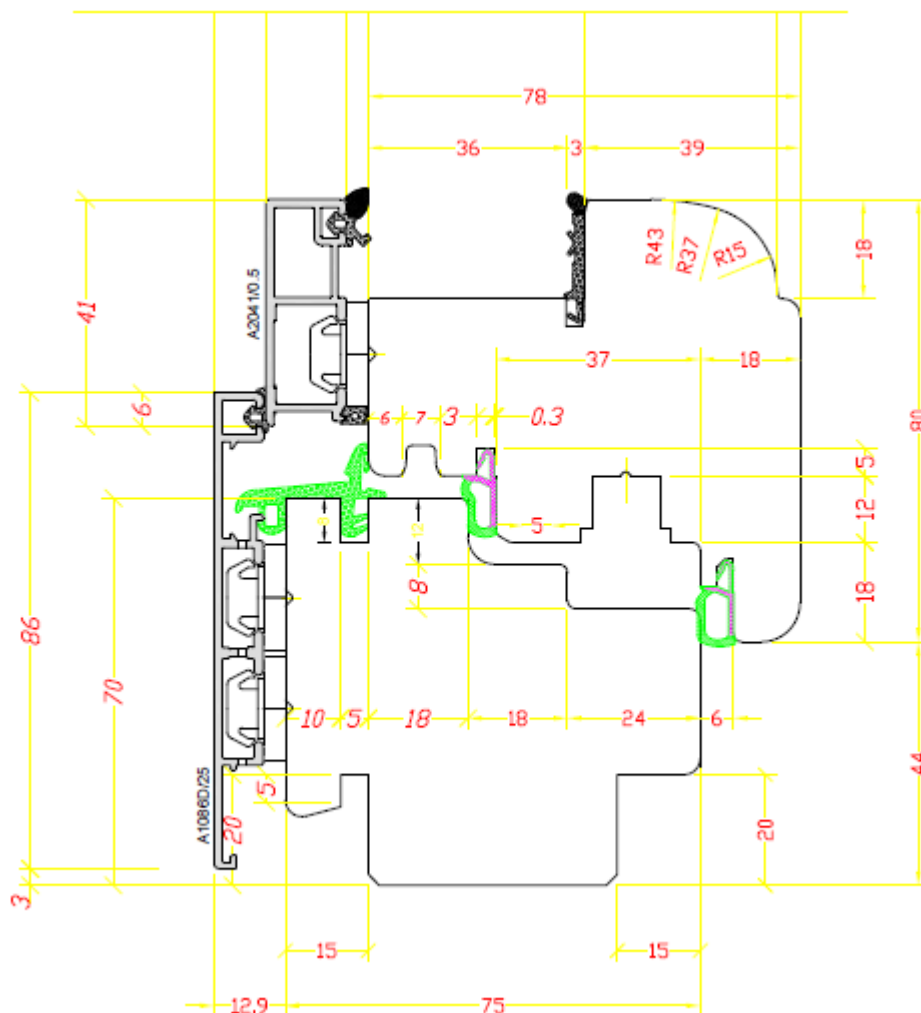


Uf=1,3*
*applies to
softwood

Specifications:

- squared form of wooden part
- 77,9 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- modern squared profiles of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL 78 Quadrat



class
C5/B5



class
E1050



class
4

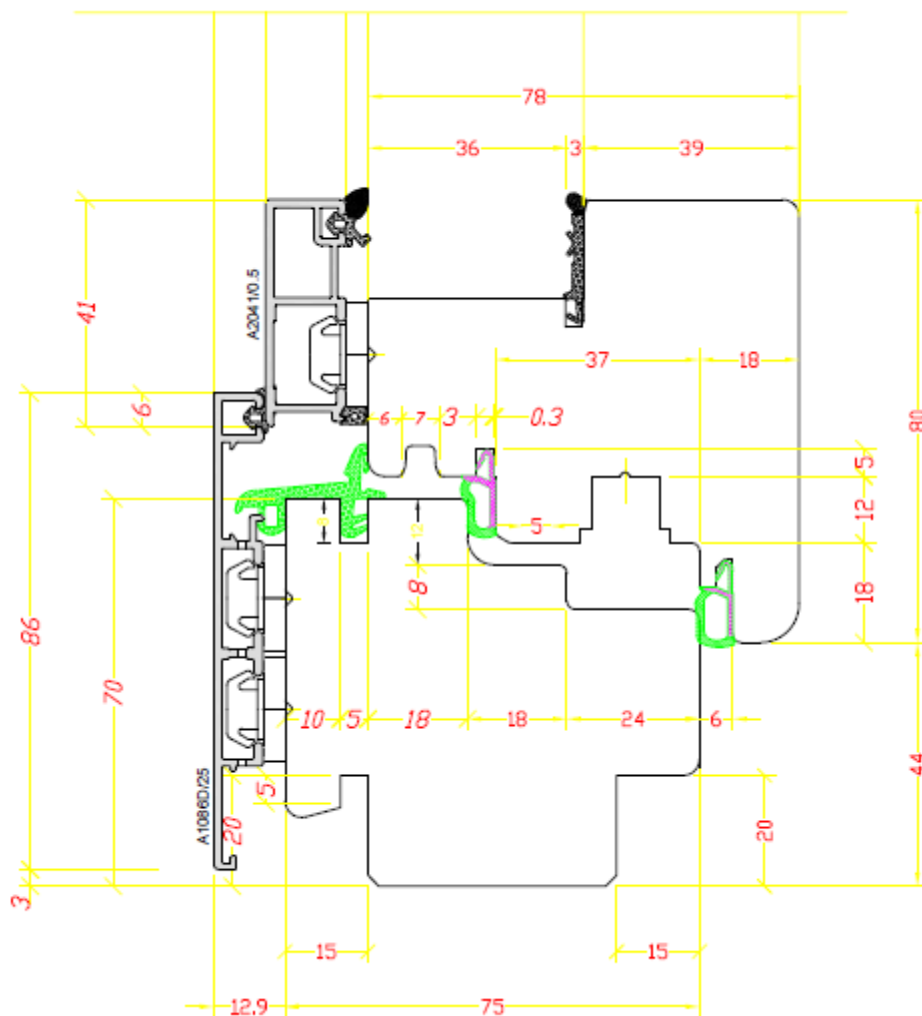


U_f=1,2*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 87,9 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- modern squared profiles of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Quadrat



class
C5/B5



class
E1050



class
4

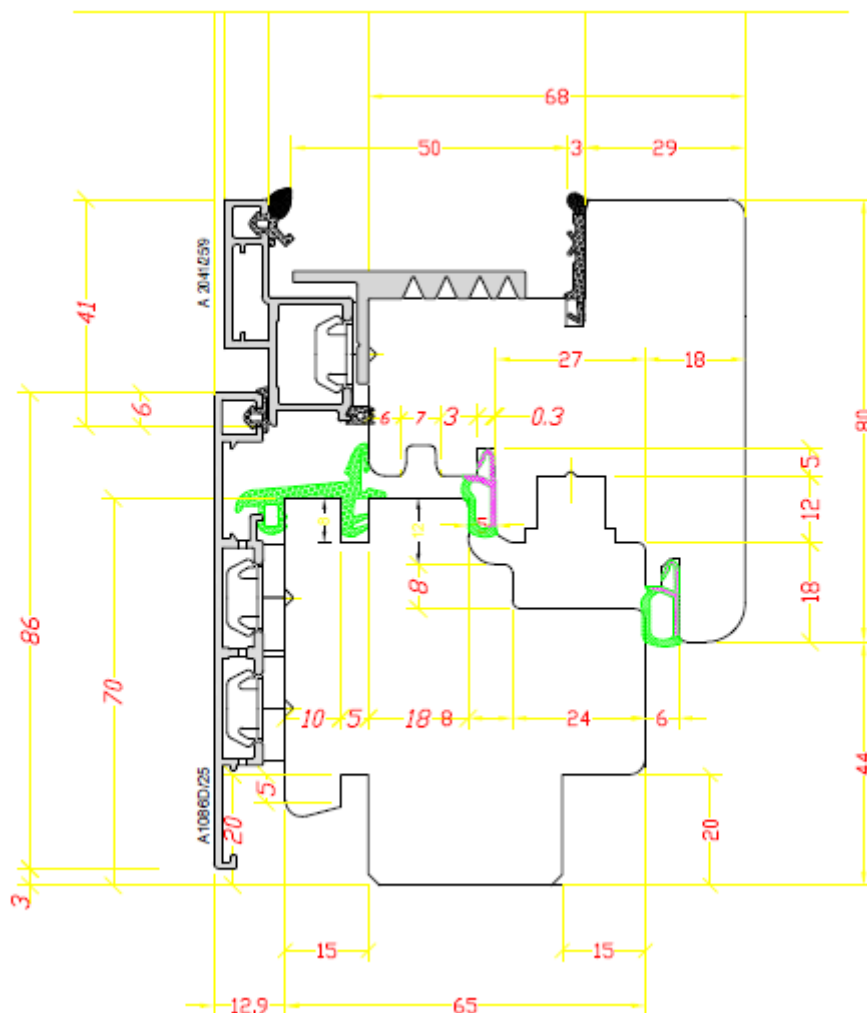


Uf=1,2*
*applies to
softwood

Specifications:

- squared form of wooden part
- 87,9 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- modern squared profiles of alu-cladding
- 13 mm axis for hardware improves closure

Alutrend Qube 68 Quadrat FB



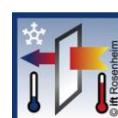
class
C5/B5



class
E1050



class
4

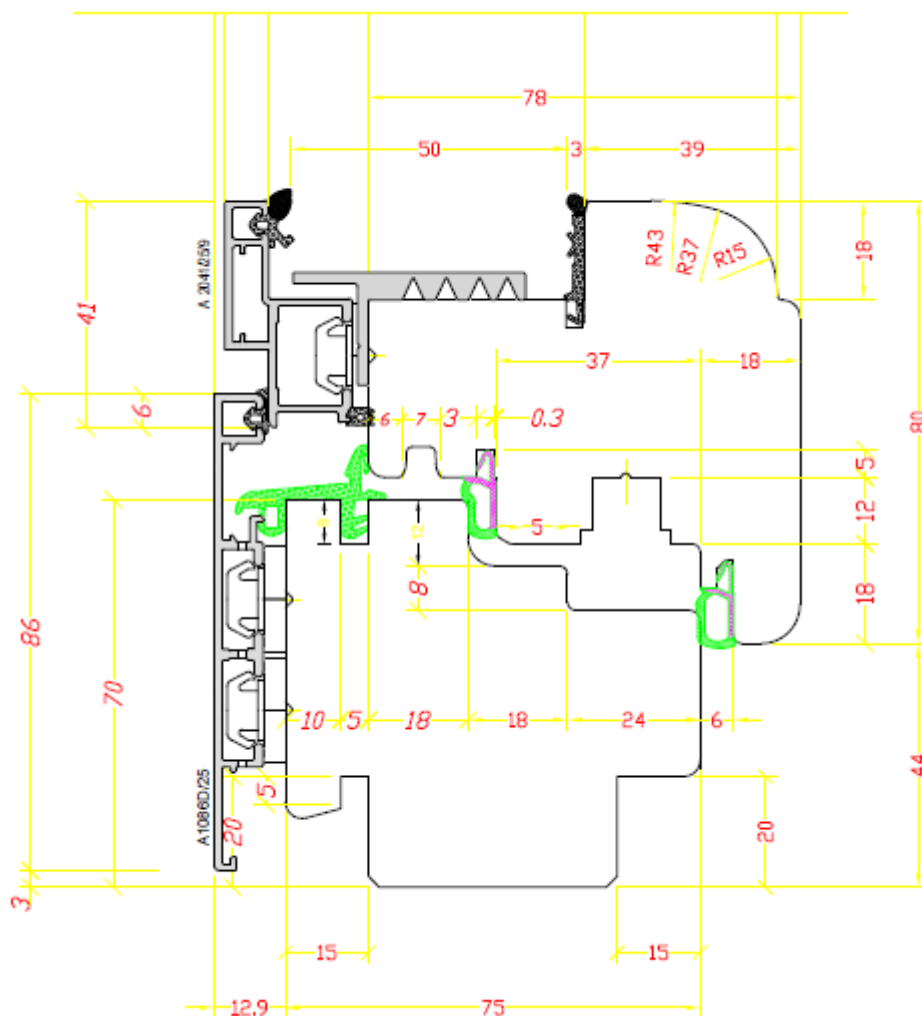


Uf=1,3*
*applies to
softwood

Specifications:

- squared form of wooden part
- 77,9 mm thickness
- glass thickness available 40 – 50 mm
- 4 round seals for better isolation
- modern aligned squared alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL 78 Quadrat FB



class
C5/B5



class
E1050



class
4

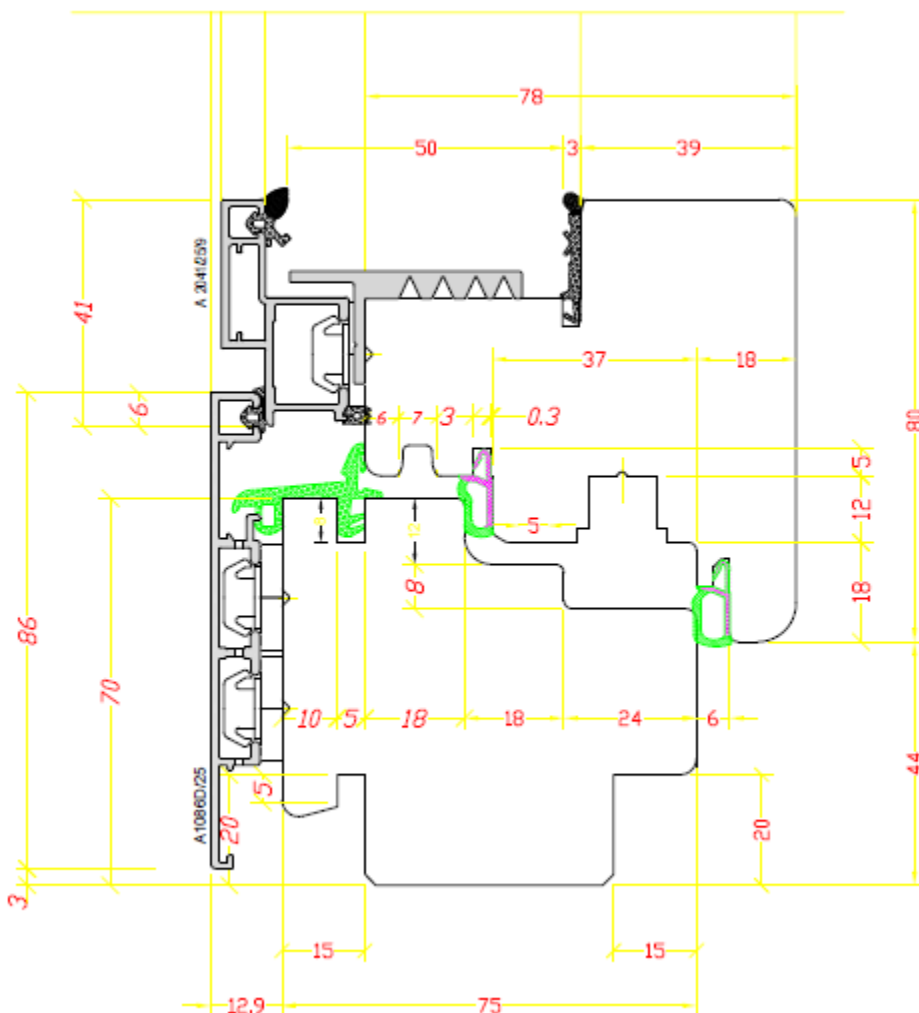


Uf=1,2*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 87,9 mm thickness
- glass thickness available 40 – 60 mm
- 4 round seals for better isolation
- modern aligned squared alu-cladding
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Quadrat FB



class
C5/B5



class
E1050



class
4

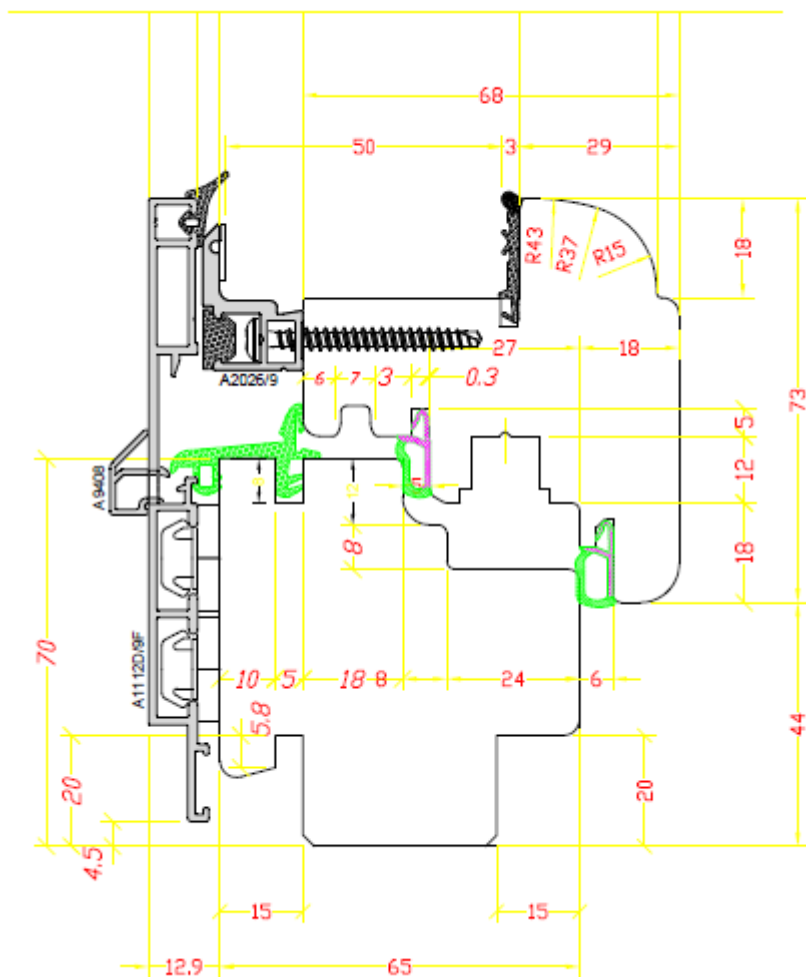


Uf=1,2*
*applies to
softwood

Specifications:

- squared form of wooden part
- 87,9 mm thickness
- glass thickness available 40 – 60 mm
- 4 round seals for better isolation
- modern aligned squared alu-cladding
- 13 mm axis for hardware improves closure

Alutrend 68 Integral



class
C5/B5



class
E1050



class
4

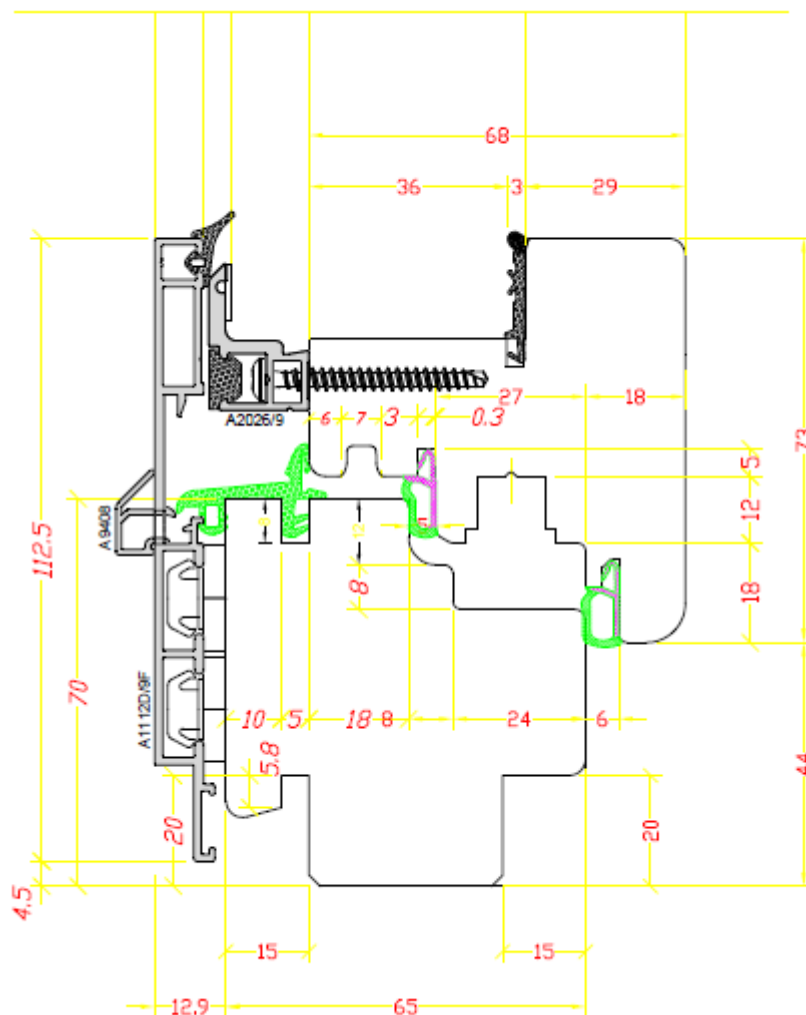


Uf=1,3*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 77,9 mm thickness
- glass thickness available 40 – 50 mm
- 4 round seals for better isolation
- modern alu-cladding with hidden sash
- 13 mm axis for hardware improves closure

Alutrend Qube 78 Integral



class
C5/B5



class
E1050



class
4

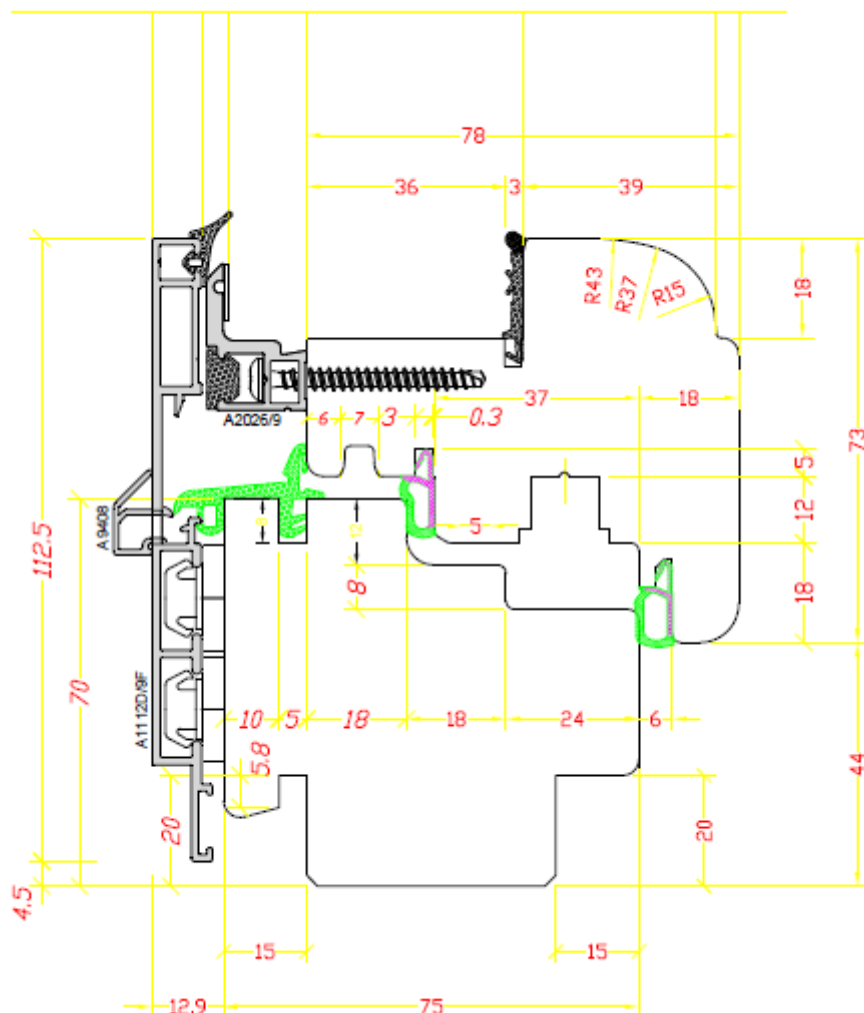


Uf=1,3*
*applies to
softwood

Specifications:

- squared form of wooden part
- 77,9 mm thickness
- glass thickness available 40 – 50 mm
- 4 round seals for better isolation
- modern alu-cladding with hidden sash
- 13 mm axis for hardware improves closure

Alutrend XL 78 Integral



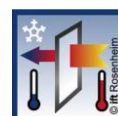
class
C5/B5



class
E1050



class
4

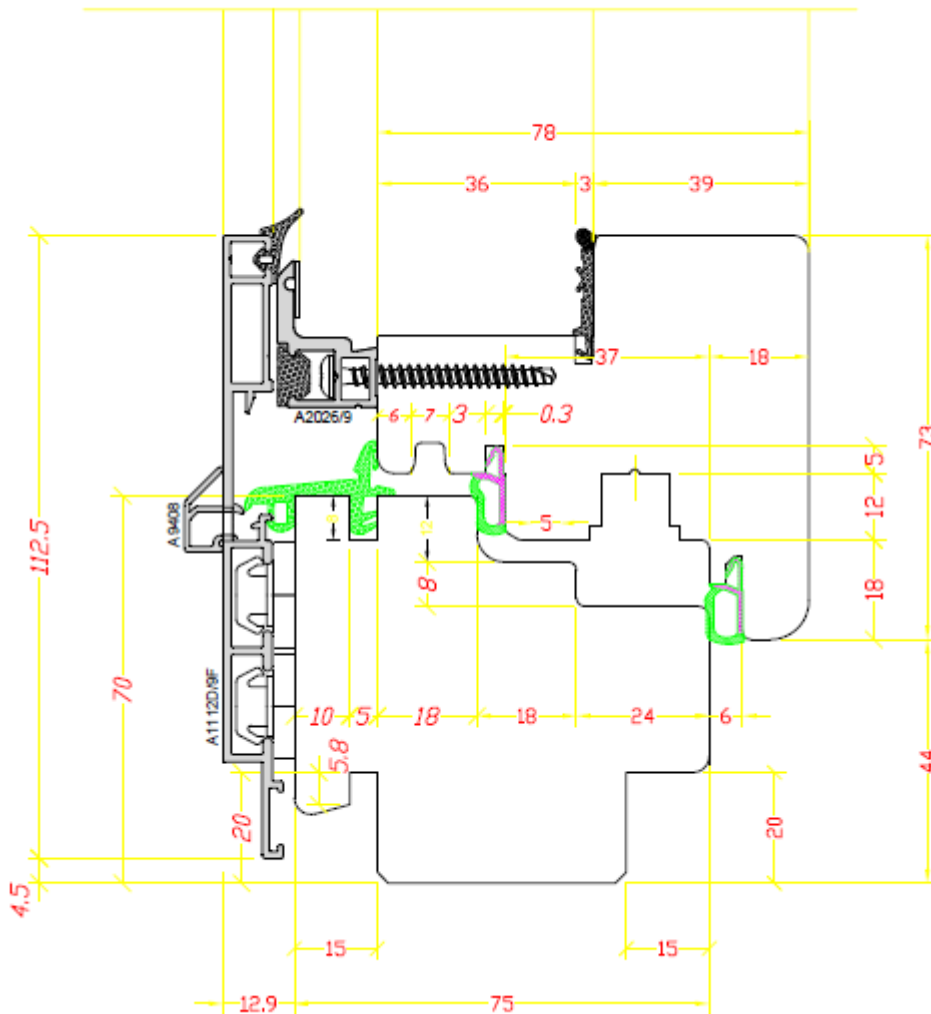


Uf=1,2*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 87,9 mm thickness
- glass thickness available 40 – 60 mm
- 4 round seals for better isolation
- modern alu-cladding with hidden sash
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Integral



class
C5/B5



class
E1050



class
4

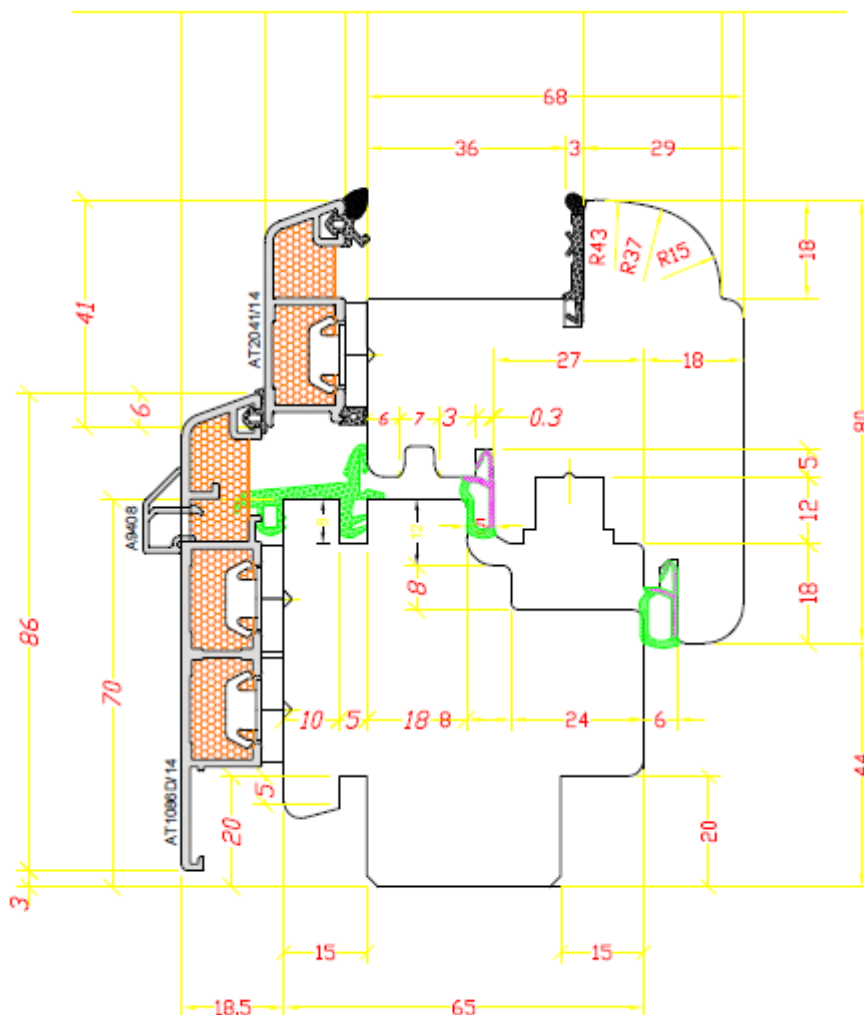


Uf=1,2*
*applies to
softwood

Specifications:

- squared form of wooden part
- 87,9 mm thickness
- glass thickness available 40 – 60 mm
- 4 round seals for better isolation
- modern alu-cladding with hidden sash
- 13 mm axis for hardware improves closure

Alutrend 68 Thermoclassic



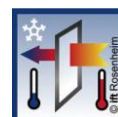
class
C5/B5



class
E1050



class
4

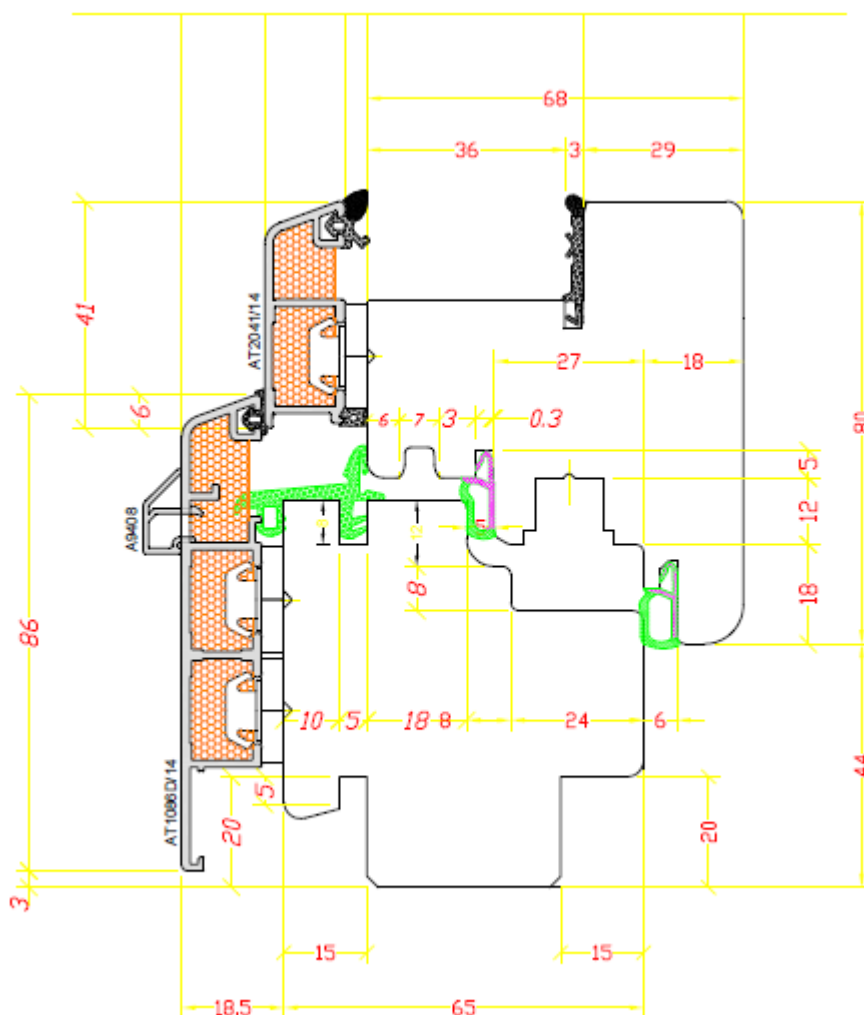


Uf=1,1*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 83,5 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- alu-cladding with special insulation foam
- 13 mm axis for hardware improves closure

Alutrend Qube 68 Thermoclassic



class
C5/B5



class
E1050



class
4

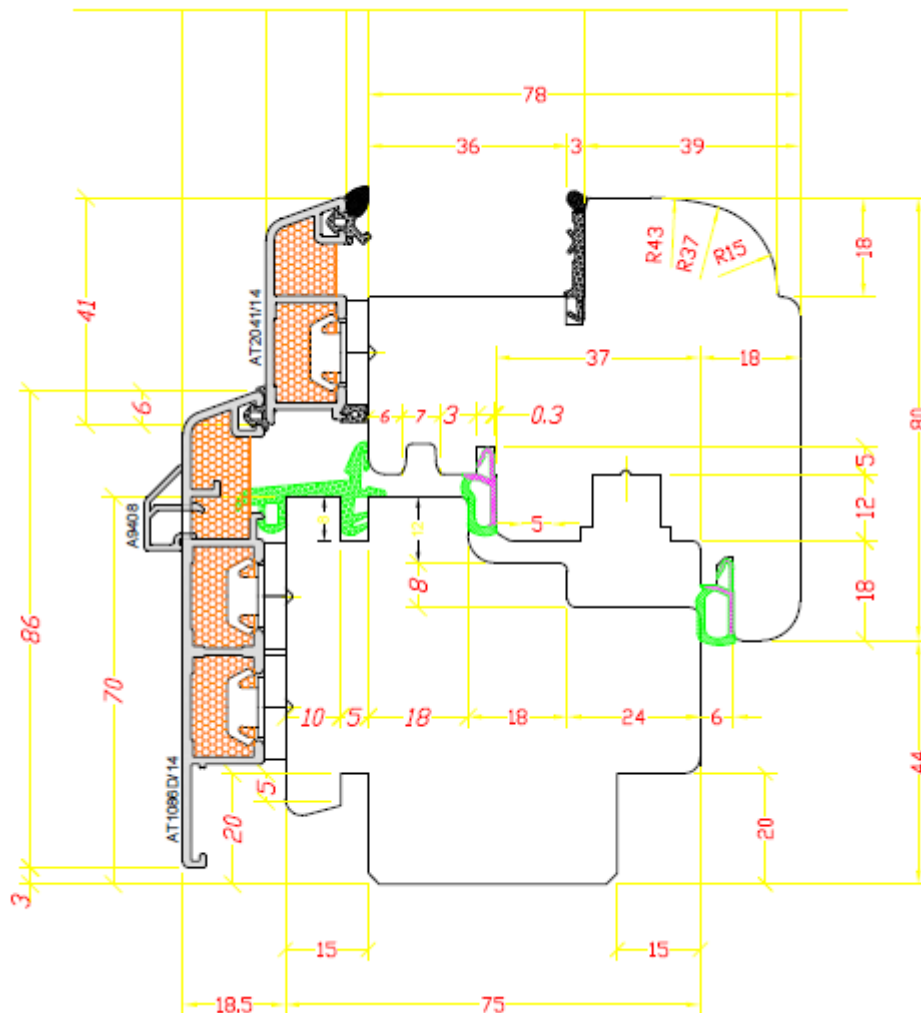


Uf=1,1*
*applies to
softwood

Specifications:

- squared form of wooden part
- 83,5 mm thickness
- glass thickness available 26 – 36 mm
- 4 round seals for better isolation
- alu-cladding with special insulation foam
- 13 mm axis for hardware improves closure

Alutrend XL 78 Thermoclassic



class
C5/B5



class
E1050



class
4

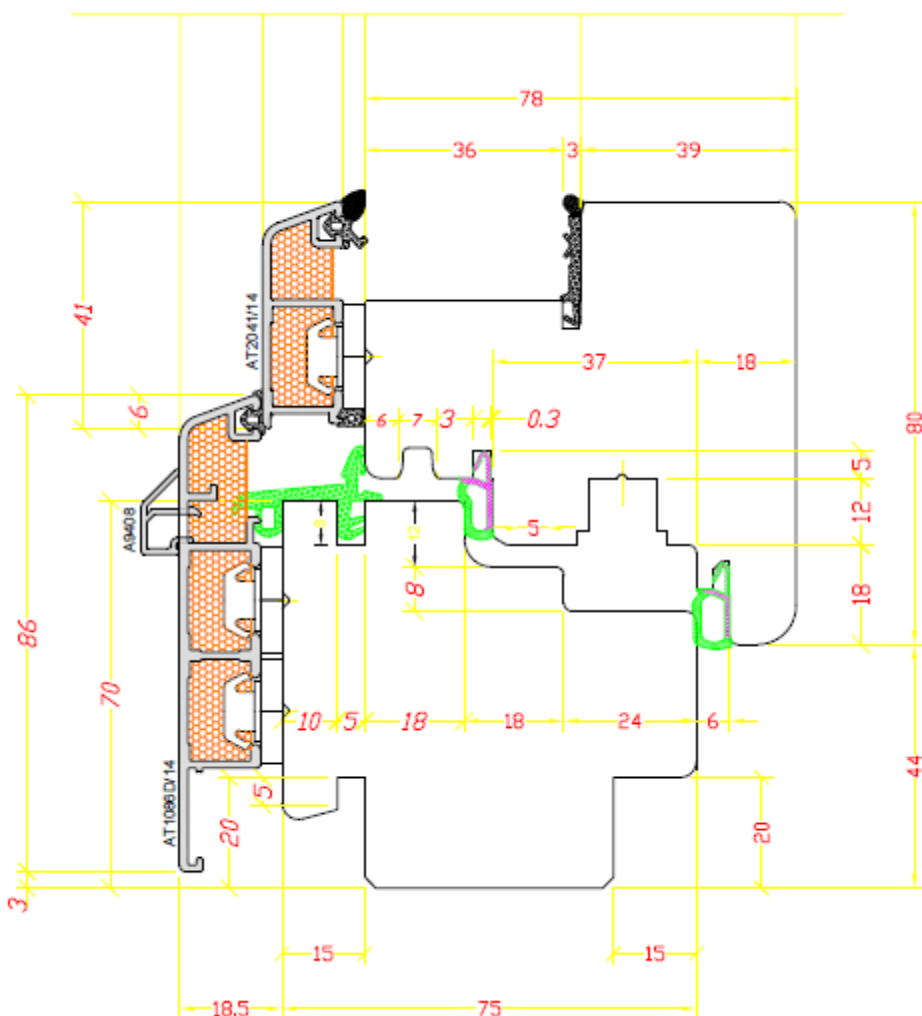


Uf=1,0*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 93,5 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- alu-cladding with special insulation foam
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Thermoclassic



class
C5/B5



class
E1050



class
4



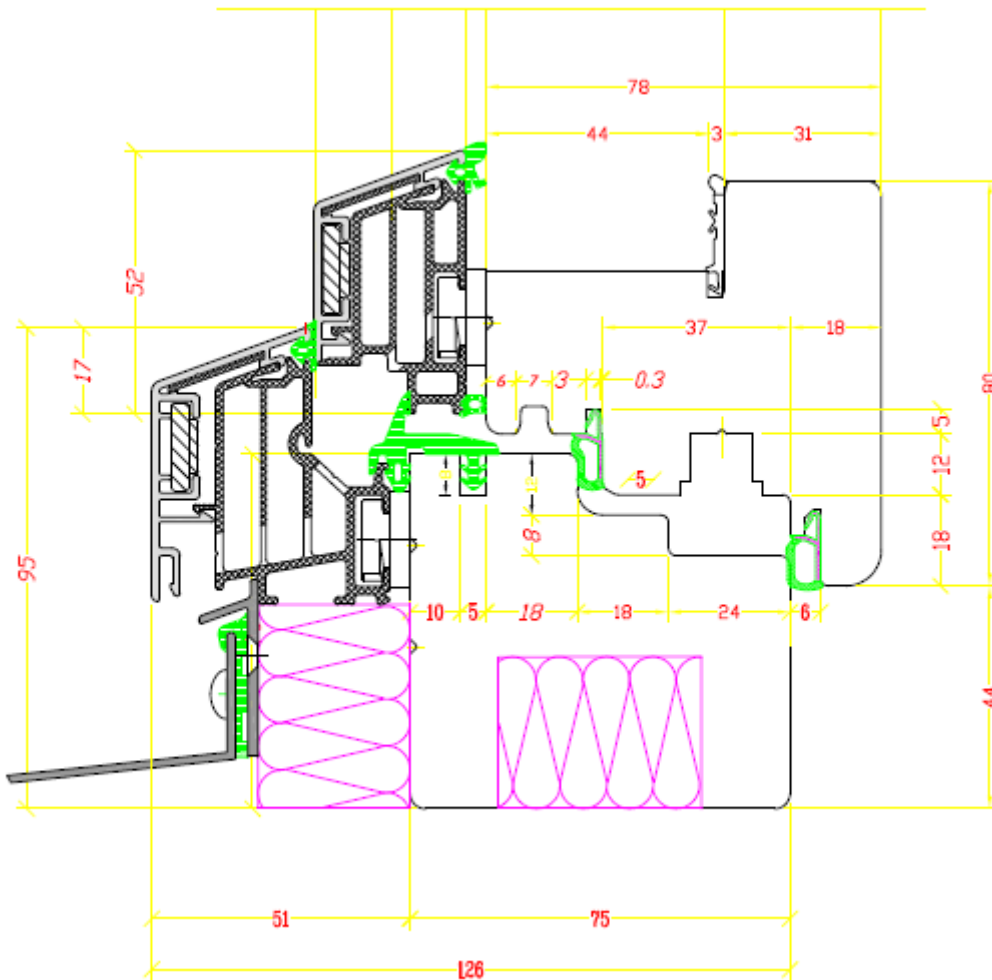
Uf=1,0*
*applies to
softwood

Specifications:

- squared form of wooden part
- 93,5 mm thickness
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- alu-cladding with special insulation foam
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Miratherm

Passiv



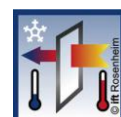
class
C5/B5



class
E1050



class
4



Uf=0,8*
*applies to
softwood

Specifications:

- squared form of wooden part
- 126 mm thickness with additional insulation
- glass thickness available 26 – 46 mm
- 4 round seals for better isolation
- multichamber alu-cladding designed for passiv standard
- 13 mm axis for hardware improves closure

Zertifikat

gültig bis 31.12.2008

**Passivhaus
geeignete**

Komponente: Fensterrahmen

Hersteller: Hermann Gutmann Werke AG, D-91781 Weißenburg

Produktname: MIRA therm 08 - PH78

Folgende Kriterien wurden für die Zuerkennung des Zertifikates geprüft:

Passivhaus-Behaglichkeitskriterium:

Unter Standardbedingungen (Verglasung mit $U_f = 0,7 \text{ W/(m}^2\text{K)}$, Fensterbreite 1,23 m, Fensterhöhe 1,48 m) erfüllt der Fenster-U-Wert die Bedingung:

$$U_w = 0,80 \leq 0,80 \text{ W/(m}^2\text{K)}$$

Rahmenkennwerte:

Rahmen	seitl./oben	unten
U_f [W/(m ² K)]	0,74	0,76
Breite [mm]	128	128

Abstandhalter	Thermix
Ψ_g [W/(mK)]	0,036

Passivhaus spezifische Auflagen:

Die Passivhausseignung wurde nur mit dem o.g. Abstandhalter geprüft; andere Abstandhalter, vor allem solche aus Aluminium, führen zu wesentlich höheren Wärmeverlusten.

Passivhaus-Einbausituationen:

Einschließlich Einbauwärmehürden erfüllt das Fenster

$$U_{w, eingebaut} \leq 0,85 \text{ W/(m}^2\text{K)}$$

wenn die in der Anlage dokumentierten Einbaubrisse des Fensters in Passivhaus geeignete Wandaufbauten (Wärmedämmverbundsystem, Holzbaufassade und Betonschalungsteil) eingehalten werden.

Das Zertifikat ist wie folgt zu verwenden:

**PASSIV
HAUS
geeignete
KOMPONENTE**
Dr. Wolfgang Feist

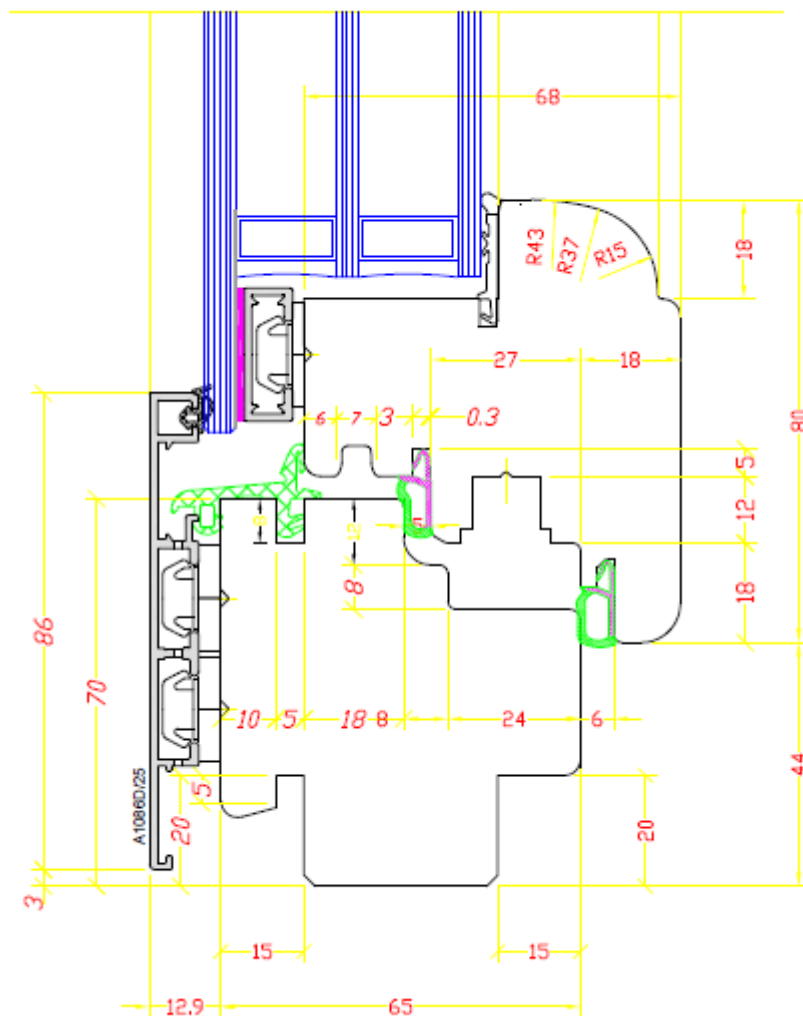


Fensterrahmen:
 $U_f = 0,74 / 0,76 \text{ W/(m}^2\text{K)}$
 $\Psi_g = 0,036 \text{ W/(mK)}$
Breite = 128 / 128 mm

Passivhaus
Institut
Dr. Wolfgang Feist
Rheinstraße 44/46
D-64283 Darmstadt



Alutrend 68 Synergic



class
C5/B5



class
E1050



class
4

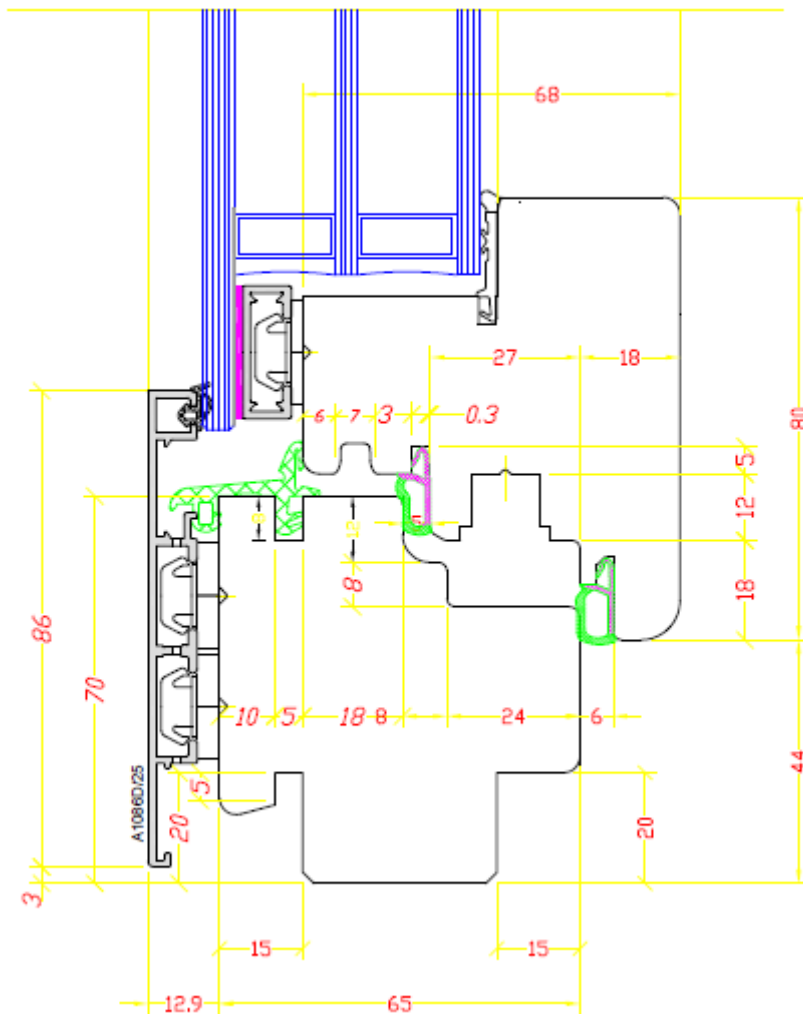


Uf=1,3*
*applies to
softwood

Specifications:

- rounded form of wooden part
- 77,9 mm thickness
- glass thickness available 44 – 54 mm
- 4 round seals for better isolation
- innovate design of alu-cladding with glass covered sash
- 13 mm axis for hardware improves closure

Alutrend Qube 68 Synergic



class
C5/B5



class
E1050



class
4

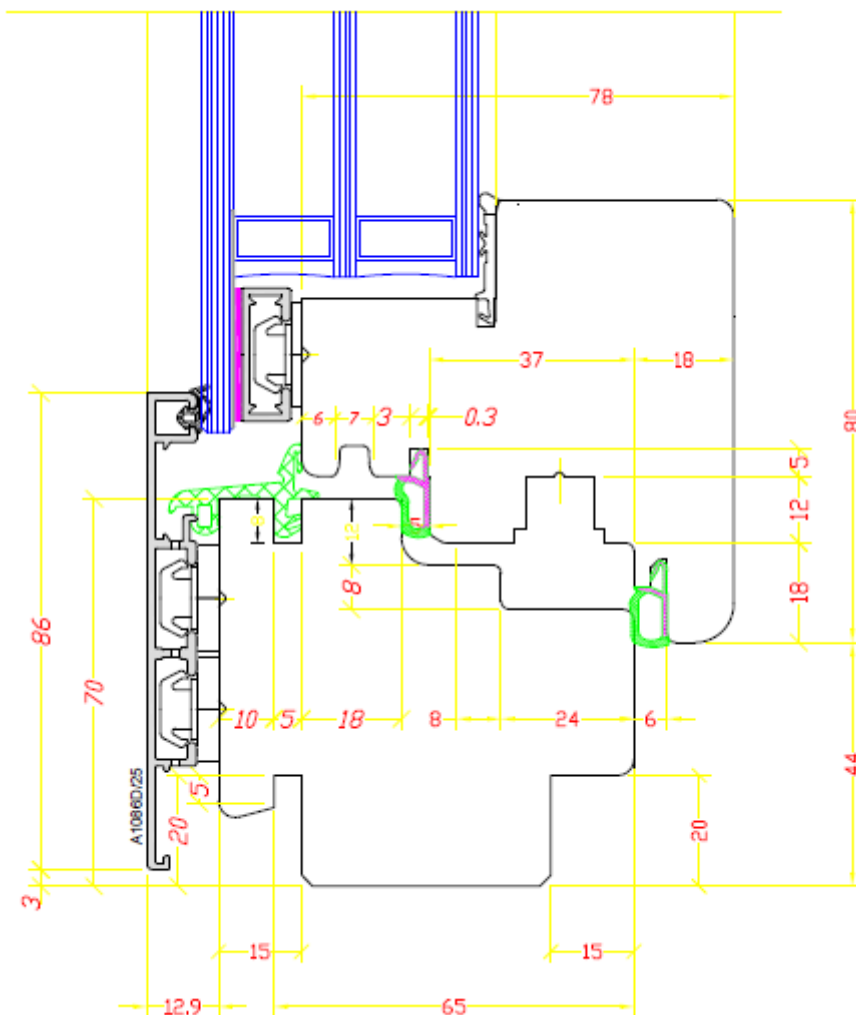


Uf=1,3*
*applies to
softwood

Specifications:

- squared form of wooden part
- 77,9 mm thickness
- glass thickness available 44 – 54 mm
- 4 round seals for better isolation
- innovate design of alu-cladding with glass covered sash
- 13 mm axis for hardware improves closure

Alutrend XL Qube 78 Synergic



class
C5/B5



class
E1050



class
4



Uf=1,2*
*applies to
softwood

Specifications:

- squared form of wooden part
- 87,9 mm thickness
- glass thickness available 44 – 64 mm
- 4 round seals for better isolation
- innovate design of alu-cladding with glass covered sash
- 13 mm axis for hardware improves closure

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