

REYNAERS aluminium



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For over 50 years, Reynaers Aluminium has been designing cutting-edge glazing solutions for some of the most iconic buildings in the world. Engineered without compromise, our range of aluminium windows, doors and curtain wall systems have been specified time and again by the world's leading architects and construction companies.

Reynaers Aluminium is recognised globally for the premium quality of its products. To help us maintain this reputation, we have invested in a world-class design and testing facility. When you choose Reynaers Aluminium products, you can rest assured that you are choosing a product that will not only look great, but will also offer industry-leading performance and reliability.

TOGETHER FOR BETTER

This is our motto. We want to be a true business partner, sharing our worldwide knowledge with fabricators, architects and other stakeholders. With our open and proactive collaboration approach we can realize the highest standards and get the best results in any project, big or small, together.

READY FOR THE FUTURE

Reynaers Aluminium is the market leader in Belgium and we have acquired a strong market position in over 40 countries, each with its own offices.



The Reynaers Campus is the corporate headquarters of the Reynaers Group in Duffel (Belgium). The Reynaers Campus is the inspiring and dynamic work environment of all Reynaers Aluminium employees and a place for partners to experience the latest products and innovations in full interactivity.

At the Reynaers Campus, you can visit the Experience Centre that is designed to bring people together and inspire you with our latest solutions and state-of-the-art technologies for architectural building solutions. In the Experience Room, you can discover our unique offering, assisted by inspiring digital applications. For a full immersive experience, a visit to AVALON can be booked where you can visit future buildings through a shared virtual reality experience.



In addition to these facilities, the Reynaers Campus also includes the Technology Centre, the largest privately owned innovation and testing centre, for the validation of architectural and high-tech window, door and façade concepts. One of the showpieces of the Technology centre is a state-of-the-art testing wall for façades with a height of 15 meters, allowing air-wind-water testing of multi-storey façades. This part of the Reynaers Campus also accommodates the 'R-Lab'; our dedicated lab for prototyping and 3D printing, resulting in faster and more accurate R & D tracks.







IMPRESSIVE GROWTH

The Reynaers Group has experienced massive growth in the last 30 years. Having grown more than 200% over the last 10 years, Reynaers Aluminium is considered by all players in the industry as one of the leaders in its business. In 2017 the Reynaers Group achieved a turnover of over 426 million euros and has nearly 2000 employees throughout the world.

REYNAERS





MasterLine 10

MasterLine 8



CS 77



CS 68





ES 50



SlimLine 68



SlimLine 38



CS 24-SL



CS 59Pa



ES 45Pa



Sensity



DECISION MATRIX

Windows & Doors



WINDOW MATRIX	,	MasterLine 10	MasterLine 8	Sensity	CS 77	CS 68	ES 50	SlimLine 68	SlimLine 38	CS 24-SL	CS 59Pa	ES 45Pa
FUNCTIONA												
HIDDEN VEN	NT											
RENAISSAN	CE											
DECO												
CUBIC												
FERRO												
CLASSIC												
SOFTLINE												

DOOR MATRIX	MasterLine 10	MasterLine 8	Sensity	CS 77	CS 77-FP	CS 77-BP	CS 68	ES 50	SL 68	SL 38	CS 24-SL	CS 59Pa	ES 45Pa
FLUSH DOOR WITH SURFACE MOUNTED HINGES													
FLUSH DOOR WITH BARREL HINGES													
WINDOW DOOR													



PERFOR-MANCE MATRIX Windows & Doors

		Master	Line 10	Maste	rLine 8	Sensity	CS	77	CS 77-FP/SP	CS 77-BP	
SAFET	TY VARIANTS										
%	Burglary Proof										
	Fire Proof										
	Bullet Proof										
	Smoke leakage control										
SUSTA	AINABILITY										
	High Insulation										
	Passive Housing Certificate				(1)						
	Ventalis										
MINIM	IAL VISIBLE WIDTH FRAMI	E/VENT									
		104 mm	134 mm	97 mm	153 mm	117 mm	89 mm	150 mm	150 mm	128 mm	150 m
PERFO	ORMANCES										
	Insulation smallest frame/ vent section (Uf-value 2)	0.9 W/m²K	0.79 W/m²K	1.2 W/m²K	1.4 W/m²K	1.4 W/m²K	1.8 W/m²K	2.1 W/m²K	2.2 W/m²K	1.8 W/m²K	-
2	Air tightness Class (value in Pa)	4 (600 Pa)	-		4 0 Pa)	4 (600 Pa)		4 0 Pa)	-		4 0 Pa)
(2)	Wind load resistance Class (value in Pa)	C4 (1600 Pa)	-	C5 (2000 Pa)	C3 (1200 Pa)	C4 (1600 Pa)	C5 (2000 Pa)	C2 (300 Pa)	-	C5 (2000 Pa)	C2 (300 F
	Water tightness Class (value in Pa)	E900 (900 Pa)	-	E900 (900 Pa)	7A (300 Pa)	9A (600 Pa)	E900 (900Pa)	7A (300 Pa)	-	E900 (900 Pa)	7A (300 F

(1)	Panel	door	only
(2)	Wind	owdo	or

cs	68	ES	50	SL 68 ⁽³⁾	SL	38	CS 2	4-SL ⁽³⁾	CS 5	69Pa	ES 4	45Pa
									,			
						(4)						
89 mm	150 mm	86 mm	146 mm	67 mm	72 mm	97 mm	50 mm	103 mm	85 mm	139 mm	84 mm	115 mm
2.5 W/m²K	2.9 W/m²K	2.3 W/m²K	3.2 W/m ² K	2.5 W/m²K	1.9 W/m²K	1.9 W/m²K	3.3 W/m²K	3.3 W/m²K	-	-	-	-
	4 O Pa)	(600		4 (600 Pa)	4 (600 Pa)	3 (600 Pa)		4) Pa)	4 (600 Pa)	-		4 O Pa)
	(4 0 Pa)	C4 (1600 Pa)	C2 (300 Pa)	C4 (1600 Pa)	C4 (1600 Pa)	C3 (1200 Pa)	(120)	:3 0 Pa)	C5 (2000 Pa)	-	C5 (2000 Pa)	C2 (300 Pa)
E900 (900 Pa)	7A (300 Pa)	9A (600 Pa)	4A (150 Pa)	E900 (900 Pa)	9A (600 Pa)	4A (150 Pa)	E750 (750 Pa)	4A (150 Pa)	E750 (750 Pa)	-		PA O Pa)



⁽³⁾ Outside opening only (4) Dutch standard only

Check CE passport for the most recent data



WINDOWS	MasterLine 10	MasterLine 8	Sensity	CS 77	CS 68	ES 50	SL 68	SL 38	CS 24-SL	CS 59Pa	ES 45Pa
		*									

DOORS	MasterLine 10	MasterLine 8	Sensity	CS 77	CS 77-FP	CS 77-BP	CS 68	ES 50	SL 68	SL 38	CS 24-SL	CS 59Pa	ES 45Pa

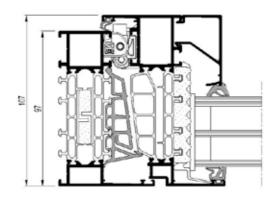
^{*} CS 86-HI Solution

MasterLine 10

Windows







No compromise

No need to compromise: with MasterLine 10 you can have it all. This new system unites the best of all worlds: unlimited design freedom combined with ultimate comfort and optimal insulation performance.

MasterLine 10 windows are designed for the building trends of today and tomorrow: low energy building, maximum daylight access, superb performance and safe homes (burglar resistance class 3).

The product offering of MasterLine 10 windows is truly unique in its applicability: inward opening windows, a full range of transoms and frames, connection profiles with Sliding and Curtain Wall systems, but also the design freedom that is offered with the Renaissance and Deco profile

The windows are offered with a Passive House certificate!

The combination of all these features makes MasterLine 10 the ideal solution for domestic as well as public projects.









TECHNICAL CHARACTERISTICS		FUNCTIONAL	RENAISSANCE	DECO	
Min visible width inward annuing window	Frame	60 mm	60 mm	60 mm	
Min. visible width inward opening window	Vent	37 mm	37 mm	37 mm	
Min. visible width inward opening	Frame	60 mm	60 mm	60 mm	
window-door	Vent	67 mm	67 mm	67 mm	
Overall system death window	Frame	97 mm	107 mm	107 mm	
Overall system depth window	Vent	107 mm	107 mm	107 mm	
Rebate height		27 mm	27 mm	27 mm	
Glass thickness	Frame	up to 88 mm	up to 88 mm	up to 88 mm	
	Vent	up to 88 mm	up to 78 mm	up to 78 mm	

PERFORMANCES							
	Thermal insulation						

Uf-value down to 0.76 W/m²K depending on the frame/vent combination and the glass thickness.

Acoustic performance

Air tightness

Wind load resistance

Up to 1600 Pa (class 4)

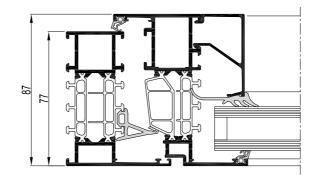
Water tightness

Burglar resistance

Rw(C;Ctr) = 46 (-1; -4) dBUp to 600 Pa (class 4)

Up to 900 Pa (class E900)

Up to RC 3 (EN 1627)





MasterLine 8

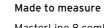
Windows & Doors











MasterLine 8 combines a wide design range that offers countless design opportunities with first in class performance in terms of thermal insulation, air-and water-tightness, and production speed.

This new generation of innovative window and door solutions mirrors the current architectural trend towards maximising daylight while offering ultimate insulation levels. The MasterLine 8 panel door has even achieved Passivhaus certification.

MasterLine 8 meets the demands of building professionals who value excellent performance, durability, comfort, productivity and sustainability.









ICTIONAL	RENAISSANCE	DECO	HIDDEN VE

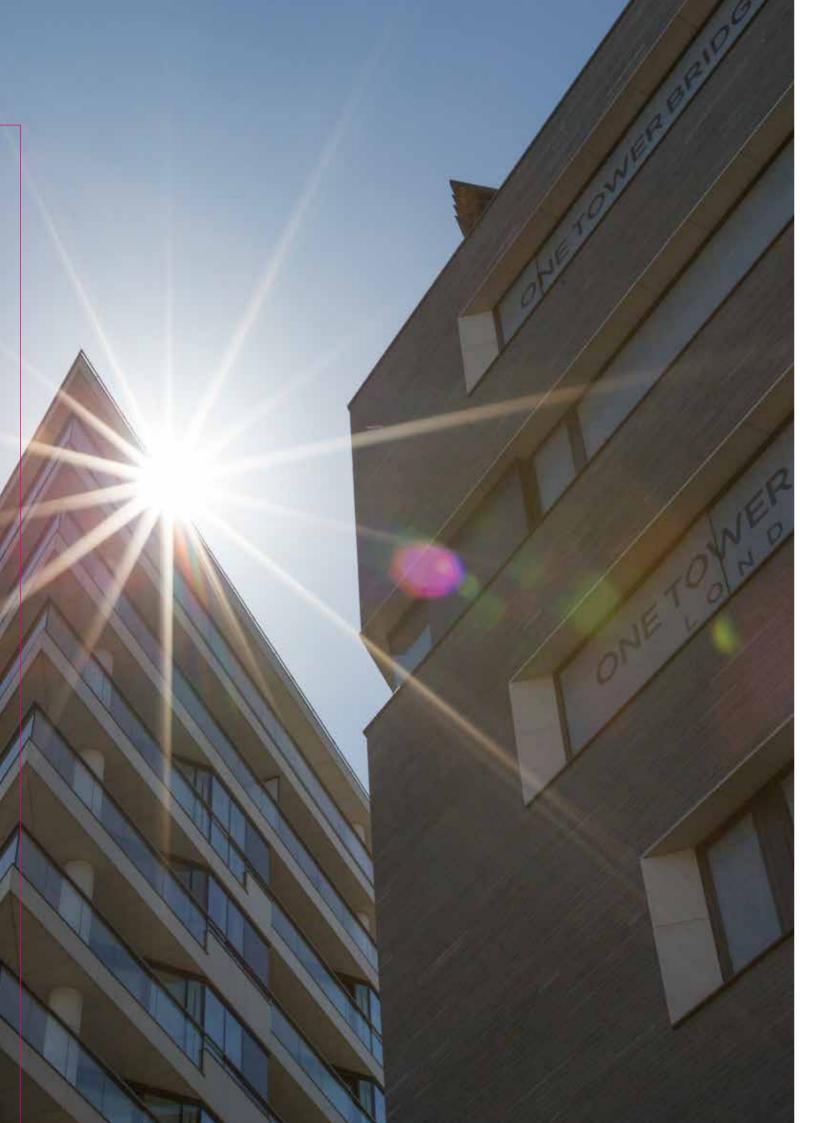
TECHNICAL CHARACTERISTICS		FUNCTIONAL	RENAISSANCE	DECO	HIDDEN VENT
Min of the contable income and a contable income	Frame	53 mm	53 mm	53 mm	80 mm
Min. visible width inward opening window	Vent	37 mm	37 mm	37 mm	-
Min. visible width inward opening	Frame	60 mm	60 mm	60 mm	not visible
window-door	Vent	67 mm	67 mm	67 mm	not visible
Overall evaluate death window	Frame	77 mm	87 mm	87 mm	77 mm
Overall system depth window	Vent	87 mm	87 mm	87 mm	80 mm
Rebate height		27 mm	27 mm	27 mm	27 mm
Glass thickness	Frame	up to 62 mm			
	Vent	up to 72 mm	up to 62 mm	un to 62 mm	up to 62 mm

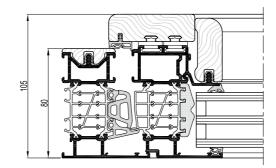
PERFORMANCES	
Thermal insulation	Uf-value down to 1.0 W/m²K depending on the frame/vent combination and the glass thickness.
Acoustic performance	Rw(C;Ctr) = 45 (-1; -4) dB, depending on glazing type
Air tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 1600 Pa (class 4)
Water tightness	Up to 1200 Pa (class E1200)

Burglar resistance

Up to RC 3 (EN 1627)











Combining the best of aluminium and wood

SENSITY is a highly insulated aluminium system for windows, based on the technologically refined CS 86-HI system, providing the best guarantee for a comfortable interior climate. The thermally insulated aluminium frame will ensure the durability, wind and water tightness and accoustic performance of your windows. This window system is perfectly suitable for different architectural creations. The aluminium at the outside allows you to personallize your windows, by selecting from a wide range of RAL colors, structural Coatex surfaces or even give it a "woodenlook" finish, while maintaining the ultimate low maintenance properties of the aluminium.



BLEACHED OAK modern interior



TOBACCO cozy interior



WENGE luxury interior

TECHNICAL CHARACTERISTICS

Min. Visible width inward opening window

Overall system depth window

Rebate height
Glass thickness

	FUNCTIONAL	
Frame	64 mm	
Vent	35 mm	
Frame	80 mm	
Vent	100 mm	
	25 mm	
	up to 52 mm	

PERFORMANCES

Thermal insulation







Water tightness

Uf-value down to 1.1 W/m²K depending on the frame/vent combination and the glass thickness

Rw (C;Ctr) = 37 (-1,-3) / 39 (-1,-3) dB

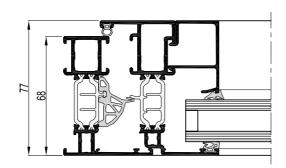
Up to 600 Pa (class 4)

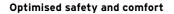
Up to 2000 Pa (class 5)

Up to 600 Pa (class 9A)









CS 77 is a high insulating window and door system that meets elevated requirements regarding thermal insulation, stability and security.

The system's performance regarding acoustics, water- and air tightness, but also for specific applications like Bullet - and Fire Resistance, meets the most severe European standards. Moreover, CS 77 is available in different burglar resistance levels (class 2 & 3) making it an extremely secure system. For insulation, CS 77 even achieved the Swiss Minergie® component label.

To match the different building types, the system is available in a variety of aesthetic styles: Functional, Softline and Hidden Vent.

The CS 77 system includes a complete range of solutions for all types of inward and outward opening windows and doors. Ultimate combination possibilities with the CP 130 sliding system and Ventalis ventilation units, makes CS 77 extremely suitable for all types of building concepts, even with the highest safety requirements.



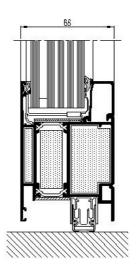






TECHNICAL CHARACTERISTICS		FUNCTIONAL	HIDDEN VENT	SOFT LINE
Min visible width inward an aring window	Frame	51 mm	76 mm	51 mm
Min. visible width inward opening window	Vent	33 mm	not visible	33 mm
Min. visible width inward opening	Frame	68 mm	-	-
flush door	Vent	76 mm	-	-
Overall system death window	Frame	68 mm	68 mm	68 mm
Overall system depth window	Vent	77 mm	72.5 mm	77 mm
Rebate height		25 mm	18.5 mm	25 mm
Glass thickness		un to 53 mm	un to 49 mm	un to 40 mm

Repate height	23 111111	10.5 11111	23 111111
Glass thickness	up to 53 mm	up to 49 mm	up to 40 mm
PERFORMANCES			
Thermal insulation	Uf-value down to 1.2 W/m²K deper and the glass thickness	nding on the frame/ve	ent combination
Acoustic performance	Rw (C;Ctr) = $36 (-1;-4) dB / 42 (-2;$ depending on the glazing type	4) dB,	
Air tightness	Up to 600 Pa (class 4)		
Wind load resistance	Up to 2000 Pa (class 5)		
Water tightness	Up to 900 Pa (class E900)		
Burglar resistance	Up to RC 3 (EN 1627 & NEN 5096)	1	



CS 77-FP60 door





The CS 77-FP EI3O and EI6O is developed based on the existing CS 77 profiles and accessories for windows and doors and extensively tested in an optimized European test and approval program. The fireproofing time span is achieved by inducing a special cooling material into the profile chambers and by using self-adhesive and water-resistant swelling gaskets. These gaskets do not need to be sealed, reducing fabrication time of the profiles and saving costs.

The CS 77 fire proof range is available as outward opening single and double doors, panic doors, combined fixed window elements as well as glazed partition walls. This extensive range of configurations offers a huge range of options and combinations for architects to work with. Furthermore a large choice of accessories and locking devices is available.

TECHNICAL CHARACTERISTICS	
Rebate height	
Glass thickness	
Glazing method	

CS 77-FP EI30	CS 77-FP EI60
25 mm	25 mm
from 15 mm to 52 mm	from 15 mm to 52 mm
dry glazing with EPDM	dry glazing with EPDM

PERFORMANCES	CS 77-FP E
European testing standards	EN 1364- EN 1634-
Classification standard	EN 13501-
Fire resistance classification	EW30, E30, EI ₁ 3
Burglar resistance	

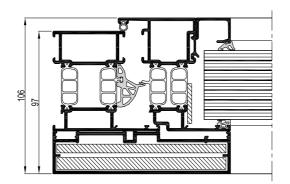
CS 77-FP EI30	CS 77-FP EI60
EN 1364-1	EN 1364-1
EN 1634-1	EN 1634-1
EN 13501-2	EN 13501-2
EW30, E30, EI ₁ 30, EI ₂ 30	E145, EW60, E60, E160

Up to RC 2 (EN 1627)







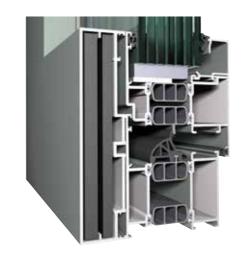




CS 77-BP is an extension of CS 77 which enables the realisation of bulletproof windows and doors according to the most severe European standards.

We offer a range of window & doors solutions for classifications FB3 up to FB6, FSG & Kalashnikov.

Optionally, the windows can be offered with a burglar resistance up to RC 3. $\label{eq:continuous} % \begin{subarray}{ll} \end{subarray} % \beg$



TECHNICAL CHARACTERISTICS

Min. visible width inward opening window

Min. visible width inward opening flush door

Overall system depth window

Rebate height

Glass thickness

	BULLETPROOF
Frame	128 mm
Vent	-
Frame	77 mm
Vent	77 mm
Frame	97 mm
Vent	77 mm
	25 mm
	from 25 to 63 mm

PERFORMANCES

Thermal insulation

Acoustic performance

Air tightness

Wind load resistance

Water tightness

Bullet resistance

Burglar resistance

Uf-value down to 1.94 W/m²K, depending on the frame/vent combination

Rw (C; Ctr) ≤ 42 (-2; -4) dB, depending on the glazing type

Up to 600 Pa (class 4)

Up to 2000 Pa (class 5)

Up to 900 Pa (class E900)

Up to FB 6, FSG & Kalashnikov (EN 1522)

Windows: up to RC 3 (EN 1627)



CS 68 is a universal window and door system, with good performances regarding stability, thermal insulation and security. The system is available in a variety of aesthetic styles: Functional and Hidden Vent – this way the windows can match your building style perfectly.

The system offers a range of solutions for inward and outward opening windows or doors, and is compatible with the Ventalis ventilation units. In addition, CS 68 windows and doors can comply with burglar resistance classes 2 and 3, offering an ultimate level of security.

TECHNICAL CHARACTERISTICS		FUNCTIONAL	HIDDEN VENT
Min. visible width inward opening window	Frame	51 mm	76 mm
	Vent	33 mm	not visible
Min. visible width inward opening flush door	Frame	68 mm	-
	Vent	76 mm	-
Somether death what	Frame	59 mm	59 mm
Overall system depth window	Vent	68 mm	63.5 mm
Rebate height		25 mm	18.5 mm
Glass thickness		up to 44 mm	up to 40 mm

PERFORMANCES

Thermal insulation

-

Acoustic performance

Air tightness

Wind load resistance

Water tightness

Burglar resistance

Uf-value down to 1.8 W/m²K, depending on the frame/vent combination

Rw (C;Ctr) = 37 (-1;-4) dB / 44 (-2;-5) dB, depending on the glazing type

Up to 600 Pa (class 4)

Up to 2000 Pa (class 5)

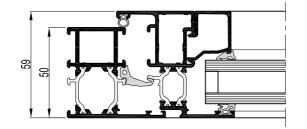
Up to 1200 Pa (class E1200)

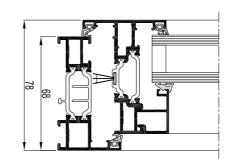
Windows: Up to RC 2 (EN 1627 & NEN 5096) Doors: Up to WK 3 (NEN 5096)





ES 50 Windows & Doors









ES 50 is a well-insulated system for inward and outward opening windows and doors, that combines aesthetic design and energy efficiency with a moderate price. The system's limited built-in depth allows its application in many constructions, even with reduced wall thicknesses.

Design wise, ES 50 offers, next to the functional design frames, special block profiles resembling wooden frames. The use of invisible fittings results in an even more elegant look, since hinges are no longer in sight. In addition, ES 50 can comply with burglar resistance class 2, offering a safe and secure solution both for residential constructions and utility buildings.



TECHNICAL	CHARACTERISTICS

Min. visible width inward or

Overall system depth window

Rebate height

Glass thickness

	ш	Ш
5		

FLINICTIONAL

Λ	ın.	visible	width	inward	opening	IIW

Min. visible width inward opening flush door

	FUNCTIONAL
Frame	48 mm
Vent	30 mm
Frame	67 mm
Vent	74 mm
Frame	50 mm
Vent	59 mm
	22 mm
	up to 32 mm

PERFORMANCES

Thermal insulation

Acoustic performance

Air tightness

Wind load resistance

Water tightness

Burglar resistance

Uf-value down to 1.6 W/m²K depending on the frame/vent combination and the glass thickness

Rw (C;Ctr) = 35 (-1;-4) dB / 39 (-1;-3) dB, depending on the glazing

Up to 600 Pa (class 4)

Up to 1600 Pa (class 4)

Up to 750 Pa (class E750)

Up to RC 2 (EN 1627)

TECHNICAL CHARACTERISTICS

Min. visible width outward opening window

Min. visible width T-profile

Overall system depth window

Rebate height

Glass thickness

Glazing method

Thermal insulation

High Insulation variant (HI)

	FUNCTIONAL
Frame	15 mm
Vent	50 mm
	50 mm
Frame	68 mm
Vent	68 mm
	18 mm
	up to 43 mm
	dry glazing with EPDM or neutral silicones
	omega-shaped fibreglass reinforced polyamide strips (32 mm)

Reynaers Aluminium's SlimLine 68 window system is specifically designed to meet the demand for an outward opening window with

this window maximises the glass area to let in lots of natural

window as it usually fits within the existing plaster line.

very slim profiles. Particularly suited to use in residential properties,

daylight. The slim frames and clean lines make this window ideal for

both contemporary and more traditional properties, as the design

windows. Its 68mm frame depth makes it perfect as a replacement

of the window mimics the sight lines of the original steel-framed

SlimLine 68 vents can be glazed from the inside as well as the

outside, and are available on a standard and a HI insulation level.

PERFORMANCES

Thermal insulation

Acoustic performance

Air tightness

Wind load resistance

Water tightness

Burglar resistance

Uf-value down to 2.5 W/m²K depending on the frame/vent combination and the glass thickness. Uw ≥ than 1.4 W/m²K for a standard window section

Rw (C; Ctr) = 36 (-1; -5) dB / 47 (-2; -7) dB, depending on glazing type

available

Up to 600 Pa (class 4)

Up to 1600 Pa (class 4)

Up to 1050 Pa (class E1050)

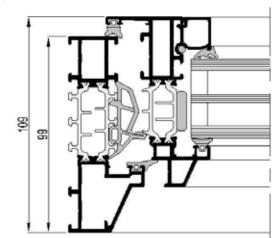
PAS 24





SlimLine 38 Windows & Doors





Light, Elegance and comfort

SlimLine 38 is a highly insulated system that combines elegance and comfort with a unique design. This special slender steel look is the perfect solution for modern architecture and renovation of steel-framed windows, respecting the original design but offering a thermally improved solution.

The SL 38 system is available in 3 different minimalistic design variants, Classic, Ferro and Cubic, to perfectly match the architectural aspect of the building. The windows and doors can be provided with double and triple glazing without losing the ultra-slim look.

In combination with its superior insulation capabilities, the system provides the perfect harmony between durable material, clean design and demanding architectural challenges.









33.5 mm 21.5 mm

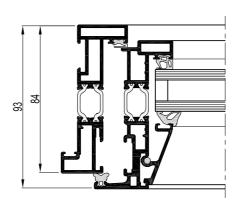
76 mm

72 mm 13.5 mm

up to 55 mm

TECHNICAL CHARACTERISTICS		CLASSIC	CUBIC
Min. visible width inward opening window	Frame	33 mm	33.5 mm
	Vent	23 mm	22 mm
Min. visible width inward opening window-door	Frame	33.5 mm	33.5 mm
	Vent	52.5 mm	52.5 mm
Overall system depth window	Frame	99 mm	76 mm
	Vent	86 mm	75 mm
Rebate height		13.5 mm	13.5 mm
Glass thickness		up to 55 mm	up to 55 mm

PERFORMANCES	
Thermal insulation	Uf-value down to 1.7 W/m²K depending on the frame/vent combination and the glass thickness. Uw of less than 1.4 W/m²K for a standard window section
Acoustic performance	Rw(C;Ctr) = 38 (-1; -4) dB / 45 (-1; -5) dB, depending on glazing type
Air tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 1600 Pa (class 4)
Water tightness	Up to 600 Pa (class 9A)
Burglar resistance	Up to RC 2 (EN 1627 & NEN 5096)







Ultimate elegance

CS 24-SL is a thermally insulated system for outward opening windows and doors that combines ultra-slim design, stability and ease in production. The system's slender exterior contours and specially designed glazing beads give it a steel look & feel.

This in combination with the excellent insulation level makes CS 24-SL not only suitable for new-build houses, but also for renovations of steel-framed windows and doors, residential constructions, schools and utility buildings.

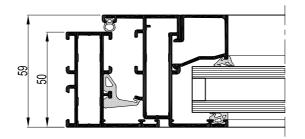
The standard outward opening types can be applied in numerous combinations in line with the needs of the building. A unique aspect is that this slim system can also comply with burglar resistance class 2, offering a safe and secure solution.

TECHNICAL CHARACTERISTICS		SLIM LINE
Min. visible width outward opening window	Frame	19 mm
	Vent	31 mm
Min. visible width outward opening window door	Frame	19 mm
	Vent	70 mm
Overall system depth	Frame	85 mm
	Vent	85 mm
Rebate height		14 mm
Glass thickness		up to 29 mm

PERFORMANCES	
Thermal insulation	Uf-value down to 3.3 W/m²K depending on the frame/vent combination and the glass thickness
Air tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 1200 Pa (class 3)
Water tightness	Up to 750 Pa (class E750)
Burglar resistance	Up to WK 2 (NEN 5096)



CS 59Pa Windows & Doors



ES 45Pa Windows & Doors

Ideal for warm climates

CS 59Pa offers an extensive range of non-insulated profiles for the construction of elegant and moderately priced aluminium windows and doors in functional or renaissance style. Therefore, CS 59Pa is the ideal system for applications in warm climates but it can also be used for the partitioning of indoor office spaces.

For winter gardens, special combinations are possible with the Reynaers Aluminium conservatory systems. The different design options and the large choice of colours allow a perfect match with the building style.



TECHNICAL	CHARACTERISTICS	

Min. visible width inward opening window

Min. visible width inward opening flush door

Overall system depth window

Rebate height			
Glass thickness			

	PARALLEL	RENAISSAN
Frame	49 mm	55 mm
Vent	21 mm	31 mm
Frame	61,5 mm	-
Vent	72,5 mm	-
Frame	50 mm	59 mm
Vent	59 mm	68 mm
	25 mm	25 mm

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Acoustic performance

Air tightness

Wind load resistance

Water tightness

	PARALLEL	RENAISSANCE
Frame	49 mm	55 mm
Vent	21 mm	31 mm
Frame	61,5 mm	-
Vent	72,5 mm	-
Frame	50 mm	59 mm
Vent	59 mm	68 mm
	25 mm	25 mm
	up to 35 mm	up to 35 mm

Rw (C;Ctr) = 36 (-1;-3) dB / 44 (-2;-4) dB, depending on the glazing

Up to 600 Pa (class 4)

Up to 2000 Pa (class 5)

Up to 750 Pa (class E750)



A new dimension of affordable quality

ES 45Pa is a non-insulated system for inward and outward opening windows and doors, designed according to the highest European quality standards. To guarantee superior quality and performance in every situation, the system has three gasket levels for inward and outward opening windows and doors. Through intelligent application, these multiple gaskets meet even the high air- and water tightness requirements of tropical regions. This simple, yet highly innovative design offers a very cost-efficient solution thanks to its optimised fabrication process.

ES 45Pa can be realised with all types of inward and outward opening windows and doors, with an extensive choice of accessories. The numerous combinations of elements and the perfect match with the ES 45Pa door -and sliding system, make ES 45Pa extremely suitable for all types of building concepts.

TECHNICAL CHARACTERISTICS

Min. visible width inward opening window

Min. visible width inward opening window door

Overall system depth

Rebate height

Glass thickness

Frame

	30 mm
9	47 mm
	61 mm
9	45 mm
	54 mm
	22 mm
	up to 42 mm

FUNCTIONAL 47 mm

PERFORMANCES

Acoustic performance

Wind load resistance

Air tightness

Water tightness

Rw (C;Ctr) = 41 (-1;-5) dB / 42 (-2;-5) dE	, depending in o	outward open
ing window		

Up to 600 Pa (class 4)

Up to 2400 Pa (class E2400)

Up to 900 Pa (class E900)







Hi-Finity



CP 155 / CP 155-LS



CP 96 / CP 96-LS



CP 45Pa



CF 77



SlimPatio 68



CP 130 / CP 130-LS





GP 51

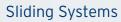


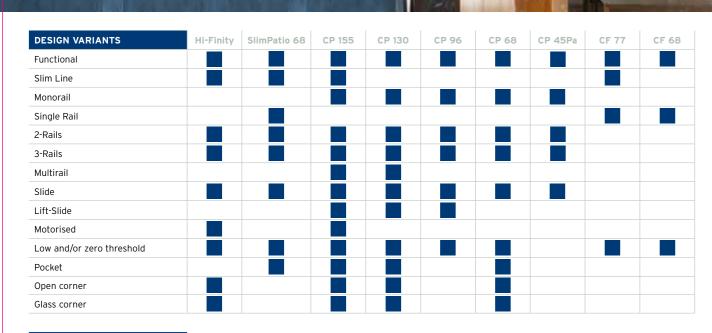
CF 68



OPENING ELEMENTS

DECISION MATRIX





SAFETY VARIANTS

Burglar resistance

OVERALL SYSTEM DEPTH (STANDARD)

Frame	147/179 mm	120 mm	155 mm	130 mm	96 mm	68 mm	50 mm	77 mm	68 mm
Vent	44/60 mm	64 mm	68 mm	59 mm	43 mm	41/49 mm	29 mm	77 mm	68 mm

SUSTAINABILITY

High insulation					
Ventalis					

ENERGY PERFORMANCE

Insulation (Uw-value >=)*	1.4 W/m²K	1.7 W/m²K	1.1 W/m²K	1.6 W/m²K	3.2 W/m²K	1.7 W/m²K	-	2.3 W/m²K	1.8 W/m² K
Air tightness Class	4	4	4	4	4	4	4	4	4
(value in Pa)	(600 Pa)	(600 Pa)	(600 Pa)	(600 Pa)	(600 Pa)	(600 Pa)	(600 Pa)	(600 Pa)	(600 Pa)
Water tightness Class	9A	8A	9A	9A	9A	7B	7B	6A	9A
(value in Pa)	(600 Pa)	(450 Pa)	(600 Pa)	(600 Pa)	(600 Pa)	(300 Pa)	(300 Pa)	(250 Pa)	(600 Pa)
Wind load resistance	4	5	4	4	3	4	4	3	2
Class (value in Pa)	(1600 Pa)	(2000 Pa)	(1600 Pa)	(1600 Pa)	(1200 Pa)	(1600 Pa)	(1600 Pa)	(1200 Pa)	(800 Pa)

^{*} Depending on frame/vent combination - HI variant - Ug value = 1.0 and pSi = 0.11

	Hi-Finity	SlimPatio 68	CP 155	CP 130	CP 96	CP 68	CP 45Pa	CF 77	CF 68
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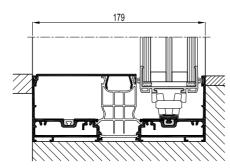


Hi-Finity Sliding Systems









The infinite view

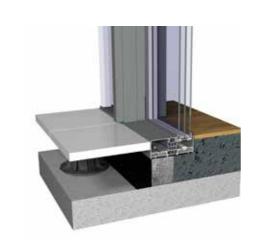
Enjoy an infinite view with ultimate performances! The ultra-slim design of the Hi-Finity sliding door creates large transparent surfaces, with a light, sleek and elegant appearance.

This fully transparent and accessible sliding door seamlessly extends the house's interior to the outside. Despite the minimal visual sidelines, the systems high strength allows Hi-Finity to carry the weight of a large sliding glass pane up to 750 kilograms. Fixed panels up to 1200 kg.

This in combination with the high energy performance and the minimalistic look makes this product the best solution for low-energy contemporary architecture.

For a higher level of comfort a concealed motor allows you to open the vents with the push of a button, or by connecting the motor to your home automation system. This high performance motor guarantees optimum convenience during use and is a safe and reliable solution.

Hi-Finity is an exclusive system for certified fabricators.

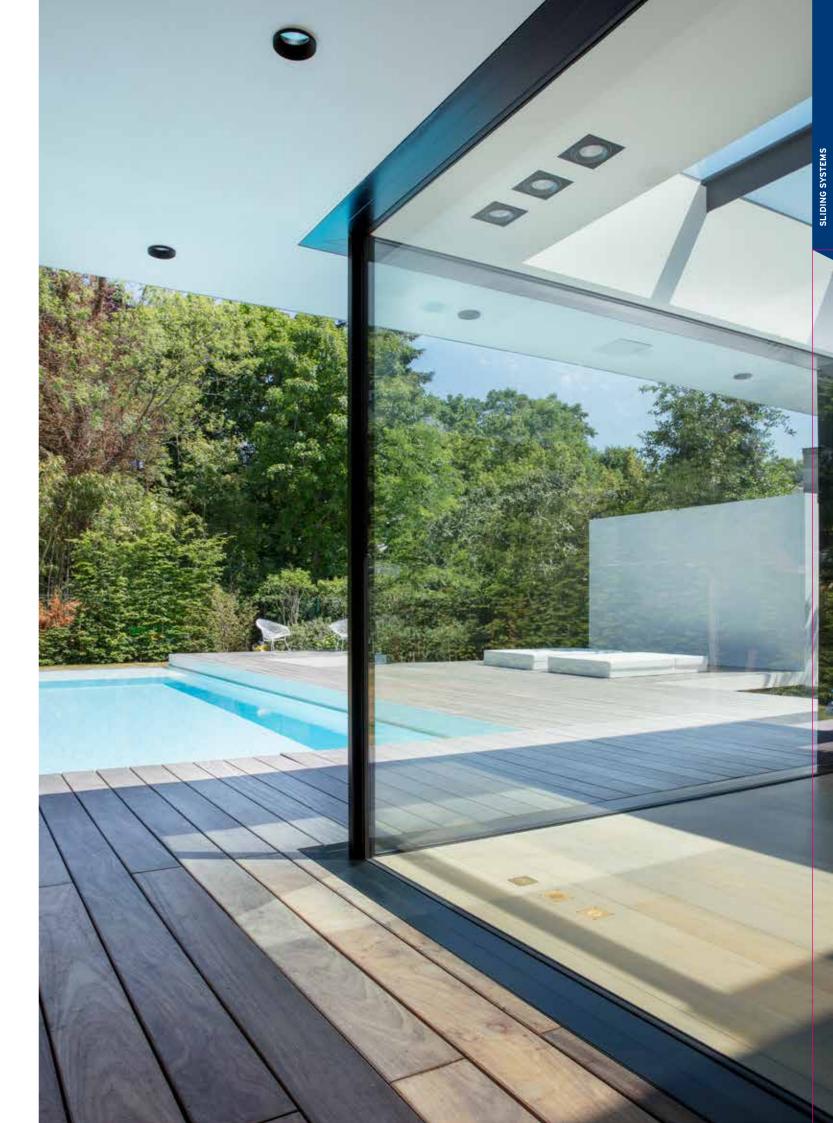


TECHNICAL CHARACTERISTICS							
Height	Build-in frame						
Visible width / height	Vent						
	Meeting section						
	Meeting section 4 doors						
Overall system depth	Frame						
	Vent						
Maximal element height							
Maximal vent weight							
Glass thickness							

Triple glazing			
68 mm / 100 mm			
10 mm			
35 mm (adjustable)			
69 mm (adjustable)			
Duo Rail : 179 mm			
3-Rail : 282 mm			
60 mm			
) mm			
300 kg manual / 750 kg motorized / 1200 kg fixed			
52-54 mm			

PERFORMANCES				
	Thermal insulation			
	Acoustic performance			
	Air tightness			
P	Wind load resistance			
	Water tightness			
%	Burglar resistance			

36-38 mm	52-54 mm
Uw-value down to 1.4 W/m²K, dependent the glazing thickness.	iding on the frame/vent
Rw(C;Ctr) = 43 (-1;-3) dB	
Up to 600 Pa (class 4)	
Up to 1600 Pa (Class 4B)	
Up to 600 Pa (class 9A)	
Up to RC 2 (EN 1627)	



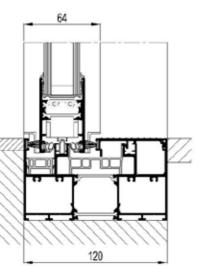
SlimPatio 68 Sliding Systems



SlimPatio 68 is a high insulated sliding system with slim profiles and a concealed frame that combines comfort with elegance. Thanks to the ultra slim design, this sliding window allows for maximum natural light and provides an optimal panoramic view. The integrated innovative technologies guarantee ultimate performances with regard to wind and water tightness and thermal insulation, meeting with the highest standards.

The sliding system SlimPatio 68 offers you all design freedom to create contemporary living spaces, combining ultimate brightness with maximum comfort.

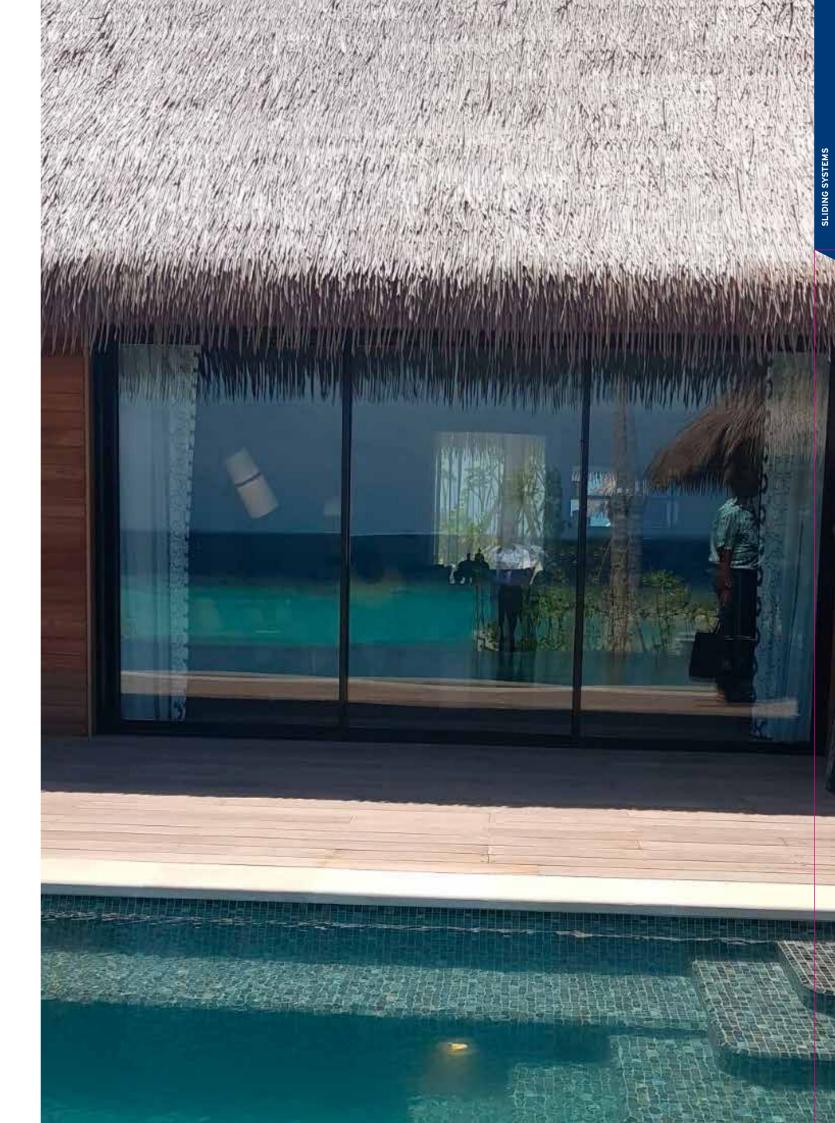
This sliding system offers a wide range of opening possibilities, from elements which slide over 2- and 3-rail solutions, allowing you to open up to 6 leaves, over a very slim central closing option of only 74 mm wide, to a single-and double-rail pocket solution that allows you to slide the elements into the



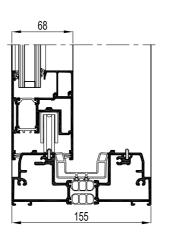


TECHNICAL CHARACTERISTICS		2-RAIL	3-RAIL
	Frame	0	mm
Visible width / beinkt	Horizontal Vent	34	4 mm
Visible width / height	Vertical vent	34	4 mm
	Meeting section	34	4 mm
Overall average denth	Frame	120 mm	176 mm
Overall system depth	Vent	64	4 mm
Maximal vent height		2700 mm	
Maximal vent weight		25	i0 kg
Rebate height		18	mm
Glass thickness from 24 mm to 36 mm		nm to 36 mm	
Thermal insulation	32 mm and 36 mm fibregla	ss reinforced polyamide strips	

PERFORMANCES	
Thermal insulation	Uw-value down to 1.2 W/m²K, for 3000mm x 2500mm frame/vent combination (Ug=0.8 W/m²K)
Acoustic performance	Rw (C; Ctr) = 40 (-2;-4) dB
Air tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 2000 Pa (class 5)
Water tightness	Up to 450 Pa (class 8A)







Sophistication for quality and insulation

Concept Patio® 155 is a premium insulating slide and lift-slide system, designed to create maximal opening elements, combined with increased comfort. The system perfectly links up to the CS 77 series.

With the CP 155(-LS) Slim Chicane, we introduced a sliding window with a meeting section of only 50mm width, which transforms our CP 155(-LS) into a modern design and makes it an elegant system, ready to meet today's trends.

The CP 155 can be upgraded to High Insulation (HI) in order to achieve even better insulation values, which makes the system suitable for low energy buildings. A specific variant of CP 155 monorail has even achieved the Swiss Minergie® component label.

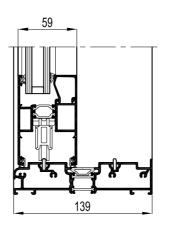
CP 155 is available with various opening possibilities, including open / glass corner, pocket and the low and zero threshold option offers a solution to improve the buildings accessibility. Optional automatic opening solutions guarantee a maximum of comfort.

The lift-slide system allows the creation of glazed doors with extreme dimensions and weights up to 400 kg. Monorail allows up to 1500 kg for fixed panels. Additionally, CP 155 can comply with burglar resistance class 2, offering a safe and secure solution.



TECHNICAL CHARACTERISTICS		CP 155		CP 155 LS				
		MONORAIL	2-RAIL	3-RAIL	MONORAIL	2-RAIL	3-RAIL	MINERGIE
	Frame		50 - 60 mm			50 - 6	50 mm	
Visible width / height	Vent		102 mm			102	mm	
ricigiit	Meeting section	115 mm		115 mm				
Overall system	Frame	155 mm	155 mm	242 mm	155 mm	155 mm	242 mm	192 mm
depth	Vent	68 mm			68 mm			
Rebate height			25 mm		25 mm		mm	
Glass thickness			up to 52 mm	l	up to 52 mm		up to 61 mm	

PERFORMAN	NCES	
Therma	al insulation	Uw-value down to 1.04 W/m²K for Minergie version, with Ug = 0.5 W/ m^2K
Acoust	ic performance	Rw (C;Ctr) = $35 (-2;-5) dB / 42 (-1;-3) dB$, depending on the glazing type
Air tight	itness	Up to 600 Pa (class 4)
Wind Io	ad resistance	Up to 1600 Pa (class 4)
Water t	ightness	Up to 600 Pa (class 9A)
Burglar	resistance	Up to WK 2 (ENV 1627)







Aesthetic functionality

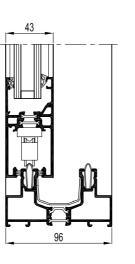
Concept Patio[®] 130 is a highly insulated slide and lift-slide system, which meets the highest requirements with regard to insulation, stability and safety. The system perfectly links up to the CS 68 series.

CP 130 is available with various opening possibilities and the low and zero threshold option offers a solution to improve the buildings accessibility. The open corner and pocket solution make it possible to open up spaces without any fixed corner element, creating a perfect and clear continuity between the indoor and outdoor spaces. This makes CP 130 ideal for rooms with a view.

This robust system allows the construction of large and stable sliding windows and doors with a vent weight up to 300 kg. It also offers an aesthetical slimline middle section. Additionally, CP 130 can comply with burglar resistance class 2, offering a safe and secure solution.

TECHNICAL CHARACTE		CP 130			CP 130-LS		
		MONORAIL	2 RAIL	3 RAIL	2 RAIL	3 RAIL	
	Frame	50 mm	50 mm	50 mm	28/35/40 mm	28/35/40 mm	
Visible width / height	Vent	69 - 98 mm			69 - 98 mm		
	T-profile	From 76 mm till 115 mm			From 76 mm till 115 mm		
Overall system death	Frame	130 mm	110-139 mm	181 mm	139 mm	210 mm	
Overall system depth	Vent		59 mm		59 mm	59 mm	
Rebate height		25 mm 25 mm		mm			
Glass thickness		Up to 43 mm Up to 43 mm		43 mm			

PERFORMANCES	
Thermal insulation	Uw-value down to 1.9 W/m²K, depending on the frame/vent combination and the glass thickness
Air tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 1600 Pa (class 4)
Water tightness	Up to 600 Pa (class 9A)
Burglar resistance	Up to WK 2 (ENV 1627)



CP 68 Sliding Systems

Safety and durability at a fair price

Concept Patio® 96 sliding and lift & slide elements are the perfect answer to the increasing demand for safety and durability. They combine strong technical performance with aesthetical minimalism.

CP 96 is available in a wide range of opening possibilities and offers an enhanced burglary resistance.



→

Concept Patio® 68 is a highly-insulated sliding system that combines elegance with performance and security. This unique sliding system is characterised by its slim profiles, allowing the integration of large windows and doors for maximum views, in combination with burglary resistance class RC2. The integrated innovative technologies guarantee ultimate performances with regard to wind and water tightness and thermal insulation, meeting with the highest standards.
The sliding system CP 68 offers you all design freedom to create contemporary living spaces, combining ultimate brightness with

sign freedom to create timate brightness with maximum comfort and security.

TECHNICAL CHARACTERIST	rics		CP 96		CP 96-LS
	_	MONORAIL	2-RAIL	3-RAIL	2-RAIL
	Frame		52 mm		52 mm
Visible width / beight	Vent		90 mm		90 mm
Visible width / height	T-profile		89-102 mm		89-102 mm
	Meeting section		104 mm		104 mm
Overall evetem depth window	Frame	96 mm	96 mm	149 mm	96 mm
Overall system depth window	Vent		43 mm		43 mm
Glass thickness		fr	om 10 mm to 29 m	m	from 10 mm to 29 mm

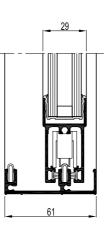
Vent				
vent		90 mm		90 mm
T-profile		89-102 mm		89-102 mm
Meeting section		104 mm		104 mm
Frame	96 mm	96 mm	149 mm	96 mm
Vent		43 mm		43 mm
	fr	om 10 mm to 29 m	m	from 10 mm to 29 mm
	T-profile Meeting section Frame	T-profile Meeting section Frame 96 mm Vent	T-profile 89-102 mm Meeting section 104 mm Frame 96 mm 96 mm Vent 43 mm	T-profile 89-102 mm Meeting section 104 mm Frame 96 mm 96 mm 149 mm

Uw-value down to 2.1 W/m²K, depending on the frame/vent combination and the glass thickness
Up to 600 Pa (class 4)
Up to 1200 Pa (class 3)
Up to 600 Pa (class 9A)
Up to WK 2 (NEN 5096)

TECHNICAL CHARACTERISTICS		2-RAIL	3-RAIL		
Calle Ia middle	Frame / Vent	109 mm	109 mm		
Visible width	Meeting section	34 mm	34 mm		
Overall system depth	Frame	68 mm	124 mm		
	Vent	41,6 mm	41,6 mm		
Maximal vent height		2500) mm		
Maximal vent weight		200 kg			
Rebate height		18 :	mm		
Glass thickness		28 / 3	6 mm		
Glazing method		with EPDM in accordance	with the envelope principle		
Thermal insulation		32 mm and 36 mm fibreglas	s reinforced polyamide strips		

THE THAT HIS GIACION	32 min and 30 min horegrass remoreed polyamide strips
PERFORMANCES	
Thermal insulation	Uw-value down to 1.8 W/m²K, depending on the frame/vent combination and the glass thickness
Acoustic performance	Rw (C; Ctr) = 38 (-2;-4) dB
Air tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 1600 Pa (class 4)
Water tightness	300 Pa (class 7B)
Burglar resistance	Up to RC 2 (EN 1627)





Less is more

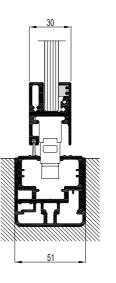
Concept Patio® 45Pa is a non-insulated sliding system offering a wide range of solutions ideal for applications in warm climates, winter gardens or the partitioning of indoor office spaces. CP 45Pa applies the latest techniques, designed according to the highest European quality standards. This sliding system offers the complete range of opening possibilities, from sliding elements in the wall, over 2-, 3- to even 4-rail solutions.

With the minimalistic design, CP 45Pa realises an aesthetic solution for your building. In addition, the sliding elements can easily be integrated with different types of windows, conservatory systems, sun screenings and screen doors.



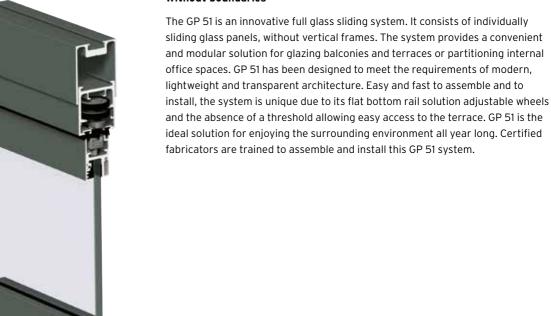
TECHNICAL CHARACTERIST	rics	MONORAIL	2-RAIL	3-RAIL	4-RAIL			
	Frame	45 mm	17 mm / 45 mm	17 mm / 45 mm	17 mm / 45 mm			
Visible width / height	Horizontal vent		56 mm					
	Vertical vent	54.5 mm / 67 mm						
	Meeting section	40 mm						
	Frame	48 mm / 56 mm	50 mm / 61 mm	86 mm / 97 mm	122 mm / 133 mm			
Overall system depth window Vent		29 mm						
Glass thickness		from 6 mm to 24 mm						

PERFORMANCES	
Air tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 1600 Pa (class 4)
Water tightness	Up to 300 Pa (class 7B)





Without boundaries

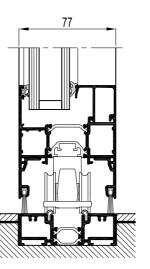




TECHNICAL CHARACTERISTICS	
Corner connection of the rails	90° - 270°
Glass thickness	6 - 8 - 10 mm
Dimensions glass panels	max. 2800 mm height
	max. 800 mm width
Glazing type	tempered glass







Invite nature into your building

Concept Folding 77 combines high insulation and comfort with maximal transparency and aesthetics. CF 77 allows for large and heavy glass panes to really open up the space, while assuring optimal insulation.

This high performance system offers different opening types, both inward and outward, to meet all possible requirements. Apart from the standard folding elements, CF 77 can feature a main door principle, in which the first leaf is used as an entrance door without affecting the other folding leafs.

CF 77 is available in 4 different threshold solutions, from high performance to low and even flush thresholds, in order to perfectly match all comfort and aesthetic requirements. Additionally, the CF 77-concept can perfectly be combined with the CS systems for windows, doors and curtain walls.

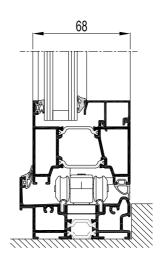
Furthermore, CF 77 is available in Functional Slim-Line style. This CF 77-SL variant features a slimmer visible profile width.



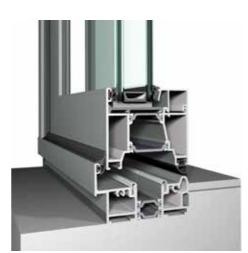
TECHNICAL CHARACTERISTICS

	CF 77	CF 77-SL	
Max. vent size	1200 x 3000 mm	1200 x 3000 mm	
Max. vent weight	120 kg	120 kg	
Uw (W/m²K) 4-panel: 4000 x 2700 mm	down to 1.66	down to 1.64	
Visible width vent-vent section	144 mm	122 mm	

PERFORMANCES	
Thermal insulation	Uf-value down to 2.25 W/m²K
Air Tightness	Up to 600 Pa (class 4)
Wind load resistance	Up to 1200 Pa (class 3)
Water Tightness	Up to 600 Pa (class 9A)
Burglar resistance	Up to RC 2 (EN 1627)







Endless enjoyment

Answering the needs of contemporary architecture, the Concept Folding 68 system combines design, comfort and space efficiency. The wide range of possibilities to unfold numerous glass panes makes the borders between in- and exterior literally vanish.

The folding principle of this high quality system allows you to combine thermal comfort and transparency, with a wide choice of in- or outside opening types.

The elements come in every colour and finish, if desired, offering a different colour for the interior and the exterior, all in order to perfectly match the building.

TECHNICAL CHARACTERISTICS

		Flush threshold	Low threshold	Double weather seal	High performance		
	Frame / Threshold	0-15 mm	5-30 mm	19-44 mm	19-74 mm		
Visible width / height	Frame-vent section	100 mm / 111 mm					
	Vent-vent section	131 mm / 153 mm					
Overall system depth		68 mm					
Maximal element height			250	0 mm			
Maximal vent weight		90 kg					
Rebate height		14 mm / 25 mm					
Glass thickness		12-55 mm					

D	6	D	5	n	D	м	Λ	М	\boldsymbol{c}	FC

PERFORMANCES							
Thermal insulation		Uf-value down to 1.8 W/m²K, depending on the profile combination					
Air Tightness	Not applicable	Not applicable Up to 600 Pa (class 4)					
Wind load resistance	Not applicable	Not applicable Up to 1200 Pa (class 3)					
Water Tightness	Not applicable	Class 5A (0 Pa)	Class 7A (300 Pa)	Up to Class 9A (600 Pa)			
Burglar resistance		Up to RC 2 (EN 1627)					











CW 60





CW 86 (-EF)



CW 50

Concept Walls



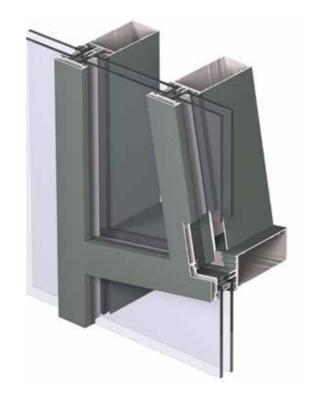
Unlimited creative freedom and maximum entrance of light

Concept Wall 50 is a façade and roof system that offers unlimited design freedom and allows maximum transparency. Innovative solutions contribute towards the tendency of big, heavy and high insulated glass panes. CW 50 supports glass panes up to 700 Kg in various glass configurations. Even more glass weight can be offered in bespoke solutions.

The system is available in several design and glazing variants, but also includes different technical variants to comply with specified levels of fire-resistance and thermal insulation down to Uf = $0.56W/ m^2K$.

The design variants offer solutions for both the exterior and the interior of the building. The glazing variants range from using standard pressure plates, to structurally glazed and structurally





PERFORMANCES

Thermal insulation

Acoustic performance

Air tightness

Wind load resistance

Water tightness

Burglar resistance

Uf-value down to 0.56W/m²K depending on the profile combination

Rw (C;Ctr) = 33 (-1;-3) dB / 60 (-2;-6) dB, depending on the glazing type or panel type

Up to 1950 Pa (class AE 1950)

Up to 2400 Pa

Up to 1950 Pa (class RE 1950)

Up to WK 3 (NEN 5096 / ENV 1627)



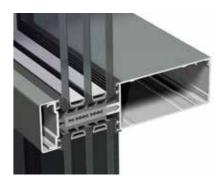
TECHNICAL CHARACTERISTICS

Inside visible width Outside visible width Glass thickness

CW 50 functional

50 mm 50 mm

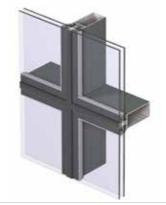
from 6 to 61 mm



CW 50-HI ultimate thermal comfort

50 mm 50 mm

from 22 to 61 mm



TECHNICAL CHARACTERISTICS

Inside visible width Outside visible width Glass thickness

CW 50-SC structural clamped glazing

50 mm joint: 20 mm from 27 mm to 63 mm



CW 50-SG structural sealed glazing

50/88 mm EPDM gasket (width 27 mm) from 24 mm to 36 mm



TECHNICAL CHARACTERISTICS

Inside visible width Outside visible width Glass thickness

CW 50-TT

50 mm 50 mm from 6 to 64 mm



CW 50-SL slender appearance

15/50 mm 50 mm



CW 50-HL

aesthetical horizontal lining

50 mm

vertical: 30 mm joint

horizontal: 50 mm

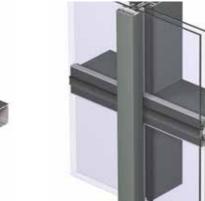
from 22 to 48 mm



Inside visible width

Outside visible width

Glass thickness



CW 50-VL aesthetical vertical lining

50 mm

vertical: 50 mm horizontal: 20 mm joint

from 27 to 40 mm



TECHNICAL CHARACTERISTICS

Inside visible width
Outside visible width
Glass thickness



50 mm

50 mm from 6 to 60 mm





TECHNICAL CHARACTERISTICS

Inside visible width

Outside visible width

Glass thickness

CW 50 HIDDEN VENT TURN AND TILT CW 50 HV-TUTI slender visible width opening element

23/80 mm

50 mm

opening window 22-28 mm (opening window SC 29-32 mm)





The CW 50-FP fire rated curtain wall is designed to provide an EW30, EI 30 or EI 60 fire resistance, whilst still offering the same advantages as the standard CW 50 façade system.

The system can be applied for both the exterior and the interior of the building, and can also offer burglar resistance as an extra option.

CW 50-FP contributes towards the tendency to use big, heavy glass panes and allows for the creation of transparent designs.

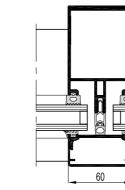
This façade system is compatible with our CS 77-FP fire resistant door system.

TECHNICAL CHARACTERISTICS	CW 50-FP EI30	CW 50-FP EI60
Rebate height	20 mm	20 mm
Glass thickness	35 mm	from 45 to 48 mm
Glazing method	fixing by pressure plates	fixing by pressure plates
Fire resistance classification	E15, E115, EW20, E30, EW30, EI30	EW60, E60, EI60

PERFORMANCES	CW 50-FP EI30	CW 50-FP EI60
European testing standards	EN 1364-3	EN 1364-3
Classification standard	EN 13501-2	EN 13501-2





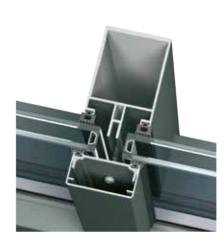


Solution for heavy glass panes

CW 60 is an excellent thermally insulated curtain wall system for robust constructions of large glass surfaces, that answers even to the specific needs of sloped or curved constructions. This modular system is designed with intelligently reinforced profiles, allowing facade design with wide glass panels.

The CW 60 concept meets the highest requirements in water- and air tightness, wind load resistance and thermal insulation. It also offers the possibility to integrate triple glazing.

This curtain wall system is standard available in 4 different aesthetical outside appearances. These different design options, together with the flush roof application, make CW 60 the perfect system for ultimate design freedom. In addition, CW 60 is made up of an extensive profile range and facilitates the integration of all types of windows.



Uf-value down to 0.76W/m²K depending on the profile combination	
Rw (C;Ctr) = 33 (-1;-4) dB / 56 (-1;-5) dB, depending on glazing type	
600 Pa (Class A4)	
Up to 2400 Pa	
Up to 1200 Pa (class RE 1200)	

WK2/RC2 & WK3/RC3 (NEN 5096 / ENV 1627)



CW 60

60 mm

60 mm



Inside visible width

Outside visible width

Glass thickness 6 mm to 62 mm



CW 60-HI ultimate thermal comfort

60 mm

60 mm

22 mm to 62 mm



CW 60-SC structural clamped glazing

60 mm

Silicon joint or EPDM gasket of 20mm width

 $27\ mm$ to $63\ mm$



CW 60-SG

60/88 mm

TECHNICAL CHARACTERISTICS

Inside visible width

Outside visible width EPDM gasket of 27mm width

Glass thickness 24 mm to 36 mm

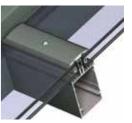


CW 60-HL / CW 60-VL horizontal or vertical lining

60 mm

mix of 20/30 mm joint & 60 mm pressure plate

22 mm to 48 mm



CW 60-RA designed for inclined surfaces

60 mm

60 mm

6 mm to 48 mm



PERFORMANCES

Thermal insulation

Air tightness

Acoustic performance

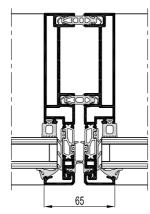
Wind load resistance

Water tightness

Burglar resistance

CW 65-EF **Curtain Walls**





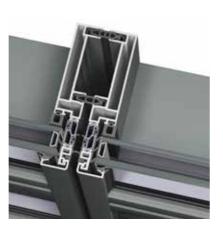
Unitized façade system with maximum transparency

CW 65-EF is a cost efficient curtain wall system for element façades with unique slender aesthetics, without compromising the extreme strength and stability required in high-rise constructions.

The typical characteristics of the unitized façade result in a high execution speed on the building site, because its elements are completely pre-assembled in the workshop. This high productivity however embraces architectural aesthetics as the CW 65-EF works with slender profiles of only 65 mm.

CW 65-EF meets the highest performance requirements in water- and air tightness and wind load resistance. The curtain wall system is available in different insulation levels, answering the appropriate insulating requirement of the building. It also offers the possibility to integrate triple glazing.

CW 65-EF is available in two glazing variants, with unique aesthetical features: one variant holds the glass using glazing beads, while the glass of the Structural Glazing (SG) variant is structurally bonded, offering a complete glass surface at the outside of the building. To fully answer all needs of the building, CW 65-EF can integrate opening elements, such as a top hung and parallel opening windows.









Max. dimensions W x H 1.600 mm x 3.700 mm Interior visible width 65 mm Exterior visible width 65 mm Glass thickness From 4 to 36 mm Glass weight Element weight

Types of vent

300 kg 700 kg All Reynaers Aluminium systems, top hung window,

PERFORMANCES

TECHNICAL

CHARACTERISTICS

Thermal insulation

Air tightness

Wind load resistance

Water tightness

POW window CW 65-EF

600 Pa (Class A4)

1800 Pa

1200 Pa (Class RE 1200)

U, down to 1.5 W/m²K, U, down to 2.5 W/m2K, depending on the profile depending on the profile combination combination

600 Pa (Class A4)

CW 65-EF/HI

65 mm

65 mm

From 10 to 60 mm

300 kg

700 kg

CW 65-EF/HI

1800 Pa

1200 Pa (Class RE 1200)

CW 65-EF/SG ultimate thermal comfort structural sealed glazing

1.550 mm x 3.500 mm 1.600 mm x 3.700 mm 65 mm

16 mm joint between glass

700 kg

From 4 to 40 mm 250 kg

CW 65-EF/SG

U_{ti} down to 7.6 W/m²K, depending on the profile combination and glass composition

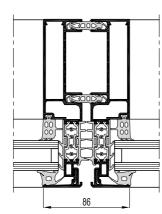
700 Pa (Class AE 700)

1400 Pa

1200 Pa (Class RE 1200)



CW 86 (-EF) **Curtain Walls**



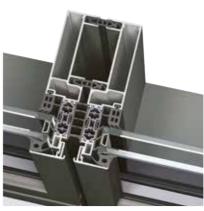
High execution speed

CW 86 is an insulated and aesthetical curtain wall system that complies with all requirements for large building projects. For these building projects, the execution speed on the building site is very important. CW 86 therefore offers a special solution, where cassettes or elements can be pre-assembled in the workshop. On the building site, the cassettes can either be hooked on to a traditional stick structure (CW 86) or the façade can be built up element by element according to the modular curtain wall principle (CW 86-EF).

CW 86 is available in two glazing variants, with unique aesthetical features: one variant holds the glass using glazing beads, while the glass of the Structural sealed Glazing (SG) variant is structurally bonded, offering a complete glass surface at the outside of the building.

The energetic performance of the system is offered in different levels, providing thermally insulated profiles also for the Structural sealed Glazing. Specific drainage methods like cascade drainage lift this façade up to the highest demands in water- and air tightness. This makes this system applicable for extreme conditions such as coastal areas and high altitudes.

Besides the seamless integration of different types of windows, doors and sun $% \left(x\right) =\left(x\right) +\left(x$ screening systems, CW 86 offers motorised solutions for its opening elements, such as top hung and parallel opening windows, providing a total solution for your façade.



J	

PERI	FORMANCES	
	Thermal insulation	Uf-value down to 1.5 $\mathrm{W/m^2K}$, depending on the profile combination
	Acoustic performance	Rw (C;Ctr) = 41 (-2;-6) dB, depending on the glazing type
	Air tightness	Up to 900 Pa (class AE900)
(P)	Wind load resistance	Up to 2000 Pa
	Water tightness	Up to 1200 Pa (class RE1200)
%	Burglar resistance	Up to RC 2 (EN 1627) upon request









TECHNICAL CHARACTERISTICS - ELEMENT FACADE	CW 86-EF functional	CW 86-EF Fixed façade (junior)
Interior visible width	86 mm (38.5 - 9 - 38.5)	86 mm (38.5 - 9 - 38.5)
Exterior visible width	68 mm (26 - 16 - 26) or 86 mm (35 - 16 - 35) 86 mm (35 - 16 -	
Glass thickness	from 4 mm to 38 mm from 6 mm to 38 mr	

















BS 40



BS 100/30

Sunscreening



BS 100 movable louvre

Complete shading solution

TECHNICAL

Shape louvres

Size louvers

(Fixed) angle

TECHNICAL

Shape louvres Size louvers

(Fixed) angle

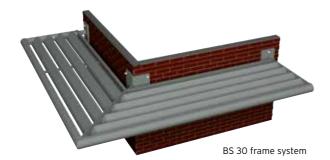
Walkway application

CHARACTERISTICS

Walkway application

CHARACTERISTICS

Reynaers Aluminium's BS (Brise Soleil) systems are designed to provide an aesthetic and efficient shading solution to almost any new and existing building. They are offered both standard or as a bespoke solution. Brise soleil is the generic term for a system of louvres which, when fitted to the external façade of a building, provides protection against solar heat and glare.





FRAME

ellipse

140 mm / 180 mm

45°

yes

	/
	A STATE OF





	ellipse
f	rom 120 to 400 mm
	0°/15°/30°/45°/
	60°/75°/90°
	yes



BS	100	MOVABL
	LO	UVRE

ellipse
from 120 to 400 mm
variable
yes







BS 100 LOUVRE

GRIP
ellipse
200 / 250 / 300 mm
0°/15°/30°/45°
no



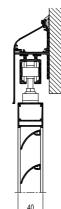
BS 100 GLASS LOUVRES

hardened glass
366 x 10 / 12 / 14 / 17 mm
0°/ 15° / 30°/ 45° / 60° / 75° / 90° and variable
yes



BS 30 FRAME SYSTEM

z-shaped
90 mm wide x 60 mm high
yes
VOS





BS 40 Sunscreening

Contemporary shutters

The Brise Soleil 40 system offers an innovative and aesthetical sun shading solution for energy conservation, perfect for apartments and smaller buildings. The system consists of elements with z-shaped or curved slats. These sliding shutters are positioned on the outside of the windows and can be removed from the window pane by sliding them horizontally. This manipulation is done manually or can be motorised.

The panels of BS 40 are available in different sliding configurations, from one to three panels behind each other. This makes it an ideal solution to control both the light entrance and the comfort level inside the building. The BS 40 system comes with various mounting options, to allow installation in front of façades, between floors or in any combination thereof. This makes it an extremely versatile application.

TECHNICAL CHARACTERISTICS
Shape louvres
Max. vent height
Max. vent width
Max. vent weight
Sliding option

Operation

BS 40
z-shaped or curved / wood (optional)
3000 mm (depending on the width)
2000 mm (depending on the height)
100 kg
mono-, 2- & 3- rail
manual & motorised







CURVED LOUVRES





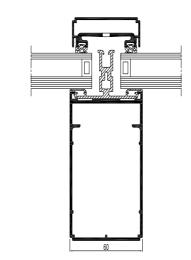








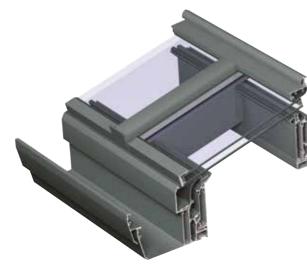
Conservatories



Concept Roof 120 is a thermally insulated conservatory roof system. The tubular aluminium rafters create space for integration of cabling and light on the inside while the small cover plates on the outside create a slim design.

This system is compatible with all Reynaers Aluminium window and door systems as well as sliding systems and offers the possibility to create a wide range of conservatory constructions and skylights.

Compatibility with motorised attic windows and roller shutters takes care of a safe and comfortable environment.



ORANGERY

TECHNICAL CHARACTERISTICS
Min. visible width of rafter
System depth of rafter
Slope
Rooftop
Glass thickness
Glazing method
Thermal insulation

70 mm / 100 mm / 120 mm / 150 mm
5° - 45°
90° - 170°
From 6 mm to 40 mm
Dry glazing with EPDM or neutral silicones
Omega-shaped fiberglass reinforced polyamide strips + synthetic profile

RENAISSANCE

60 mm

PERFORMANCES

Thermal insulation

Wind load resistance

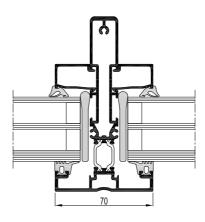
Water tightness

Specific calculation per profile combination please contact your Reynaers Aluminium fabricator

Up to 800 Pa (class 2)

FUNCTIONAL

Up to 750 Pa (class E750)







Thermo Roof 200 is a thermally insulated conservatory system offering a broad range of roof configurations. Depending on the design of the conservatory, the structure of the roof can be optimised to perfectly fit your needs. The interior of the roof structure has a minimalistic look. The gutters however, are available in three variants to match your style perfectly; Renaissance, Functional and Ellipse.

Furthermore, the conservatory system allows the integration of flush roof vents for ventilation, which can be electrically operated if desired. Anticipating any thermal requirements, the unique glazing concept of the system makes is perfectly suitable for triple glazing. TR 200 provides rafters which are not only able to carry the weight of the triple glazing but also to withstand the weight of snow load.





TECHNICAL CHARACTERISTICS

Overall system depth of rafter

Style variants Min. visible width of rafter Slope Construction options Glass thickness

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DOUBLE GLAZING

inside: 18 mm outside: 23 - 58 mm

Functional / Renaissance / Ellipse

70 - 99 - 128 mm 5° - 45° Hip and valley

6-40 mm



30-62 mm

PERFORMANCES

Thermal insulation

Air tightness

Wind load resistance

Water tightness

U-value rafter down to 1.8 W/m²K For specific calculation per profile combination: please contact your Reynaers Aluminium fabricator.

Up to 600 Pa (class 3)

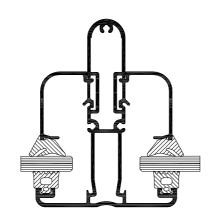
Up to 800 Pa (class 2)

Up to 900 Pa (class E)



PR 100

Outside roof



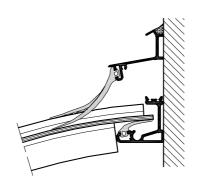
Parallel Roof 100 is a non-insulated aluminium roof system that can be used as a terrace covering or a carport. PR 100 offers a range of rafters in different heights and widths so that high static requirements coming from snow load and own weight can be implemented without using steel reinforcements.



TECHNICAL CHARACTERISTICS	
Height of rafte	
Min. visible width of rafter	
Slope	
Glass thickness	
Glazing method	

SOFTLINE	
100 - 150 mm	
75 - 105 mm	
5° - 45°	
8 - 37 mm	
dry glazing with EPDM	







Cintro Conservatories

The profiles within the Cintro range have been developed as an architectural solution for bending profiles.

The possibilities for application are numerous and may even include light roofs. The system is able to incorporate a variety of glazing styles including plate glass and is the ideal system for applications where abundant daylight is required.

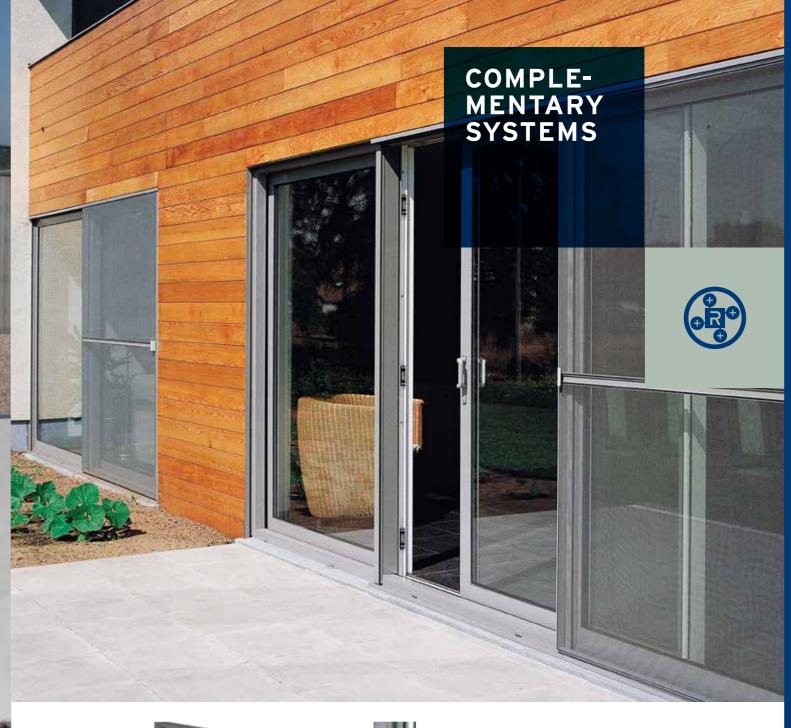
TECHNICAL CHARACTERISTICS
Inner visible width
Outer visible width
Height of the covers
Height of the bearing profile
Inertia of the bearing profile
Filling thickness

CINTRO	
60 mm	
60 mm	
8 mm	
8 - 35 mm	1
Ix= 0.2 to 9.8	cm ⁴
from 2 mm to 3	2 mm











Ventalis



Mosquito



RB 10



B Glass

Ventalis Complementary Systems

A breath of fresh air



Ventalis is an innovative and controllable ventilation system with a self-regulating airflow that can seamlessly be integrated in your windows or sliding doors. This modular system ensures both efficiency and an aesthetic design, allowing hassle-free cleaning and maintenance.

The patented self-regulating units automatically open and close the air inlet when wind pressure increases or decreases, keeping the incoming airflow constant. What's more, the Ventalis system is easily adjustable in 5 different positions, allowing users to easily adjust the ventilation degree.

The Ventalis system is installed at the top of the window or sliding door in the so-called 'dry rooms'. They can be built in different configurations, depending on the aesthetics or the required airflow, to comply with the applicable regulations. Ventalis can be integrated with a wide range of Reynaers Aluminium systems: ES 50, CS 68, CS 77, CP 130 and CP 155.



TECHNICAL PERFORMANCE OF THE SELF-REGULATING UNIT

Water tightness	
Airflow for each unit of 20 cm	
Self-regulation	
Extra exterior visible height	

class 9A (600 Pa)
10 m³/h (windows) - 12 m³/h (sliding elements)
class P3
18.5 mm (windows) - 30.5 mm (sliding elements)



Mosquito Complementary

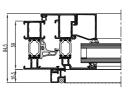
Systems

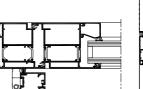


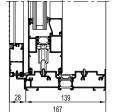
Keep out insects

Mosquito is a wire screen system, mounted on to a window, door or sliding door, which keeps out insects with a minimal interference of the view outside. The insect screen concept allows the windows, doors or sliding doors to be opened or closed without taking out the system. For the sliding insect screen, the rail is situated above or at the bottom of the door, assuring optimal comfort.

Obviously, the Mosquito system is compatible with all Reynaers Aluminium window, door and sliding door systems as well as systems from other system suppliers, even non aluminium windows like wood and PVC.







TECHNICAL CHARACTERISTICS

System depth

Corners

INSECT-RETARDANT WINDOWS

15 mm/22 mm

pre-formed synthetic supporting corner pieces or aluminium clampable corner.

INSECT-RETARDANT DOORS

28 mm

pneumatically crimped aluminium corner or aluminium clampable corner.

INSECT-RETARDANT SLIDING DOORS

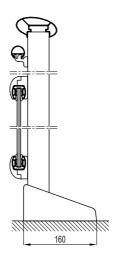
28 mm

pneumatically crimped aluminium corner or aluminium clampable corner.





RB 10 Complementary Systems



RB Glass Complementary

Invisible safety

High rise buildings without balconies are a worldwide seen architectural trend. Simultaneously safety cannot been jeopardized by transparency and design.

Reynaers Balustrade Glass is an add-on glass balustrade for larger window areas in high rise buildings. Even without balconies, you can safely open your windows and enjoy an unobstructed view.

RB Glass is compatible with all MasterLine and Concept System Window and Door Systems, as well as Concept Patio and Hi-Finity Sliding Systems.

Ensured safety

Reynaers Balustrade 10 is an elegant balustrade system, which guarantees optimum levels of safety. It has been tested in renowned test centres according to the most stringent European standards.

This system is available in three styles: Functional, Ellipse or Softline – this way your balustrade matches your style perfectly. Besides the traditional set-up of a balustrade, RB 10 also provides a very aesthetical way of incorporating panels, like multilayered glass, plexiglas or acrylic sheets allowing a multitude of design variants.

STANDARDS

STS 54

NEN 6702

NF P01-013

Polish standard balustrades

STYLE VARIANTS









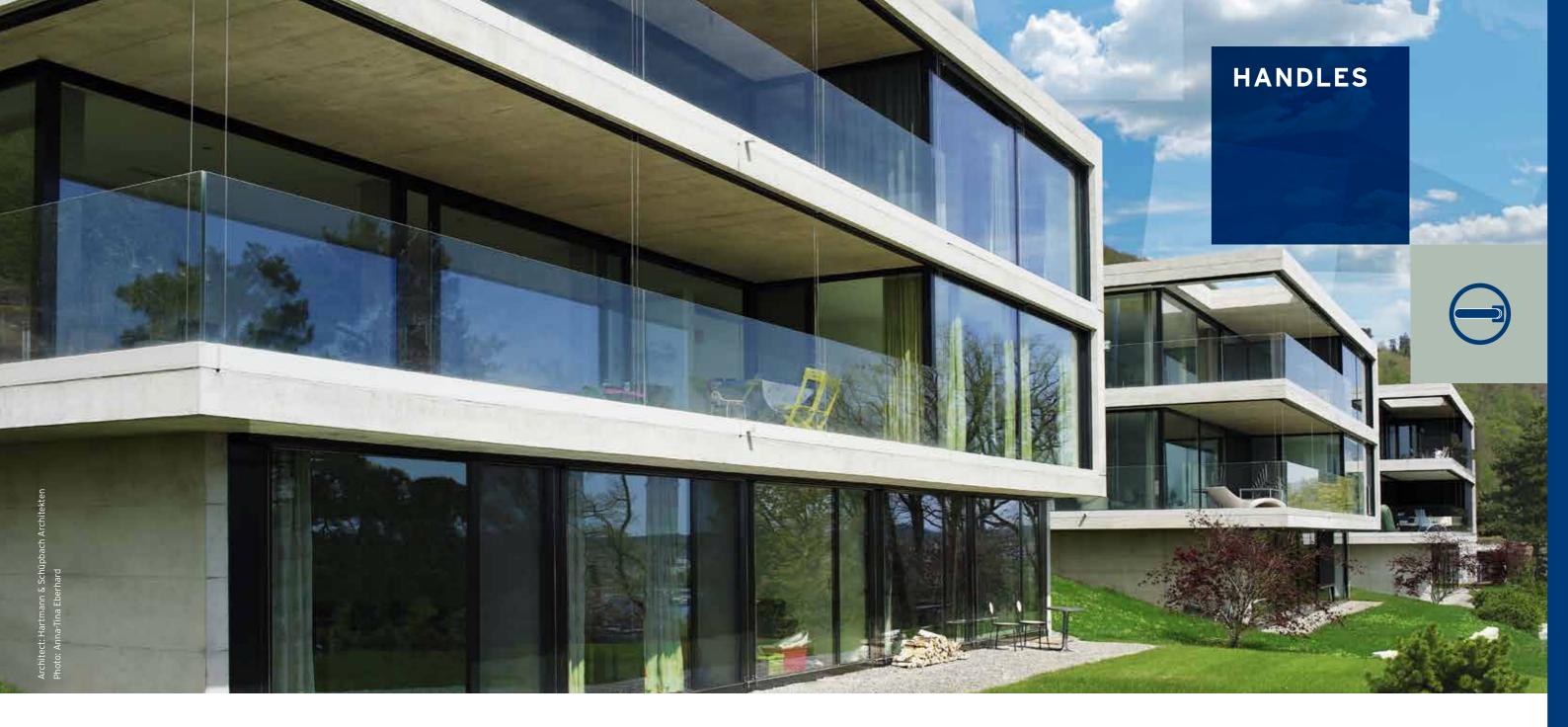


Min. glass thickness Min. glass width Max. glass width Min. glass height

12.5 mm 800 mm 2000 mm 1200 mm









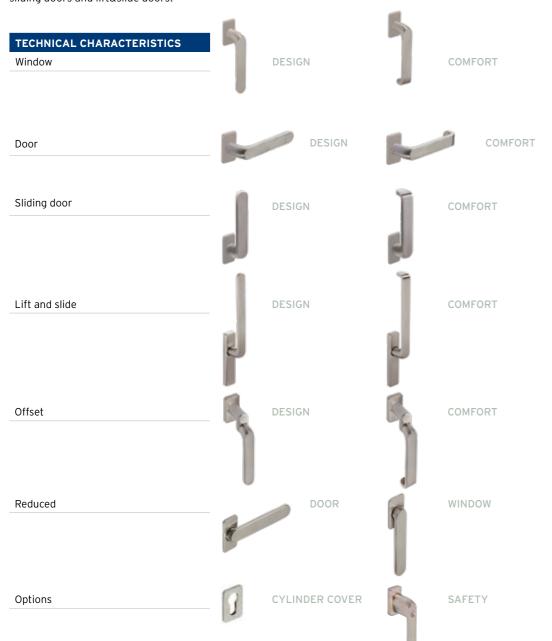
PuRity Handles



Design matters...

For people who desire ultimate design and top quality, a unique Reynaers Aluminium handle series is created, called PuRity. This series combines next-generation material and mechanical properties with the superior Italian design abilities of designer Leo De Carlo. De Carlo studied both Reynaers Aluminium's culture and project successes to capture the essence of his observations in the PuRity design, resulting in a timeless, minimal and rational design.

The PuRity handles are available in four standard colours (Sapphire Black, Eclipse, Moonlight White and Lithium). But PuRity is much more than just a great design. The combination of the material and its surface treatment makes the handles non-corrosive, hypoallergenic and 100% recyclable. The PuRity range is suited for all Reynaers Aluminium windows, doors, sliding doors and lift&slide doors.

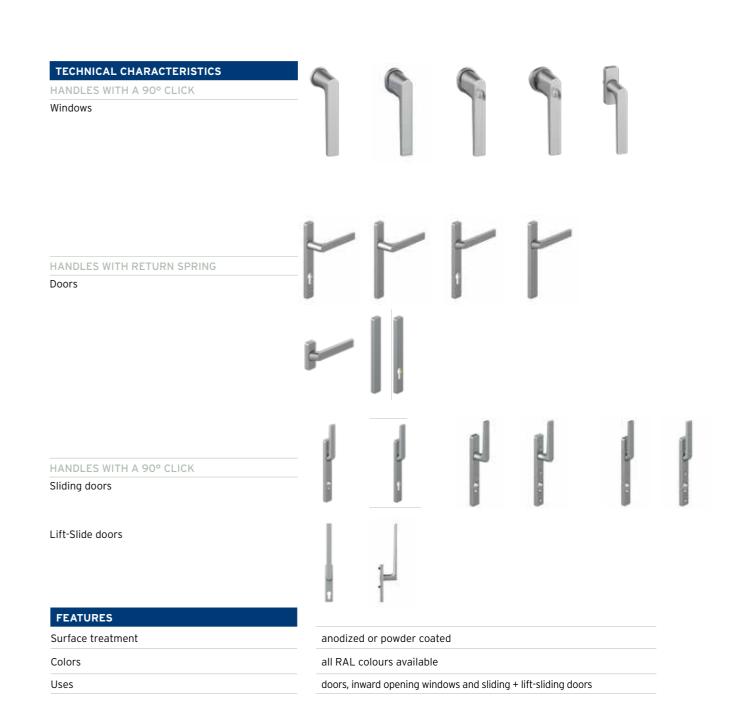






True elegance

Create an aesthetic look with this minimalist timeless design, tailored to the needs of contemporary living, without sacrificing ease of use. The finishes (anodization or powder coatings) are endless for each type and ensure a uniform look, that fits into any type of architecture.





Olimpo Handles



Iris

Eos

Gea

Hera

Affordable design

The brand new OLIMPO LINE introduces an up-to-date design that meets the latest aesthetic trends; the accuracy of all details ensures innovation, as well as a smart, easy and ergonomic shape to each product. The smooth shape of the Olimpo line is enhanced by the many finishes available which contribute to meet the highest quality and aesthetical requirements.

TECHNICAL CHARACTERISTICS

HANDLES WITH A 90° CLICK

Windows



HANDLES WITH RETURN SPRING

Doors



FEATURES

Surface treatment

Colors

Uses

anodized and powder-coated

available in all RAL colors.

doors, sliding doors, inward opening windows



Orchid Handles

Elegance

Orchid is a beautiful and elegant handle type. This series is characterized by a curved shaped design that radiates in its simplicity. The handles are very reliable and cost-efficient, making them suitable for any window or door system. Orchid handles are available in white, black or anodized-look.

TECHNICAL CHARACTERISTICS

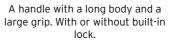
HANDLES WITH A 90° CLICK

Windows











A handle with a short cover plate and large grip. With or without built in lock.



A door handle with a short cover plate and a large grip.



A sleek rounded handle specially designed for sliding doors.

FEATURES

HANDLES WITH RETURN SPRING

Surface treatment

Colors

Uses

all handles are painted

available in all RAL colors.

doors, sliding doors (CP 45Pa and CP 50), inward opening windows and outward opening windows (ES 45Pa) $\,$

Horizon Handles



Modern style

The Horizon handle is characterised by the modern and contemporary appearance. The horizontal details give the handle a very special and unique look. Its sleek design makes it the perfect combination for any window or door system. Horizon handles can either be anodized, or powder coated in one of our 400+ RAL-colours.

TECHNICAL CHARACTERISTICS

HANDLES WITH A 90° CLICK

Windows



A handle with a short cover plate and long grip

HANDLES WITH RETURN SPRING

Doors



A handle with a long cover plate or a short cover with cylinder cover and a long grip. Ideal for roll down shutters.



A handle with a long or short cover plate and a long grip. A cylinder cover is also available.

HANDLES WITH A 90° CLICK

Sliding doors



A handle with a long cover plate and a long grip.

FEATURES

Surface treatment

Colors

Uses

anodized or powder coated

available in all RAL colours

doors, sliding doors, inward opening windows (side hung, bottom hung, turn-tilt, tilt-turn)





Reliability

Shield is our safest and strongest series of handles. Created to withstand thieves, these handles are characterized by their rugged, robust and reliable design. Shield received two SKG stars on most of the range and on some specific articles even three stars as a safety score. The handles are available in unpolished, natural anodized colour.

TECHNICAL CHARACTERISTICS

HANDLES WITH RETURN SPRING

HANDLES WITH A 90° CLICK

HANDLES WITH A 90° CLICK

Windows

Doors



A handle with a short cover plate and a long grip



A handle with a short cover plate, long grip and built-in lock



A handle with a long face plate and a short, round and flat grip



A handle with a long face plate and a long straight grip



A handle with a long face plate an a long rounded grip



A handle with a long face plate and a rounded grip



A handle with a long face plate and a long, round and reduced grip

FEATURES

Sliding doors

Surface treatment

Colors

Uses

unpolished natural anodized for all handles (color .17), powder coated possible for doors and sliding doors

all models are available in unpolished natural anodized (color .17), for doors and slidings doors all RAL colours available

doors, inward opening windows and sliding doors (CP 130 and CP 155 only)



^{*} Sliding door handles are only available for the systems CP 130 and CP 155.









RB 10 Solar



BS 100/30 Solar

Solar

The Solar version of the already existing systems Brise Soleil 100 and 30, matches electricity production with protection against blinding and direct sunlight. BS 100 and BS 30 can handle all 3 types of PV panels: mono and poly chrystalline and amorphous cells.







The Concept Wall 60 Solar is the aesthetically pleasing high tech green energy solution, ideal for wall and roof

The system, totally insulated, has been designed to completely avoid shadow on the cells.

CW 60 Solar can handle all 3 types of PV panels: mono and poly chrystalline and amorphous cells.

RB 10 Solar

Reynaers Balustrade 10 SOLAR is a balustrade system, designed for the integration of photovoltaic panels and all its necessary wiring. The balustrade system can be applied on both accessible and inaccessible balconies.

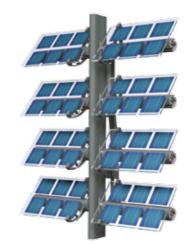
CW60/RB

10 Solar

Solar

RB 10 Solar positions the photovoltaic panels at the most efficient angle.

RB 10 Solar can handle all 3 types of PV panels: mono and poly chrystalline and amorphous cells.



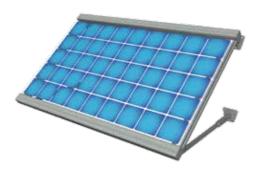
TECHNICAL BS 100 SOLAR CHARACTERISTICS

Filling type

Inclination

Glass edged photovoltaic modules, semi transparent or normal, crystalline or amorphous, single glassed, side PV panel box or back PV panel box

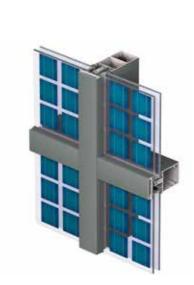
0° to 45°



BS 30 SOLAR

Standard or glass edged photovoltaic modules, semi transparent or normal, crystalline or amorphous, single glassed, back PV panel box

15° to 45°



TECHNICAL CHARACTERISTICS

Filling type

Inclination

CW 60 SOLAR

Glass edged photovoltaic modules, semi transparent or normal, crystalline or amorphous, single or double glassed, side PV panel box or back PV panel box

5° to 90°



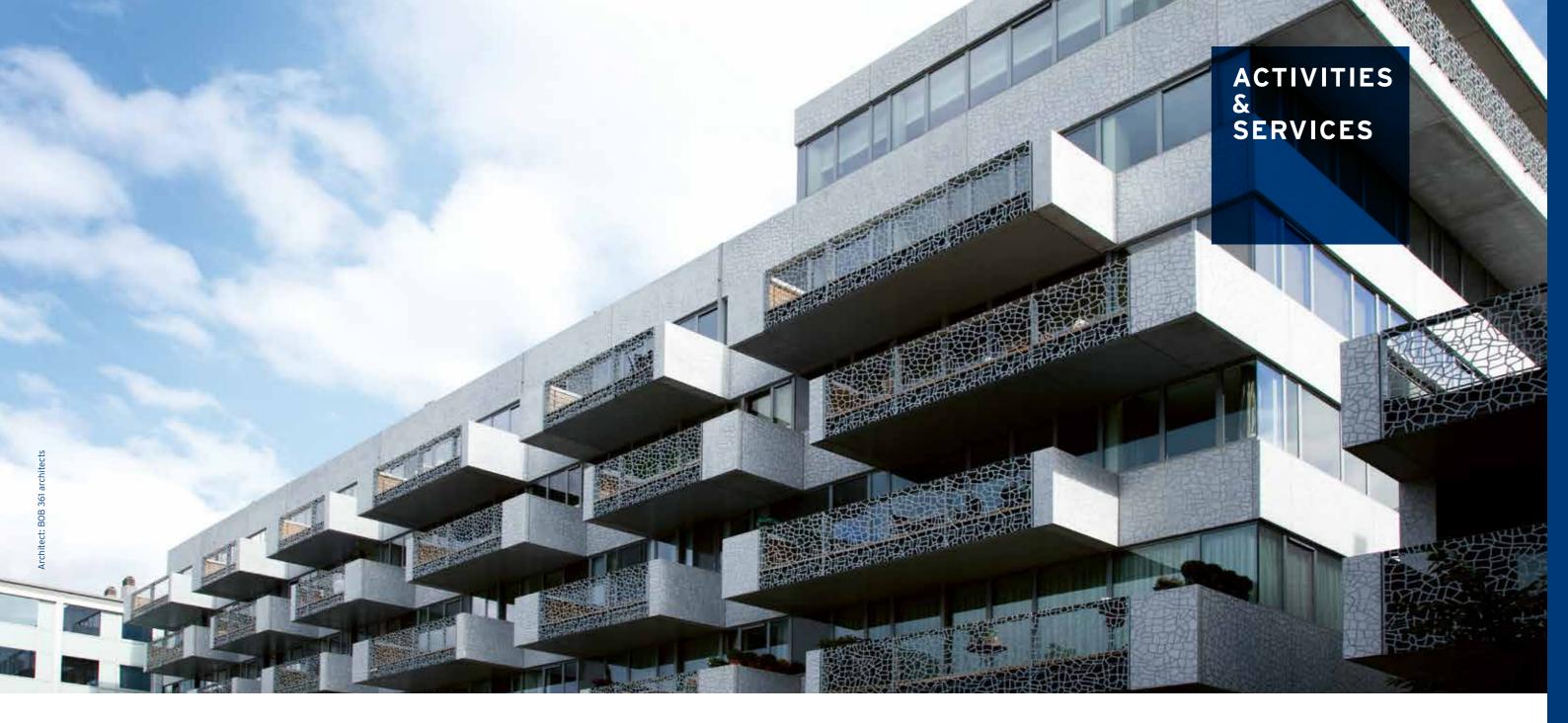
RB 10 SOLAR

Accessible Non-Accessible balconies balconies

Standard or glass edged photovoltaic modules, semi transparent or normal, crystalline or amorphous, single glassed, back PV panel box

> 90° 60° to 90°









THE REYNAERS CAMPUS

Introduction

Reynaers Campus is the headquarters of the Reynaers Group. This unique establishment with a total surface of 283,000 m² focuses on sharing the know-how and experience with architects, fabricators, contractors and other building partners.

The Reynaers Campus consists of:

- Experience centre
- Technology centre
- Training centre
- Automation centre

- Logistics Centre
- Production Centre
- Quality Control
- Offices

The Reynaers Campus is much more than just a building... It's a state of mind and a permanent incentive to implement values such as partnership and innovation. It is an international communication forum and a source of inspiration for all those involved in the building process.

EXPERIENCE CENTRE

The Reynaers Experience Centre is designed to bring people together and inspire you with our latest solutions and state-of-the-art technologies for architectural building solutions. In the Experience Room, you can discover our unique offering, assisted by inspiring digital applications.

For a full immersive experience, a visit to AVALON can be booked where you can visit future buildings through a shared virtual reality experience. AVALON is a high-end projection-based Virtual Reality room, specifically configured for architectural applications.

Together with an auditorium and multiple meeting rooms, this Experience Centre is the place to share know-how and strengthen partnerships. On the storytelling table you can discover more about our history, activities and corporate social responsibility.



TECHNOLOGY CENTRE

The Reynaers Aluminium Technology Centre is the largest privately owned innovation and testing centre in Europe. All Reynaers Aluminium systems are rigorously tested to ensure that they meet the international standards.

The different tests are centered around these 3 MAJOR TRENDS in the aluminium industry:



One of the showpieces of the test centre is a state-of-the-art testing wall for curtain walls with a height of 15 m. On this specially developed test wall we carry out air-, wind- and water-tightness tests, especially on glass façades. Thanks to the 15 m height we can test multi-storey elements with connections playing an important role.

For windows and doors, we have a 20 m wide wall at our disposal to execute tests for air permeability, wind load and watertightness. There are 5 calibrated test walls with a total capacity for 10 different test positions.

To ensure that all Reynaers Aluminium systems remain stable and of high quality even after extensive use or after natural disasters, we carry out cyclic tests and earthquake or seismic tests.

In the acoustic test lab, aluminium façade elements are tested on their acoustic insulation. Different test elements can be built in thanks to a flexible partition wall between the sending and receiving room.

The Technology Centre also accommodates the Research Centre, with the R-cube and the R-Lab. The R-cube is a rotatable research and test installation designed for thermal performance analyses. The R-lab is the dedicated lab to test solutions at an early stage through the use of rapid prototyping and 3D printing.





At Reynaers Aluminium we endorse the importance of qualitative production and installation for the long-term performance of our aluminium systems. That is why we maintain daily contacts with a strong international network of professional manufacturers and designers and why we advise and train our customers.

We organise numerous training sessions in order to teach our customers the necessary skills and know-how enabling them to provide their own customers with high-quality service. Our practical training is made up of both standard and specialised courses (assembly and installation) as well as software classes.

Reynaers Aluminium organizes an average of 2000 training days every year (both practical training and software training) for its customers and own employees. The trainees come from all over the world.

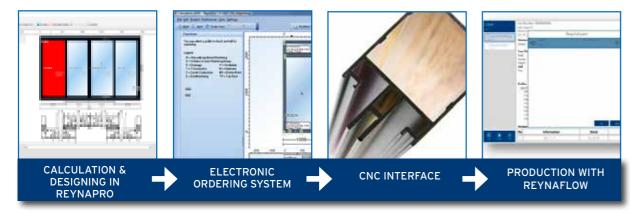




AUTOMATION CENTRE

Reynaers Aluminium offers a full range of automation solutions to the customer through dedicated partnerships. Every stage of the production process can be optimized using a fine-tuned combination of the right experience and know-how, state-of-the-art machinery, the most recent technologies and an optimized link with the ReynaPro software. In this way, the fabricator gets the opportunity to produce in the most efficient way, reduce costs and increase profitability.

On top of that, Reynaers Aluminium developed ReynaFlow, an intelligent control system and workflow manager that optimises the production processes in the realm of 'smart manufacturing' and improves quality and production time.



In terms of tooling, Reynaers Aluminium can offer you several possibilities:

Conventional tooling offer

In order to realize this, Reynaers Aluminium selects the best performing and most suitable solution for every type of operation on our profiles.

- Multifunctional punch tool: for all simple operations on profiles
- Notching saw: high quality tooling for the notching of curtain wall transoms

- Copy routers: specialized copy routers are available for more complex operations to profiles
- Glazing bead / single head saws: a range of sawing machines for small profiles



















For more detailed information about our tooling offer, visit our Extranet - www.reynaers-extranet.com

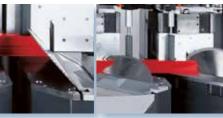
A selection of our machine offer

elumatec

For an optimised production, Reynaers Aluminium established close partnerships with machine suppliers, to optimally set-up and install different types of machines, but also to ensure full service and support after installation. Over the last 10 years, this collaboration resulted in the installation of over 200 Elumatec machines all over Europe.

Double mitre saw: 2 types of high quality double mitre saws, with special clamping blocks to fully support the entire Reynaers Aluminium profile range.

DG104



DG244

CNC- machining centres: a whole range of state-of-the-art CNC machining centres, with clamping blocks and tooling sets to allow all necessary operations to the Reynaers Aluminium profiles.



Corner press: dedicated 1 and 4 corner press machines to create high quality corner connections, with special quickchange sets for supports and crimping knives to reduce adjustment time.



Transporting units: a combination of tables and transporting units are able to process your elements throughout the workshop with minimal risk of damage.

Software

To allow fully automated production of our systems, there is a direct link between miscellaneous machines and the ReynaPro software. This ReynaPro software includes a database of all profiles and accessories, allowing calculation and manufacturing of projects. The technical data and commercial information are continuously updated and supported by our technical service. Today, almost 2400 supported ReynaPro-licenses are in use.

To further support fabricators, Reynaers offers **ReynaFlow:** an intelligent control system and workflow manager that optimizes production processes in the realm of 'smart manufacturing', also known as Industry 4.0. While most production processes are still manually driven, ReynaFlow digitally links the full manufacturing process, from preparation (cutting, machining), through connection and sealing to the final assembly and finishing. By providing on the spot information, tracking errors and monitoring each phase in real time, both quality and production times are vastly improved.



PRODUCTION CENTRE

Thermal insulation

The thermal insulation of aluminium profiles requires a lot of know-how and experience. In order to ensure the highest quality, we created our own insulation company, ERAP.

The outer and inner chambers of the profiles are joined with glass-fibre reinforced polyamide or Noryl strips. These strips create a thermal break. The insulation value depends on the height of the strip, the type of strip and whether or not extra foam is used.

In total, Reynaers insulates ±100,000 profiles per month (= ±700,000 metres of profiles) with 9 machines.





LOGISTICS CENTRE

Our customers benefit from our strong logistics organisation, which enables us to quickly deliver products from our various distribution centres worldwide.

The warehouses in Duffel cover a total surface area of almost 62,000 m², equal to ca. 9 football fields. Stock is permanently maintained through continuous delivery by more than 200 different suppliers. The Reynaers Aluminium Logistics Centre consists of Profiles warehouses (approx. 50,000 m²) and an Accessories warehouse.

The Profiles warehouses provide storage for 4,500 different profiles (mostly 7 metres long). After insulation, lacquering and anodisation, orders are sorted, packed and prepared for transport.

The Accessories warehouse (approx. 12,000 m²) stores 5,000 different accessories, such as handles, hinges, locks and gaskets (over 7 million units).

Worldwide, Reynaers Aluminium has 17 distribution centres.





SURFACE TREATMENT

Colors & finishing

For the surface treatment of the profiles we collaborate with selected painting companies that strictly adhere to our standards and regulations.

Reynaers Group can provide you with different treatments and finishes, depending on your personal taste and on the building environment:

Powder coating:

Suitable for all environments, except mild-aggressive and aggressive environments. Available in large color variations, and has different shine and finishing possibilities.

Pre-anodisation and powdercoating:

Pre-anodisation for aggressive environments (Coastal area < 1km, swimming pool, ...) or Seaside treatment for mild aggressive environments (Coastal area 1-10km, railways, ...) gives the finish increased corrosion resistance. Available in large color variations, and has different shine and finishing possibilities.

Anodisation:

Suitable for all environments, layer thickness is adjusted for aggressive environments. Available in different colors: natural, champagne, bronze and black. Preserves the natural look of aluminium



REYNAERS CAMPUS OFFICES

The Reynaers Campus houses the Belgium-Luxembourg organisation and centralises the corporate functions for the entire Reynaers Group. These corporate departments can provide you with a lot of added value.

BESPOKE SOLUTIONS

Reynaers Aluminium Consult & Project Team

"I have a dream..." Almost everything starts with a dream, a vision. With imagination, enthusiasm and a little help from Reynaers Aluminium, your dream becomes a project that will soon become reality.

As Reynaers Aluminium opens the window on the world, we plan to be there for you not only this year but during the years to come. We, Reynaers Aluminium consults, engineers and technicians are your professional partners, and we can create a special design. We will support you every step of the way, and we will help you to bring your projects to life!

Bespoke solutions tested and approved

New projects need suitable solutions. That's why we will even develop new products for you. You need a new profile, a special design and different specifications in one of your new projects? Illustrative in this respect is the Heathrow and Gatwick airports project, where special product teams were assigned the task of designing concepts into reality.

All our products' standard measurements are tested and certified. But every so often you will plan a module not covered by standard measurements or that has to meet special requirements. After agreement, Reynaers Aluminium is able to carry out the design for you and test it for wind resistance, water tightness and stability. The testing facilities at the Reynaers Campus are fully compliant with official standards.



RESEARCH & DEVELOPMENT

Reynaers Aluminium puts enormous investment into research and development to maintain its position at the forefront of the industry. We work closely with architects and building contractors all over the world, developing systems and solutions for total facade construction - from the design concept through to manufacture and installation.

Reynaers Aluminium's high-performance window, door and curtain-walling systems are developed with the aim of enhancing the energy-efficiency, design, comfort and safety of buildings.

In all our developments we follow these 4 key innovation drivers:



Sustainability

energy efficiency: thermal insulation, sunscreening, solar cradle-to-cradle, green labels



Safety

burglar proof, fire proof, bullet proof, smoke evacuation. earth quake proof



Comfort

interior climate, acoustic insulation, integration of systems in floors, daylight, domotics, water-tightness



Design

transparency: large glass panes, slim profiles, full glass panes

COMMUNICATION

Reynaers Aluminium develops customised technical and marketing tools to provide solutions for our partners with all the means to work as well and efficiently as possible.

A large range of tools and services is at our customers' disposal:

- Corporate website: www.reynaers.com
- Point of Sales material
- Product brochures
- Corporate brochures
- Reference book
- Demo assembly movies on dedicated YouTube channel
- Presence at fairs







Discover our inspirations platform

We're pleased to inform you that our inspirational website is online: https://www.reynaers.com/architects/get-inspired

This digital inspiration platform, evolved from our well-known Report magazine, increases our worldwide reach to all stakeholders.

A new showcase article is published regularly and offers inspiring pictures, a detailed article, interviews, video's and technical solutions.

Explore this inspirational website with interesting functionalities and share the projects with your network via the social share buttons!



Extranet

On the extranet site our partners have the opportunity to access up-to-date technical and commercial information

- product catalogues for fabricators with information about all Reynaers systems: profile overviews, section drawings, assembly steps, ...
- software packages and calculation tools e.g.
- overview of the trainings we offer and the training calendar
- machines, software, hardware, assembly drawings, product prescriptions
- CE + DOP documents
- EOS (Electronic Ordering System)
- U-tool for insulation calculations
- Ventalis tool for the calculation of natural airflow according to relevant standards
- other technical information e.g. system characteristics, performances



QUALITY MANAGEMENT

Reynaers Aluminium aims to still be valued by its partners ten years from now. Customer satisfaction and quality assurance are closely linked, so they are both high on our list of priorities. Together with our suppliers we endeavour to guarantee permanent high quality.



Reynaers Aluminium provides certainty: 10-year system guarantee

At each stage of the production process our quality control department carries out very stringent checks, which enable us to guarantee that our systems satisfy country- and product specific technical approvals and standards. In addition we grant a 10-year system guarantee. This is an insurance on the aluminium, lacquer or anodisation layer, as well as on the insulation. On the accessories, we grant a 5-year system guarantee.



ISO 9001:2008 certification: proves permanent quality control

Striving for quality is no empty slogan at Reynaers Aluminium. We permanently and systematically update our quality control as proven by our ISO 9001: 2008 certification.

In order to acquire and maintain this certification, our departments responsible for design, production and delivery of all our products and services, are regularly inspected.



Qualicoat guarantees top-quality lacquer work

All our lacquering partners bear the European Qualicoat quality label, which implies that they meet specific requirements with respect to seals, service life, UV-resistance, discolouration, etc., representing the best possible guarantee for the quality of the lacquer work.



Qualanod guarantees optimal anodisation

All our anodising suppliers bear the European Qualanod quality label and consequently meet specific requirements with respect to seals, service life, UV-resistance, discolouration, etc., representing the best guarantee for the quality of the anodisation.

10 YEAR GUARANTEE

Reynaers Aluminium guarantees that the Reynaers Aluminium systems meet the technical specifications and standards of the country and the product in question. The current processing and maintenance regulations mentioned in the Reynaers Aluminium catalogues determine the extent of this 10 year guarantee (a 5 year guarantee for wearing parts).



Object of the Guarantee

The products delivered by Reynaers Aluminium have the following properties and/or guarantees, with explicit exception of items detailed under the headings "validity" and "exclusions".

Aluminium

Standards extruded aluminium:

- Composition to standard EN 573 parts 3 and 4;
- Mechanical properties to standard EN 755 part 2;
- Tolerances to standard DIN 17 615 and EN 12020 part 2;

Standards rolled aluminium:

- Composition painted aluminium EN AW 1050 A H24 to standard EN 573 part 3;
- Composition anodised aluminium EN AW 5005 H14 AQ to standard EN 573 part 3;
- Mechanical properties to standard EN 485 part 2;
- Tolerances to standard EN 485 part 4.

Painting and Anodising

A 10 year guarantee on:

- Detachment, flaking and blistering of the treated aluminium parts.
- Corrosion, including filiform corrosion for material AIMgSi0.5F22 (AW 6060 and AW 6063) with additional requirements Zn ≤ 0.15%; Cu ≤ 0.02%; Pb ≤ 0.022%; Si: 0.30 -0.55%; Fe: 0.10-0.30%; Mg: 0.35%- 0.60%; Mn ≤ 0.10%; Cr ≤ 0.05%; Ti ≤ 0.10%; other elements individually ≤ 0.05% together ≤ 0.15%; after treatment T66;
- UV resistance, discolouring and loss of gloss exceeding the defined tolerances, according to Qualicoat and Qualanod regulations (latest editions).
- The paintwork warranty can be extended under specific conditions. These conditions can be obtained from Reynaers Aluminium.

Insulation

A 10 year guarantee on:

- Adherence between the polyamide strips and the aluminium;
- Preservation of the thermal and mechanical properties of the insulator, within the boundaries defined by the technical specifications.

Accessories

Accessories, gaskets and synthetic profiles:

- A 10 year guarantee on properties, functionality and design, within restrictions defined by technical specifications;
- Painting and anodising: see above;
- A 5 year guarantee on wearing parts, only applies to normal and realistically foreseeable use.
- A 2 year guarantee on electrical and wood components

CE MARKING

The CE - Marking is now required also in the European building industry. Products have to show the conformity with the appropriate European Regulation. The Construction Products Regulation (CPR) aims to promote the free flow of products within the European Union by overcoming the technical barriers between standards that had previously applied to different countries. The CPR now lays down the basic requirements that products must meet in terms of:

- · Mechanical resistance and stability,

· Safety in case of fire,

Protection against noise

• Hygiene, health and the environment,

• Energy economy and heat retention

· Safety and accessibility in use,

Sustainable use of natural resources

For the CE - Marking of facades the harmonized product standard 14351-1 is relevant for windows and doors and 13830 for curtain walls.

This obligation is not only valid for enterprises exporting to other European Union countries, but also for those, which are exclusively active in their homeland.

The Reynaers Aluminium systems can be CE-marked in accordance with the relevant product standards. This implicates that they are fully compliant with the EU Construction Products Regulation (CPR).

The procedure for CE - Marking of products entails a process that starts with Type Testing (TT) where all the relevant elements of products are tested to determine the extent to which a product will meet the standards that apply to it, and classes of compliance are allocated. A second important item in the CE - Marking is Factory Production Control (FPC). This ensures that the products are manufactured under controlled conditions to ensure that each product meets the performances as →determined during the Type Testing.

To prepare yourselves, Reynaers Aluminium as your partner issued a CE - Marking brochure and other tools to inform you about every step necessary for CE marking.

GREEN COMMITMENT

Reynaers Aluminium is aware that companies play an important role in the care for the environment. That is the reason why Reynaers Aluminium is constantly searching for new ways to become "greener". This means that Reynaers Aluminium is passionately interested in sustainability, by being at the forefront in the development of energy saving and sustainable products. This has resulted in some actions, taken by Reynaers Aluminium to try and make a difference.



First of all, aluminium is a material which is 100% recyclable without any losses in quality. This allows Reynaers Aluminium to use aluminium profiles with a high recycled content, with guaranteed quality. On the other hand, it also allows all systems to be recycled at the end of their lives.

Due to the use of aluminium, Reynaers Aluminium is able to develop slim profiles for large glass panes, allowing more light to enter and therefore leading to a comfortable indoor environment.

Aside this, the energy-efficiency of our systems is a very important topic for Reynaers Aluminium. A good example of this is the development of our new MasterLine platform, a window and door system which can be used for passive houses. Also our high insulated sliding elements and curtain walls can minimize the building's energy loss.

The integration of external sunscreening (Brise Soleil range) onto our façade systems makes it possible to control the sun entering the building minimizing the use of energy intensive air-conditioning. The integration of photovoltaic panels into our innovative façades, even transforms the solar energy into green electricity.



All of this contributes to the realization of sustainable buildings and leads to credits for LEED (Leadership in Energy and Environmental Design) and BREEAM (BRE Environmental Assessment Method), just two examples of assessment methods which set the standard for best practice in sustainable architecture.

These certifications show that the buildings are built taking into account environmental issues such as: energy demands of the building, recycling of materials, use of water, comfort of people inside the building, use of renewable energy sources, location of the

The increasing interest in these types of certificates proves the importance of sustainable buildings and products. Reynaers Aluminium's innovative products, continuing research and focus on knowledge exchange will allow the company to make a genuine contribution to this new way of building.



ABOUT REYNAERS ALUMINIUM

Reynaers Aluminium is a leading European specialist in the development and marketing of innovative and sustainable aluminium solutions for windows, doors, curtain walling, sliding systems, sunscreening and conservatories. Besides offering an extensive range of standard solutions, the company also develops solutions that are tailored to the individual customer or project. Research, product development and testing are conducted at the Reynaers Campus, the sector's largest private innovation and testing centre, located in Duffel (Belgium). In addition, the company also provides extensive technical support and advice to fabricators, contractors and architects.

Reynaers Aluminium is the market leader in Belgium and has acquired a strong market position in the 40 countries where it has its own sites. The company's success is due in part to the close partnership between Reynaers Aluminium and 5,000 partner fabricators, architects and project developers worldwide.

In 2017 the Reynaers Group achieved a turnover of over 426 million euros and has nearly 2000 employees worldwide.

For more information: $\underline{www.reynaers.com}$

REYNAERS ALUMINIUM NV/SA

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TOGETHER FOR BETTER