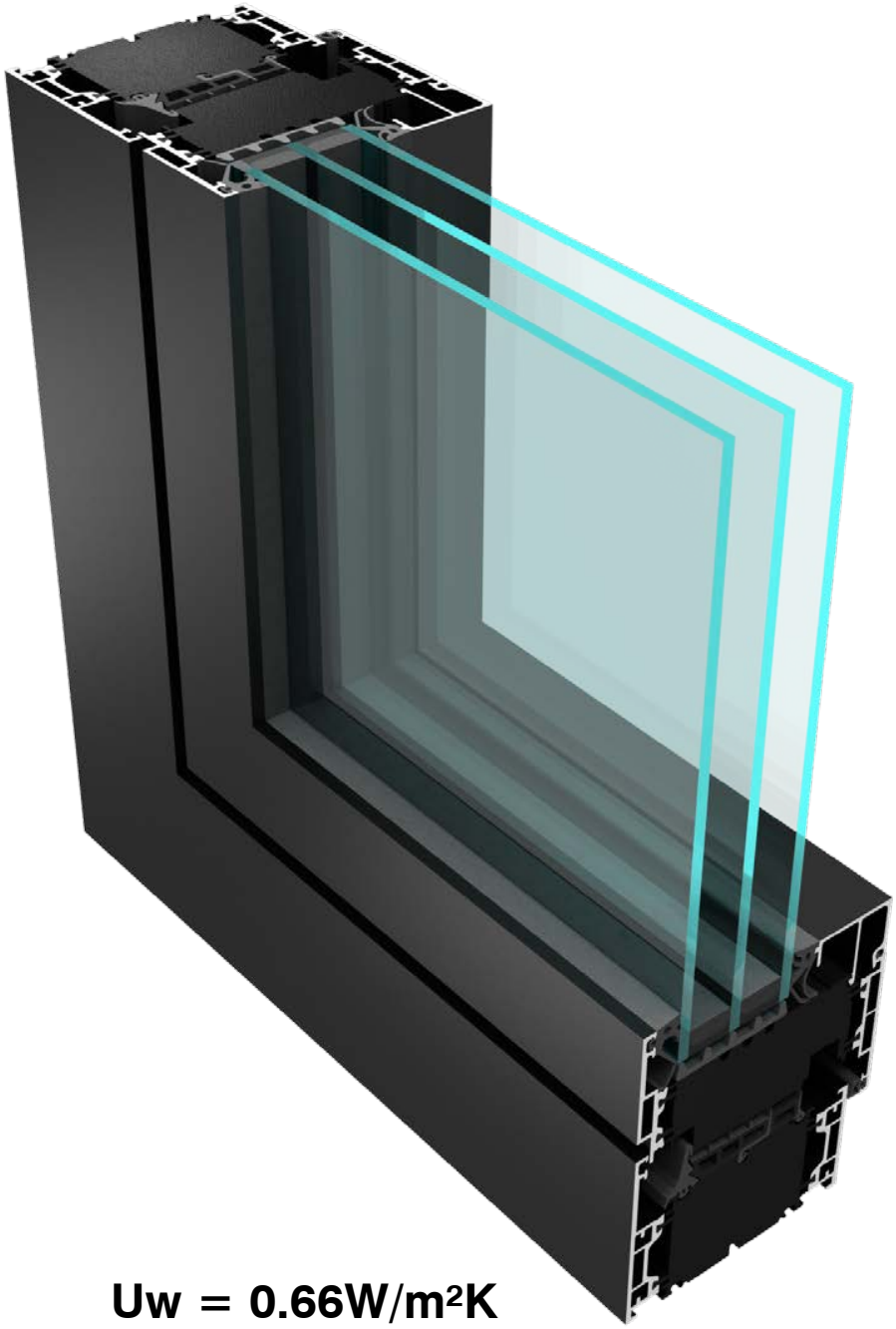
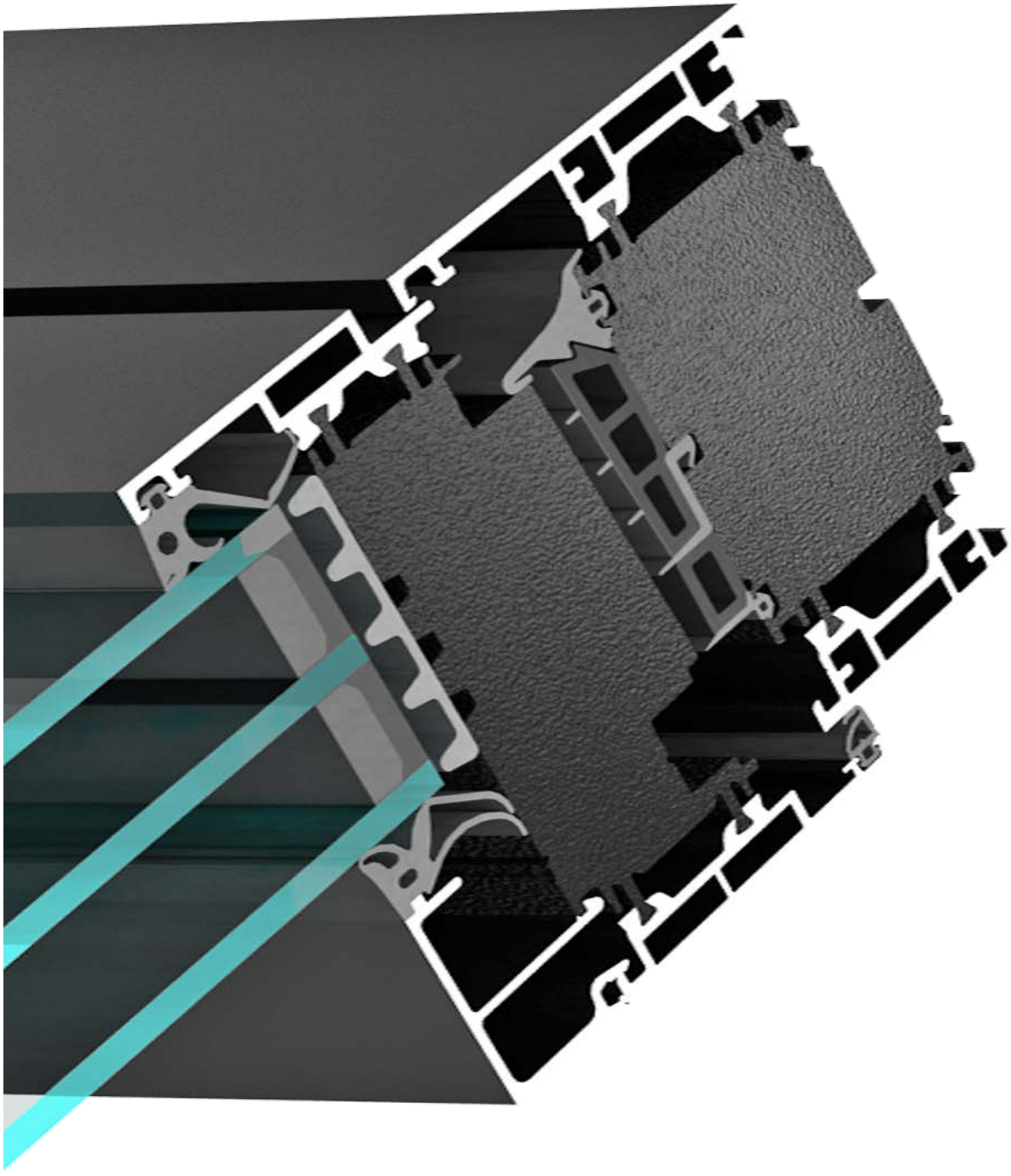
comar10
passivhaus
certified component



Uw = 0.66W/m²K
Uf = 0.77 W/m²K
Ug = 0.50 W/m²K

cool, temperate climate
phB
CERTIFIED COMPONENT
Passive House Institute

comar
ARCHITECTURAL ALUMINIUM SYSTEMS



Innovation is often spoken about, but very rarely delivered. Comar 10 offers a new departure, a Passivhaus certified product with U-values as low as 0.66 coupled with processes that cut manufacturing costs by 70%

Comar10: Solutions Delivered

projects@parksidegroup.co.uk

cool, temperate climate

phB

CERTIFIED COMPONENT

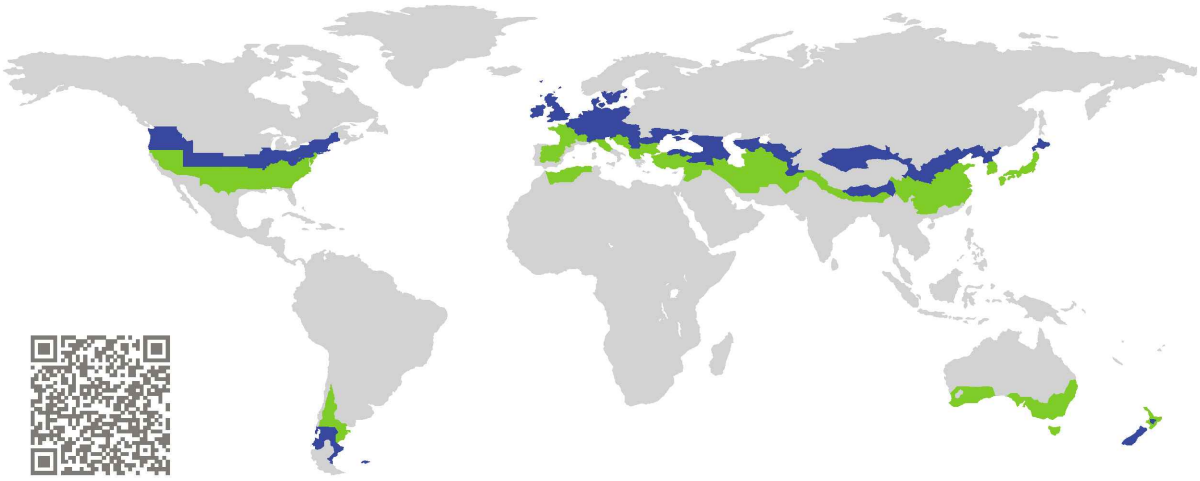
Passive House Institute

CERTIFICATE

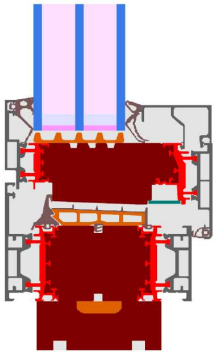
Certified Passive House Component

Component-ID 0922wi03 valid until 31st December 2016

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany



Category:	**Window frame**
Manufacturer:	**Comar Architectural Aluminium Systems, The Parkside Group Limited, Mitcham, United Kingdom**
Product name:	**Comar 10**



This certificate was awarded based on the following criteria for the cool, temperate climate zone

Comfort	U_W = 0.77	≤	0.80 W/(m² K)
	$U_{W,\,installed}$	≤	0.85 W/(m² K)
	mit U_g	=	0.70 W/(m² K)
Hygiene	$f_{Rsi=0.25}$	≥	0.70

cool, temperate climate

phB

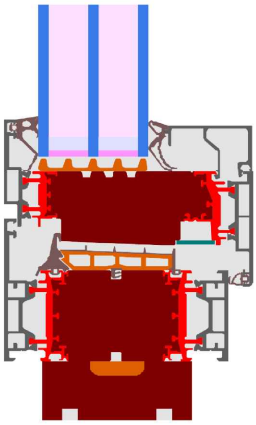
CERTIFIED COMPONENT

Passive House Institute

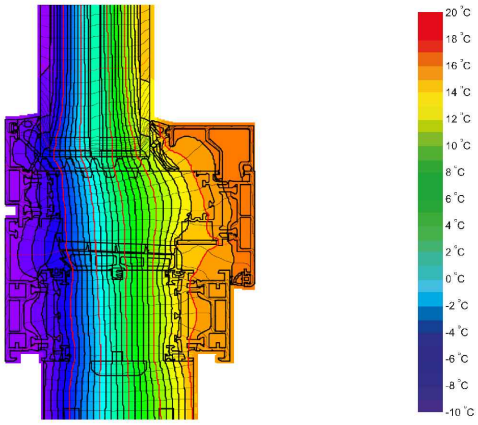
Passive House efficiency class	phE	phD	phC	phB	phA

www.passivehouse.com

Comar Architectural Aluminium Systems, The Parkside Group Limited
Unit 5, 17 Willow Lane, CR4 4NX Mitcham, United Kingdom
☎ +44 20 8685 9685 | ✉ projects@parksidegroup.co.uk | http://www.comar-alu.co.uk |



Calculation model



Isothermal

Description

Thermally broken aluminum frame with PU-foam core (0,051 W/(mK)). SWISSPACER Ultimate.

Explanation

The window U-values were calculated for the test window size of 1.23 m × 1.48 m with U_g = 0.70 W/(m² K).
If a higher quality glazing is used, the window U-values will improve as follows:

Glazing	U_g =	0.70	0.64	0.58	0.52	W/(m² K)
		↓	↓	↓	↓	
Window	U_W =	0.77	0.74	0.70	0.66	W/(m² K)

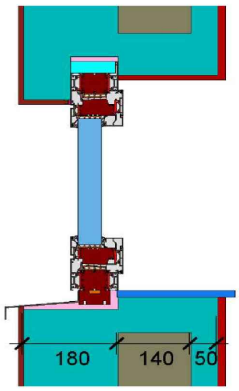
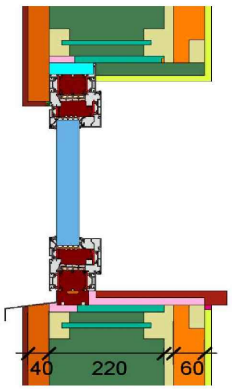
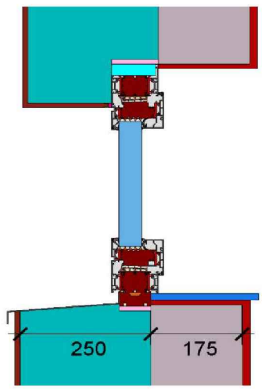
Transparent building components are classified into efficiency classes depending on the heat losses through the opaque part. The frame U-Values, frame widths, thermal bridges at the glazing edge, and the glazing edge lengths are included in these heat losses. A more detailed report of the calculations performed in the context of certification is available from the manufacturer.

The Passive House Institute has defined international component criteria for seven climate zones. In principle, components which have been certified for climate zones with higher requirements may also be used in climates with less stringent requirements. In a particular climate zone it may make sense to use a component of a higher thermal quality which has been certified for a climate zone with more stringent requirements.

Further information relating to certification
can be found on www.passivehouse.com and passipedia.org.

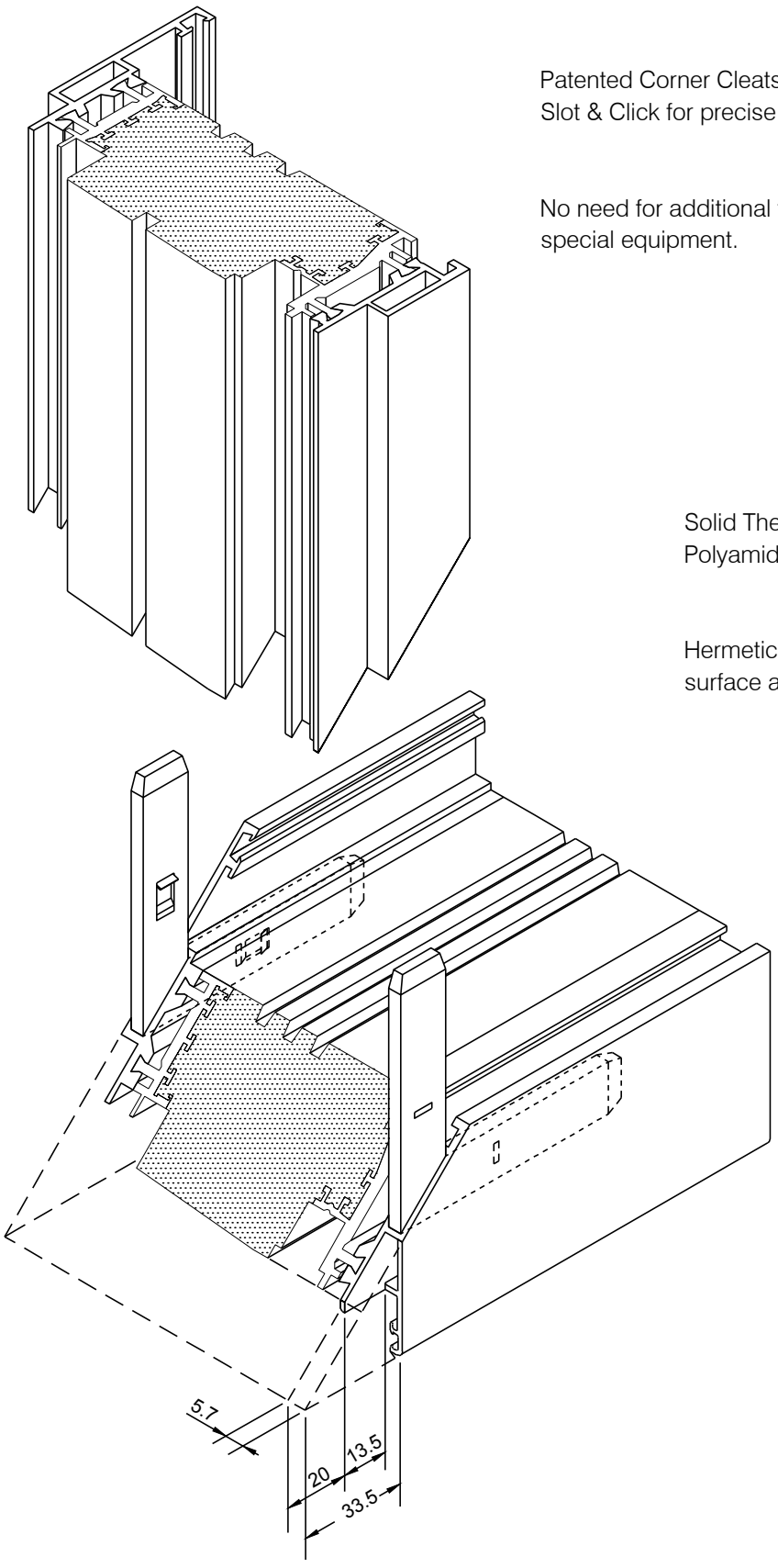
Frame values		Frame width b_f mm	U-value frame U_f W/(m² K)	Ψ-glass edge Ψ_g W/(m K)	Temp. Factor $f_{Rsi=0.25}$ [-]
Top	(to)	142	0.70	0.028	0.76
Side	(s)	142	0.70	0.028	0.76
Bottom	(bo)	147	0.79	0.028	0.76
Mullion flying	(fm)	134	0.78	0.029	0.76
Spacer: SWISSPACER Ultimate			Secondary seal: Polysulfide		

Validated installations

Insulated formwork blocks		Timber frame		EIFS	
					
$\Psi_{install}$	W/(m K)	$\Psi_{install}$	W/(m K)	$\Psi_{install}$	W/(m K)
Top	0.002	Top	0.023	Top	0.007
Left	0.002	Left	0.023	Left	0.007
Right	0.002	Right	0.023	Right	0.007
Bottom	0.008	Bottom	0.025	Bottom	0.023
$U_{W,installed}$ = 0.78 W/(m² K)		$U_{W,installed}$ = 0.84 W/(m² K)		$U_{W,installed}$ = 0.81 W/(m² K)	

CONTENTS

70% FASTER FABRICATION



Patented Corner Cleats that simply Slot & Click for precise alignment.

No need for additional tooling or special equipment.

Solid Thermal Break with integral Polyamide strips creates joint stability.

Hermetically sealed corners through full surface adhesion of cut surfaces.

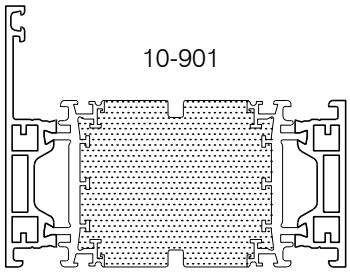
Thermal Break with integral gasket ports, ensures rapid gasket fit & precise location to provide superior thermal insulation.

100% recyclable.

PROFILES BROADSHEET

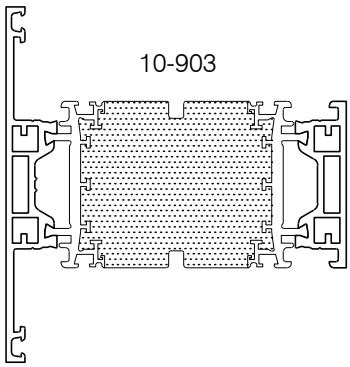
OUTER FRAMES

10-901



OUTER FRAME - 69mm

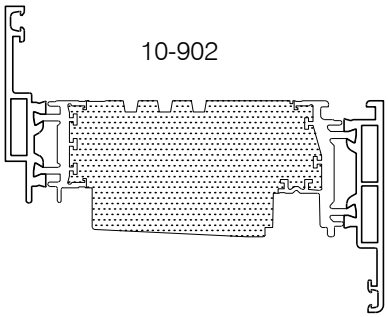
10-903



MULLION / TRANSOM - 94mm

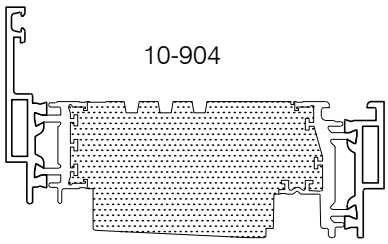
VENT FRAMES

10-902



VENT - 81mm

10-904



VENT - 61mm

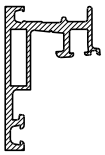
GASKETS, BEADS & ADAPTORS BROADSHEET

ADAPTOR PROFILES

10-911

CURTAIN WALL ADAPTOR

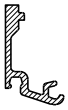
10-910



FRENCH CASEMENT
REBATE LEG

GLAZING BEADS

10-958

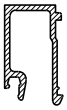


GLAZING BEAD 59-63mm

10-959

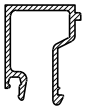
GLAZING BEAD 54-58mm

10-953



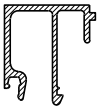
GLAZING BEAD 49-53mm

10-960



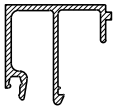
GLAZING BEAD 45-48mm

10-961



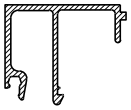
GLAZING BEAD 41-44mm

10-962



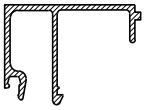
GLAZING BEAD 37-40mm

10-957



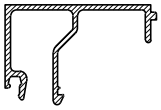
GLAZING BEAD 33-36mm

10-963



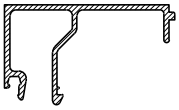
GLAZING BEAD 29-32mm

10-964



GLAZING BEAD 34-38mm

10-965



GLAZING BEAD 29-33mm

GASKETS & ACCESSORIES

GK011

GK013

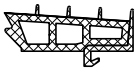
GK012

GK018

GK010

GK014

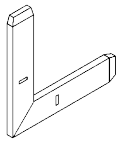
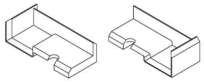
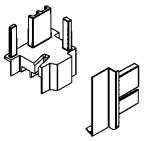
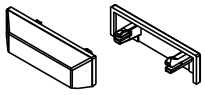
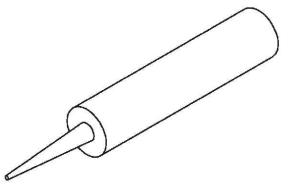
GK015



GK016

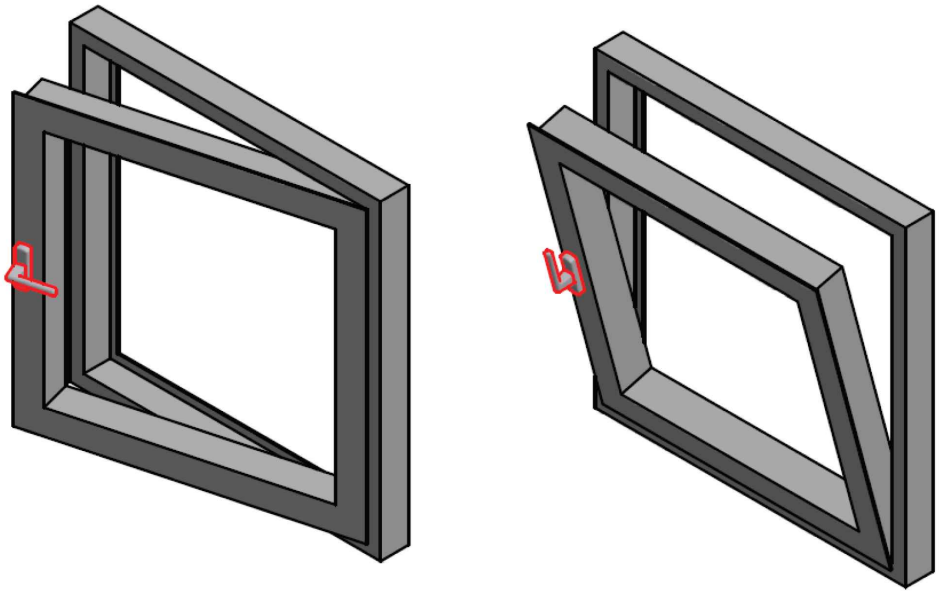
GK017

ACCESSORIES BROADSHEET

Sprung Cleat	WS101XSLF	
Chevron	WS102XSLF	
End Cap	EC103XSLF	
End Cap, French Window	EC104KIT	
Drainage Cap	WS023DBLK(Black) WS023EWHT(White)	
Adhesive	SE007BLK(Black) SE007WHT(White)	
Gasket Adhesive	SE009XSLF	
Mitre Clamp	TL1010XSLF	
Mitre Clamp Tong Tool	TL1011XSLF	
Gasket Cutter	TL1012XSLF	

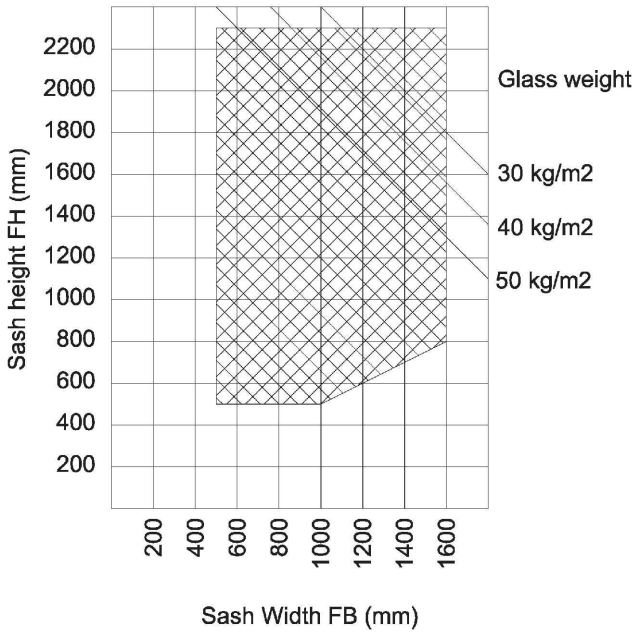
LIMITATIONS

Tilt & Turn Window with Concealed Hinges



Comar 10 Passivhaus
Certified Component

Maximum weight of sash 100 kg

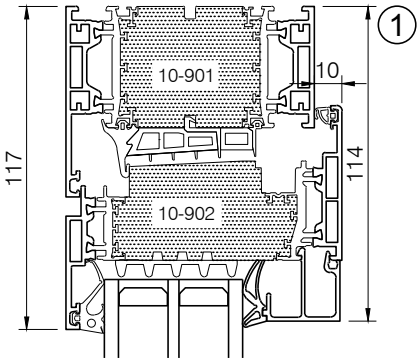


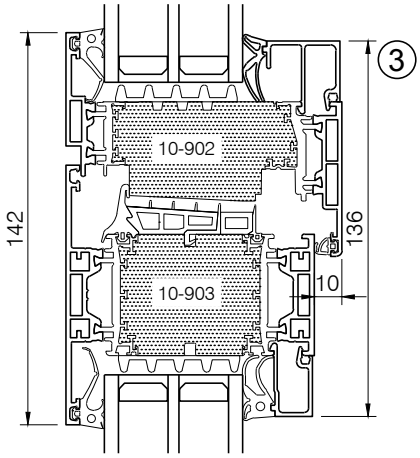
comar
ARCHITECTURAL ALUMINIUM SYSTEMS

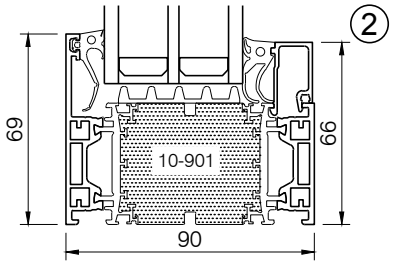
comar10
passivhaus
certified component

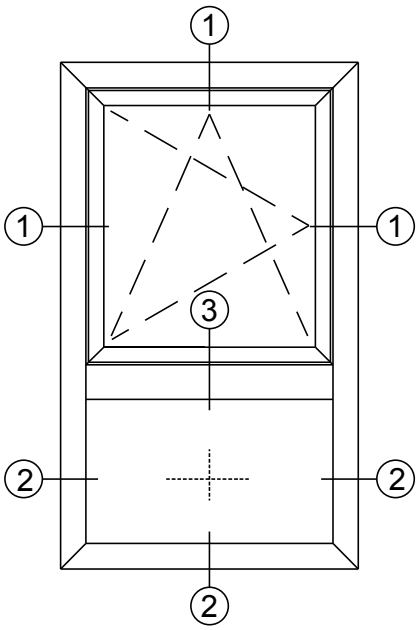
2.00

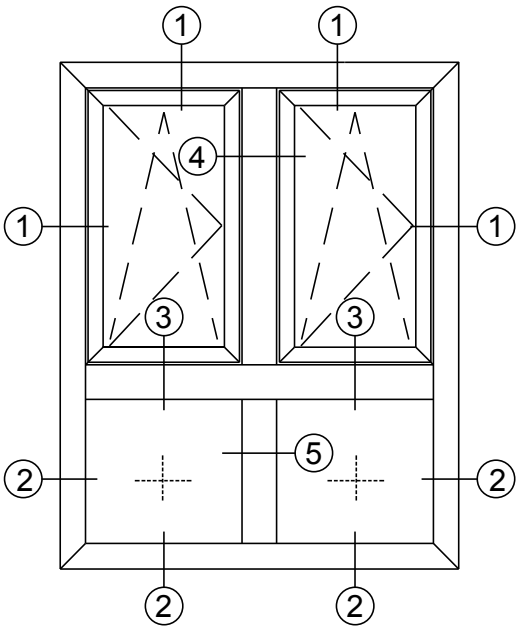
INWARD OPENING WINDOW VIEW & SECTIONS

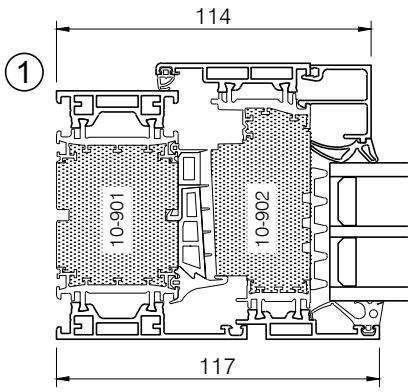


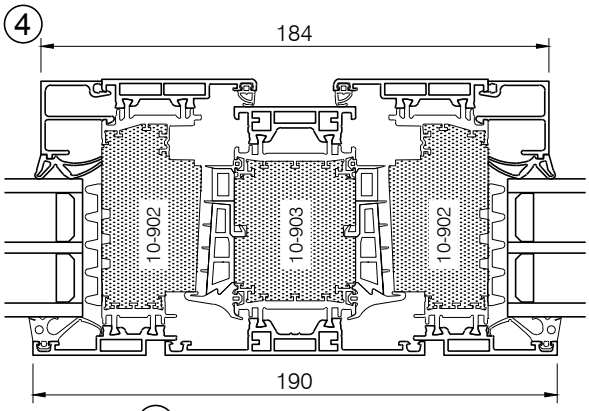


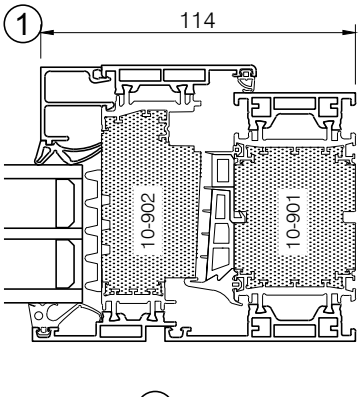


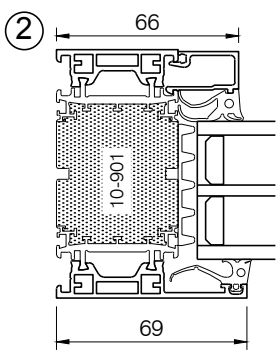


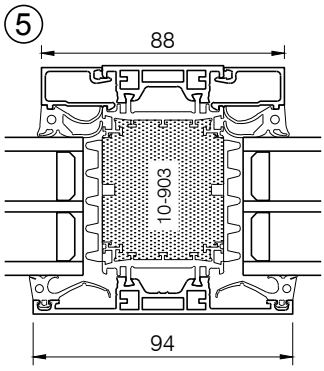


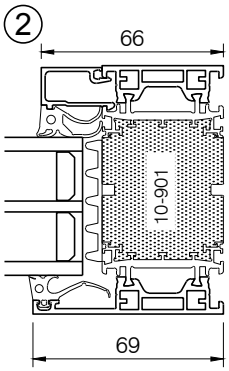




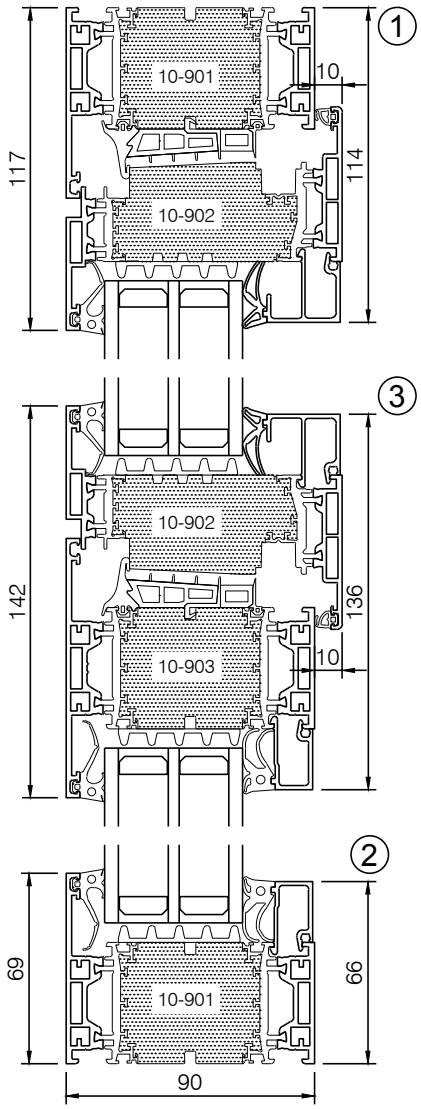


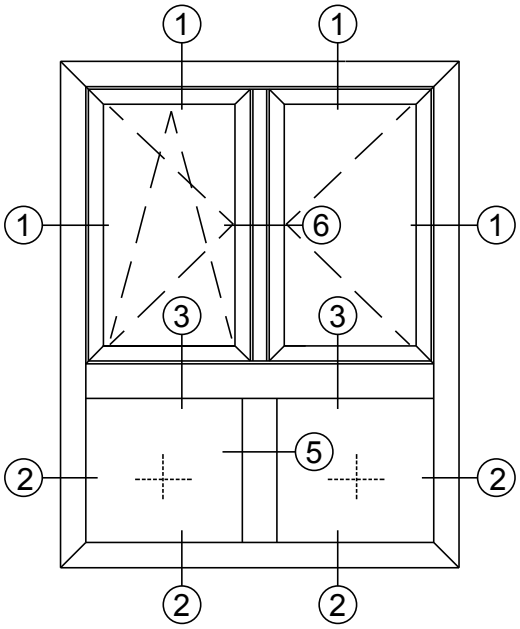


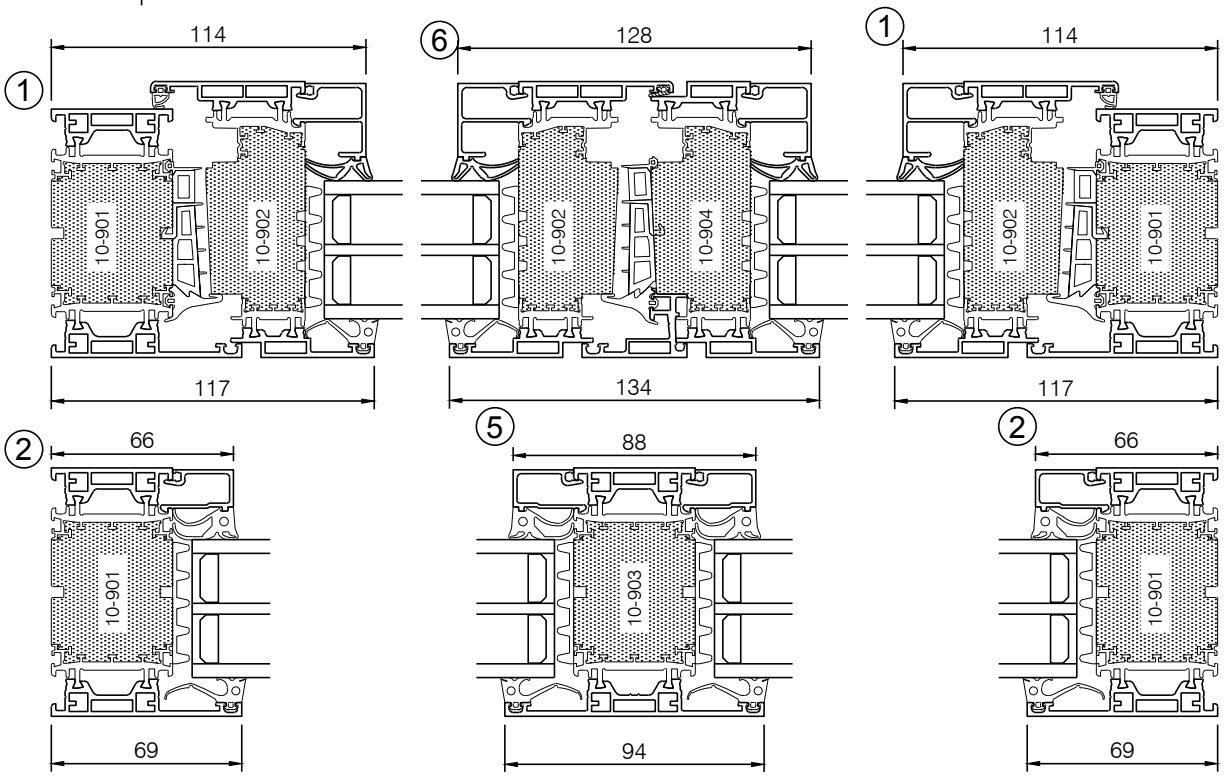




INWARD OPENING WINDOW WITHOUT POST VIEW & SECTIONS





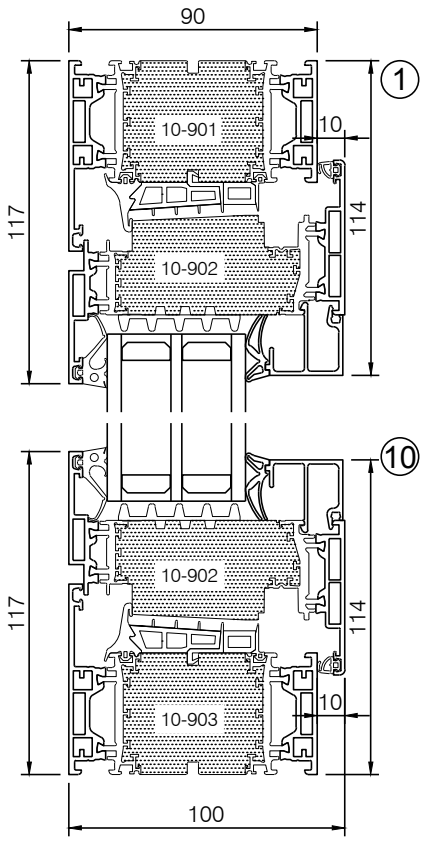


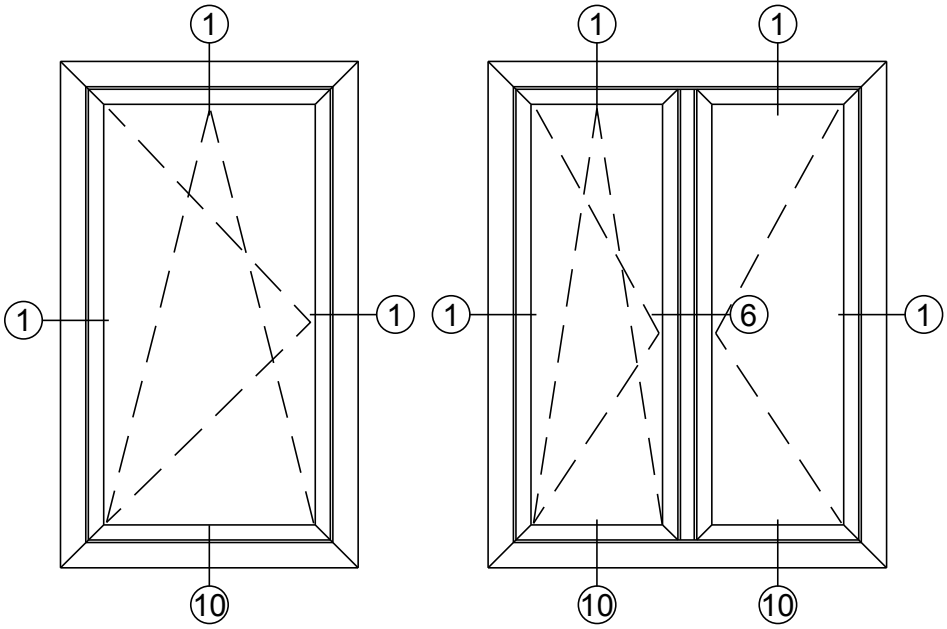
comar
ARCHITECTURAL ALUMINIUM SYSTEMS

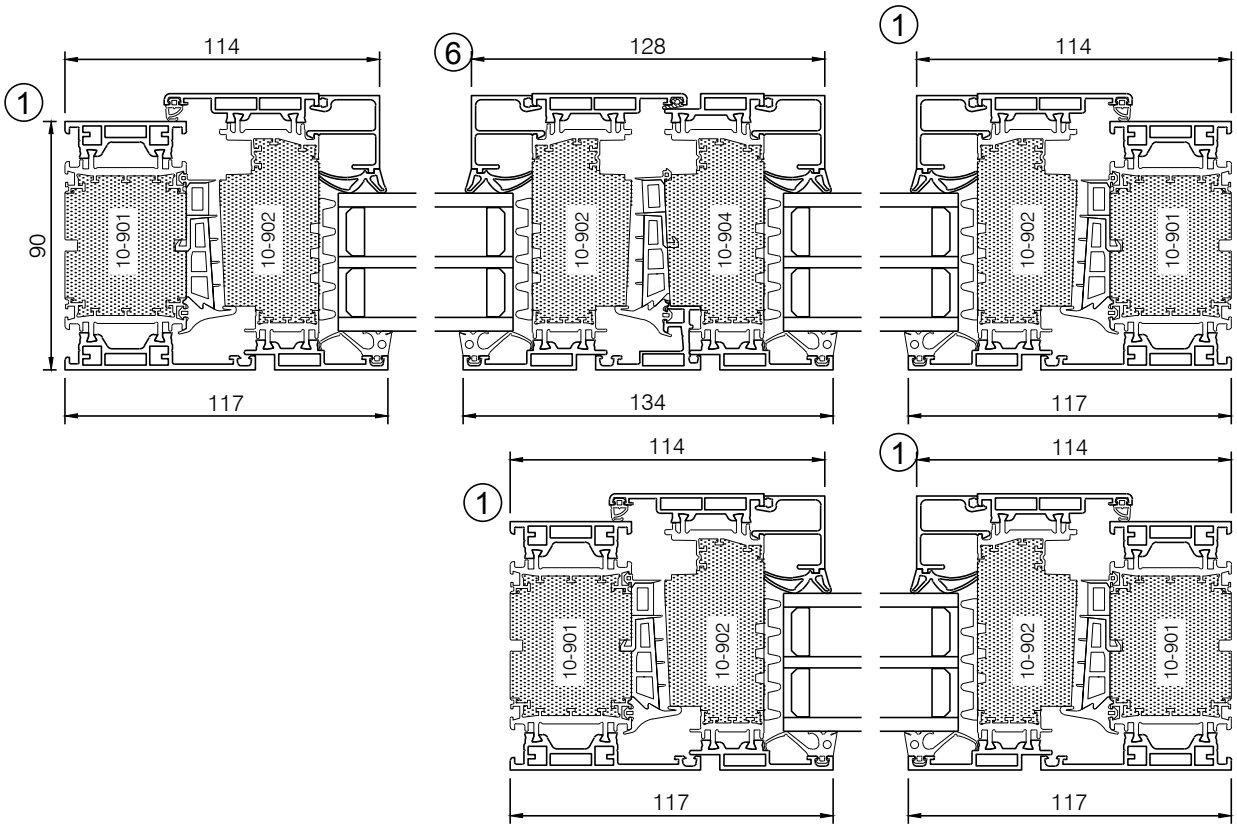
comar10
passivhaus
certified component

2.02

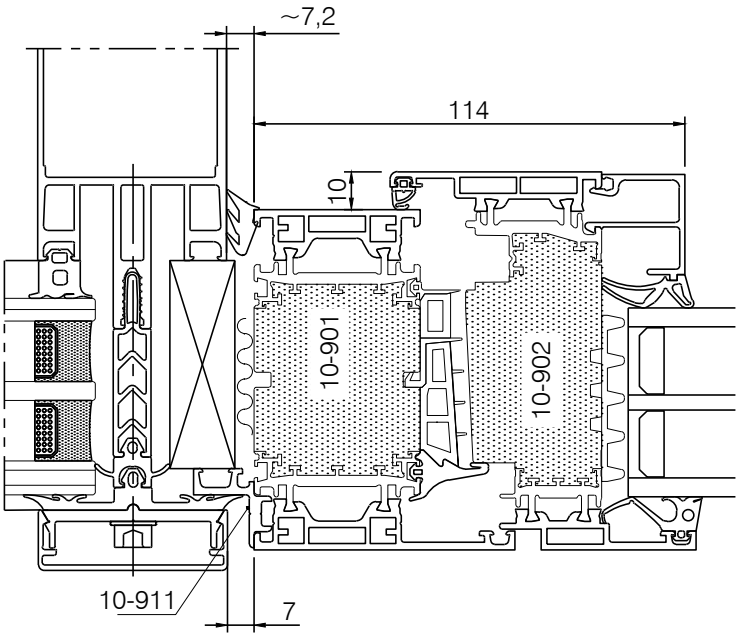
FRENCH CASEMENT WINDOW VIEW & SECTIONS



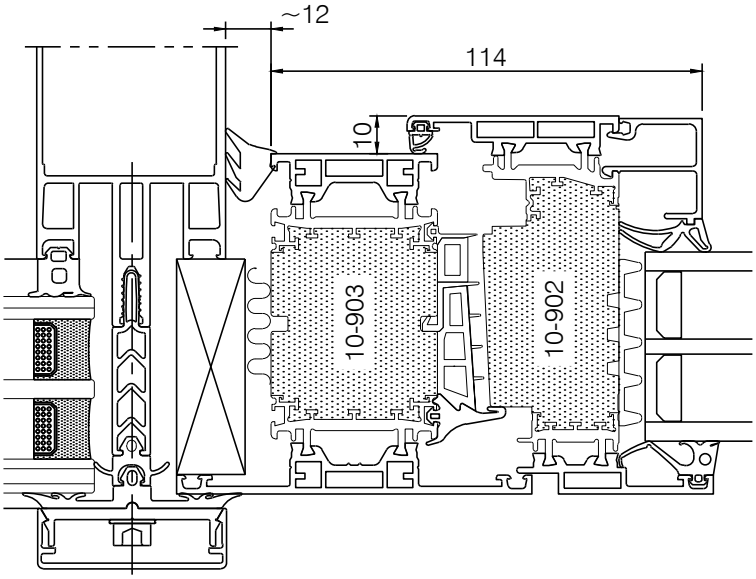




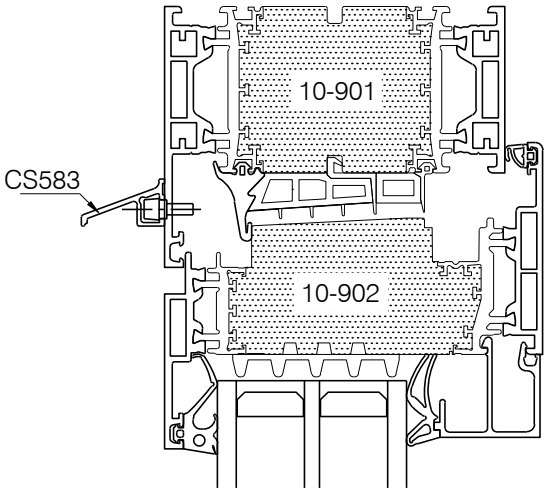
CURTAIN WALLING COUPLING DETAILS



Comar 6EFT Coupling
using 10-911 Adaptor
with 10-901 Outer Frame.

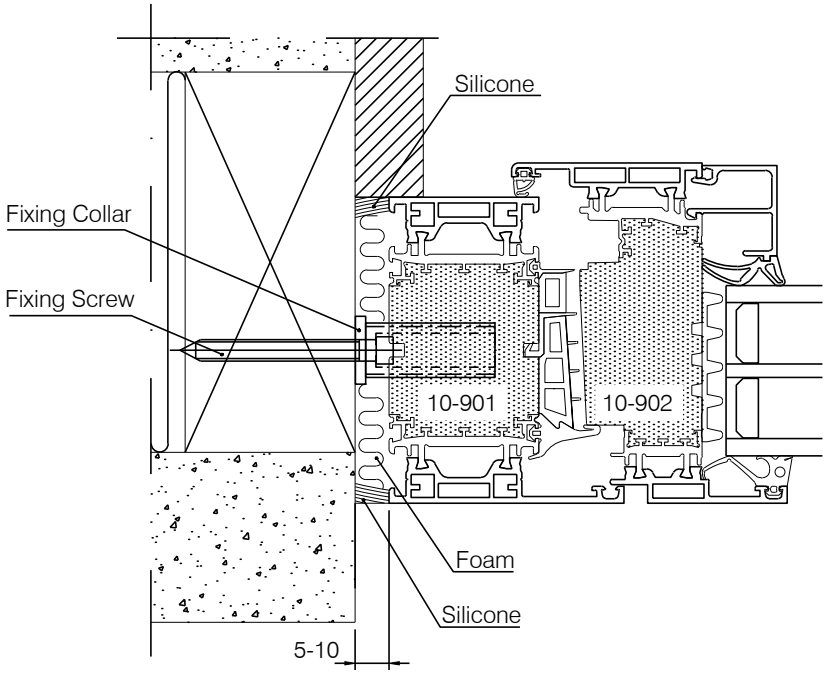


Comar 6EFT Coupling
with 10-903 Outer Frame.

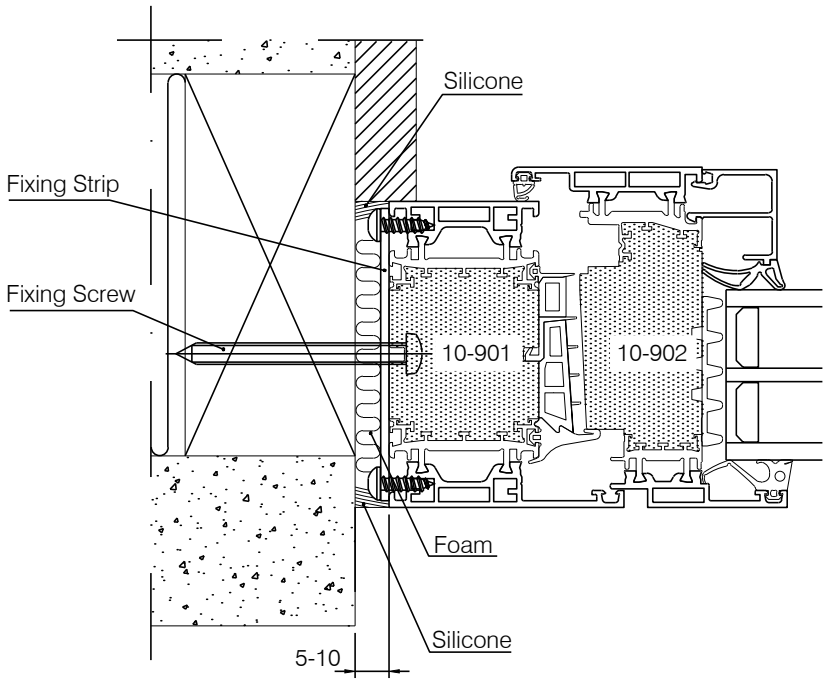


Position of Comar Drip CS583.

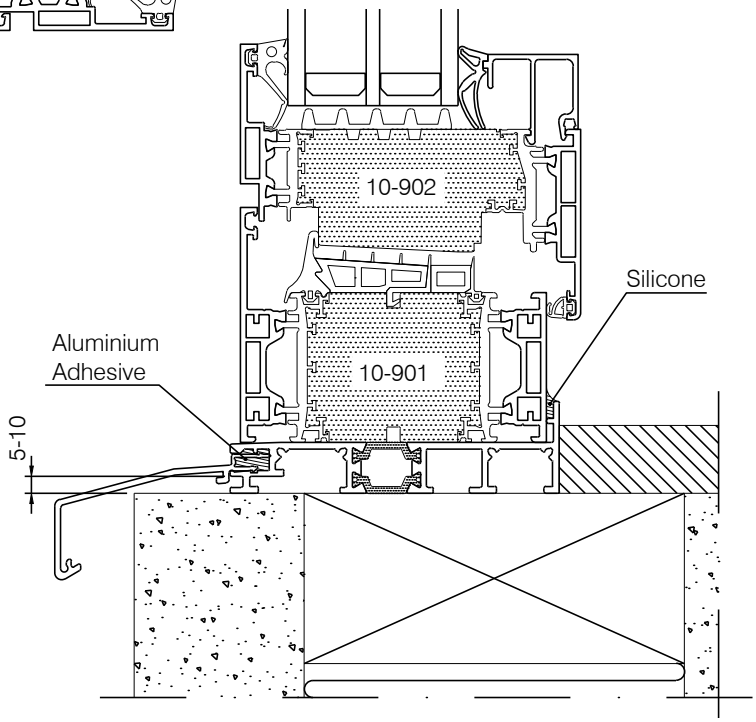
COUPLING PERIPHERY DETAILS



Jamb detail using
10-901 Outer Frame.

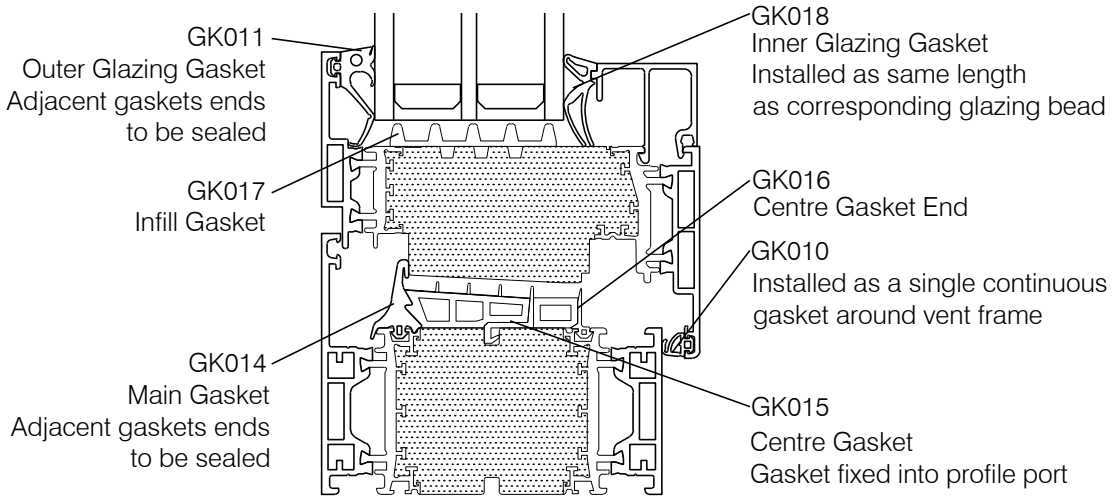


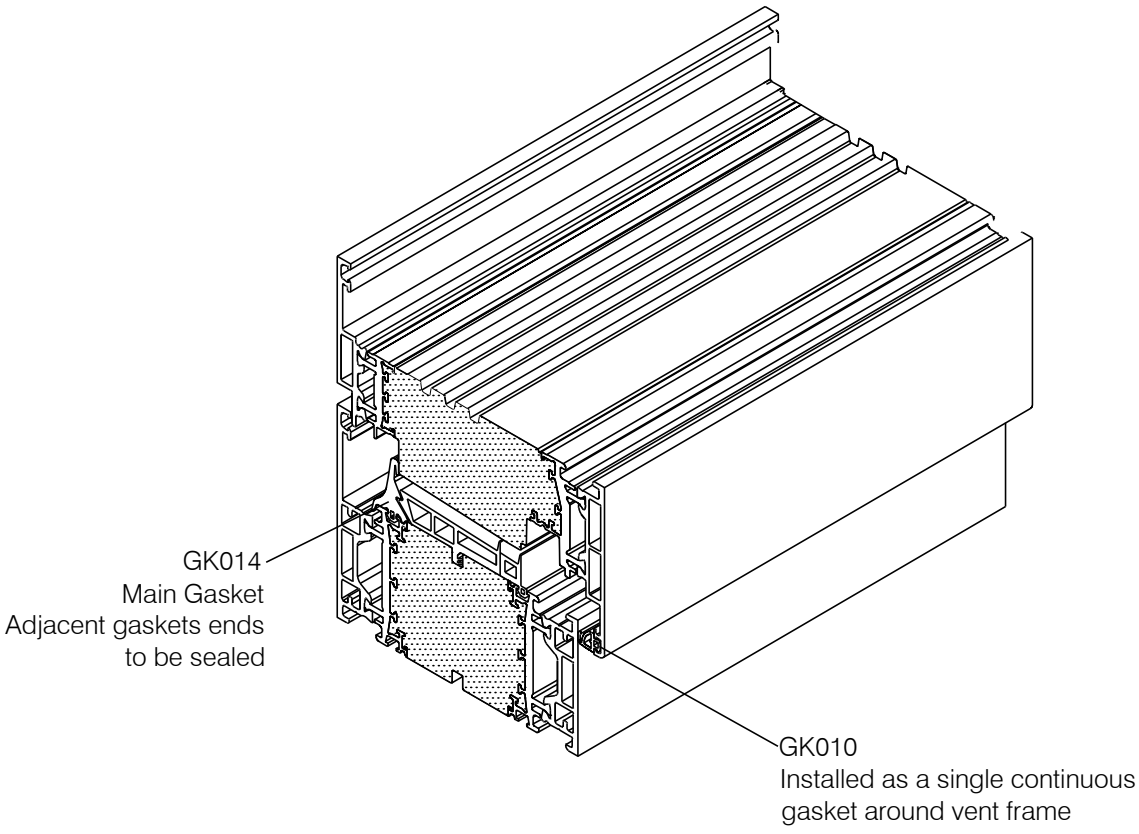
Jamb detail using
10-901 Outer Frame
with Fixing Strip.



Jamb detail using
10-901 Outer Frame with
Framework Sub Sill CS485
and Sub Sill Nosing CS588.

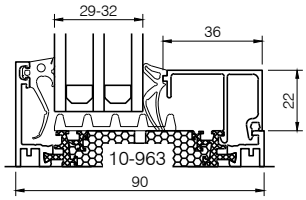
GASKET INSTALLATION & DETAILS

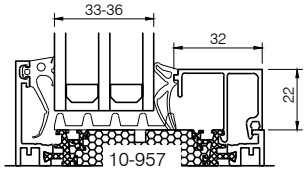


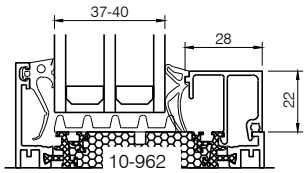


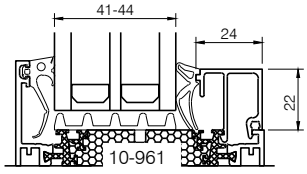
GLAZING OPTIONS FIXED LIGHT

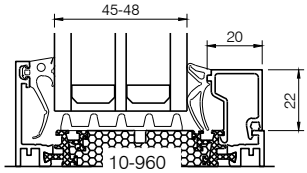
Glazing Thickness	Glazing Bead	Outer Gasket	Inner Gasket
29 30 31 32	10-963	GK011	GK013 GK012 GK012 GK018
33 34 35 36	10-957	GK011	GK013 GK012 GK012 GK018
37 38 39 40	10-962	GK011	GK013 GK012 GK012 GK018
41 42 43 44	10-961	GK011	GK013 GK012 GK012 GK018
45 46 47 48	10-960	GK011	GK013 GK012 GK012 GK018
49 50 51 52 53	10-953	GK011	GK013 GK013 GK012 GK012 GK018
54 55 56 57 58	10-959	GK011	GK013 GK013 GK012 GK012 GK018
59 60 61 62 63	10-958	GK011	GK013 GK013 GK012 GK012 GK018

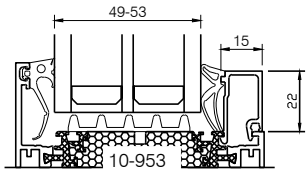


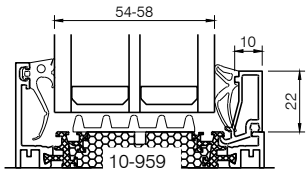


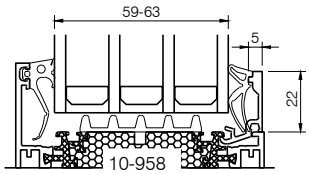












GK011

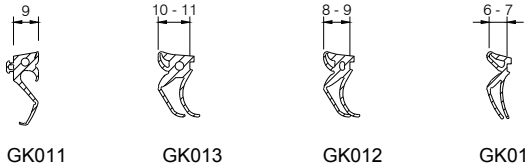
GK013

GK012

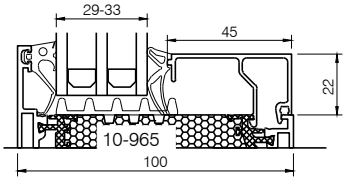
GK018

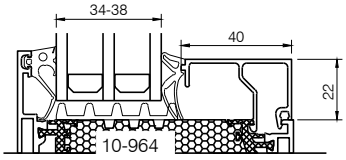
GLAZING OPTIONS INWARD OPENING WINDOW

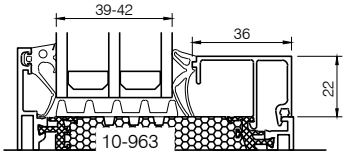
Glazing Thickness	Glazing Bead	Outer Gasket	Inner Gasket
29 30 31 32 33	10-965	GK011	GK013 GK013 GK012 GK012 GK018
34 35 36 37 38	10-964	GK011	GK013 GK013 GK012 GK012 GK018
39 40 41 42	10-963	GK011	GK013 GK012 GK012 GK018
43 44 45 46	10-957	GK011	GK013 GK012 GK012 GK018
47 48 49 50	10-962	GK011	GK013 GK012 GK012 GK018
51 52 53 54	10-961	GK011	GK013 GK012 GK012 GK018
55 56 57 58	10-960	GK011	GK013 GK012 GK012 GK018
59 60 61 62 63	10-953	GK011	GK013 GK013 GK012 GK012 GK018
64 65 66 67 68	10-959	GK011	GK013 GK013 GK012 GK012 GK018
69 70 71 72 73	10-958	GK011	GK013 GK013 GK012 GK012 GK018

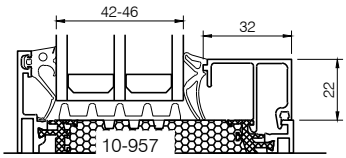


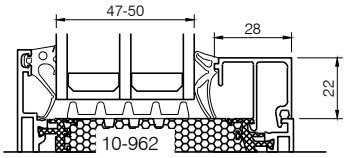
GK011 GK013 GK012 GK018

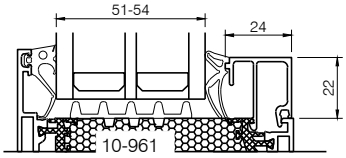


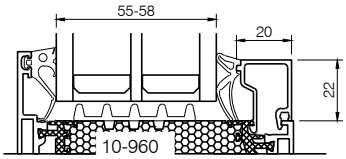


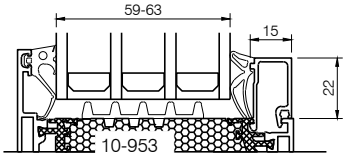


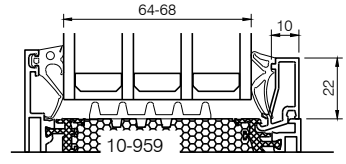


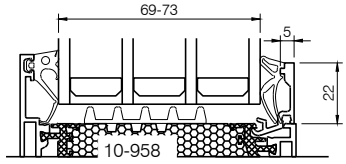




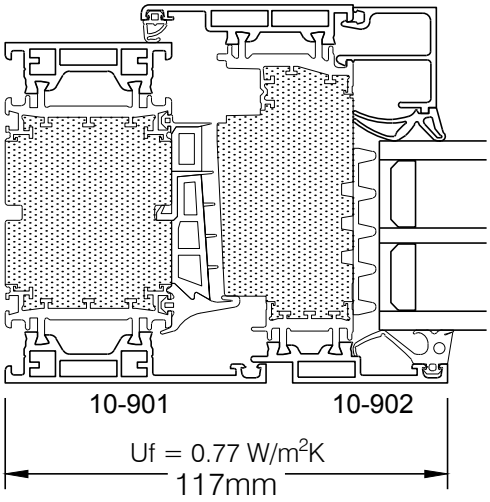


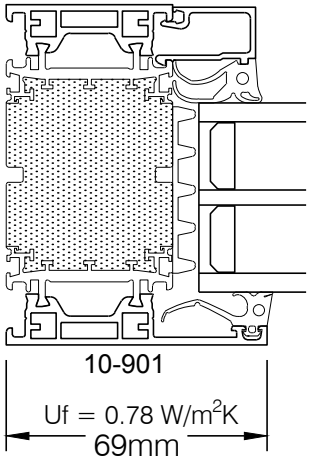






U-VALUES & PROPERTIES





COMAR 10 Passivhaus	U_g [W/m²K]	U_w [W/m²K]
Openable Window Triple Glazed Swisspacer ULTIMATE 1230 X 1480mm	1.0	1.0
	0.70	0.80
	0.60	0.73
	0.50	0.66

COMAR 10 Passivhaus	U_g [W/m²K]	U_w [W/m²K]
Fixed Light Triple Glazed Swisspacer ULTIMATE 1230 X 1480mm	1.0	1.0
	0.70	0.80
	0.60	0.72
	0.50	0.64

Properties for openable window (1230 x 1480 mm)

Resistance to Wind Load	C5 / B5
Watertightness	9A
Air Permeability	4
Acoustic Performance, R_w ($C;C_{tr}$)	max. 46 (-1; -4) dB
Burglary Resistance	RC2

comar

ARCHITECTURAL ALUMINIUM SYSTEMS