



PIXEL.

PIXEL WINDOW TECHNICAL CATALOGUE

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TABLE OF CONTENTS

1 Features

- 1.1 uPVC reinforced profiles
- 1.2 Colors
- 1.3 Handle options
- 1.4 Hardware options
- 1.5 Muntin Bars
- 1.6 Unique Shapes
- 1.7 effiAIR Ventilation
- 1.8 Trickle Vent

2 Sizes

3 Cross Sections

- 3.1 Typical Frame and Sash cross sections
- 3.2 Mullion cross sections
- 3.3 Coupling Mullion cross sections
- 3.4 PIXEL Balcony Door

4 Tapee - Brickmould profiles

- 4.1 Assembly Options
- 4.2 Sizes schedule

5 Technical parameters

- 5.1 NFRC requirements
- 5.2 Structural Requirements
 - 5.2.1 Allowable Stress Designed pressure
 - 5.2.2 Ultimate Designed Pressure
- 5.3 NFRC - Thermal Properties
- 5.4 STC - Sound Reduction Properties
- 5.5 AAMA - Structural Performance

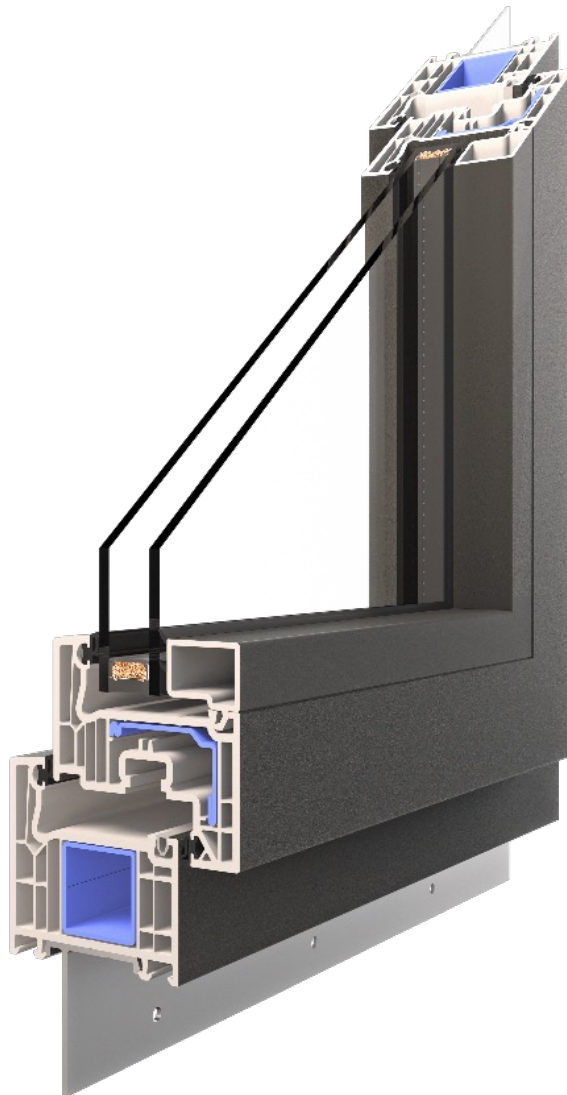
1

FEATURES

1.1 REINFORCED UPVC PROFILES

Pixel windows exude originality with their slim and elegant design. They feature a narrow movable mullion, symmetrically placed handles, and a modern, sharp-edged profile that allows for more natural light.

- 2.75" (70mm) thick 6 chamber profiles to provide better thermal performance
- Steel reinforced frame and sash
- Locking around whole perimeter to provide better security and weathertightness
- Removable glazing bead to allow for easy glass replacement
- Easy one-hand handle operation
- Tilt function for ventilation
- Various double and triple glass packages available
- Optionally structural nailing fin available with sealed corners



1.2 COLOURS

Thoughtful window composition and color can determine the final aesthetic of your spaces. See the possibilities of our windows in different styles. You can choose from many veneer colors.

PIXEL windows as standard comes in white color both sides without veneer.

Optionally it is possible to order windows veneered:

- From the outside (internal side white without veneer)
- Both sides the same color
- Both sides with different color form the outside and inside

AVAILABLE VENEER COLORS



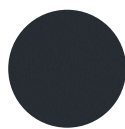
white



brilliant
white



black jet matt



dark gray



anthracite
grey ALUX
DB-703



smooth
anthracite
grey



sheffield oak



winchester



golden oak



walnut



anthracite
wood



siena rosso



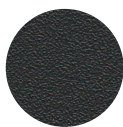
dark oak



 **woodec**
dark toffee



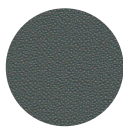
kitami dark



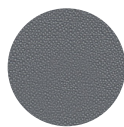
mattex
s-bronze



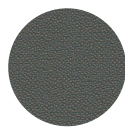
white matt



basaltgrau
matt



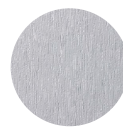
fenstergrau



quarzgrau
matt



umbragrau



brushed
aluminium



Antracit
aquartz

**NOTE: For other color options please
contact OKNOPLAST sales dept.**

1.3 HANDLE OPTIONS

PIXEL HANDLES



light gold F3



gold F4



graphite F9



silver F1



black 9004



brown



white

ONIX HANDLES



DESIGN+



light gold F3



gold F4



silver F1



brown



white



light gold F3



gold F4



silver F1



brown



white

>>

ROSETLESS HANDLES - SLEEK



light gold F3



gold F4



graphite



silver F1



black 9004



brown



white

ROSETLESS HANDLES - SLEEK+



light gold F3



gold F4



graphite F9



silver F1



black 9004



brown



white

TAULON



jasnozłoty F3



złoty F4



srebrny F1



czarny 9004



biały

TBT (TILT BEFORE TURN)



white



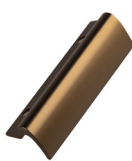
silver F1

>>

WINCLICK - USED FOR BALCONY DOOR WITHOUT OUTSIDE HANDLE



light gold F3



gold F4



stainless steel



silver F1



anthracite RAL 7016



black



brown
RAL 8017



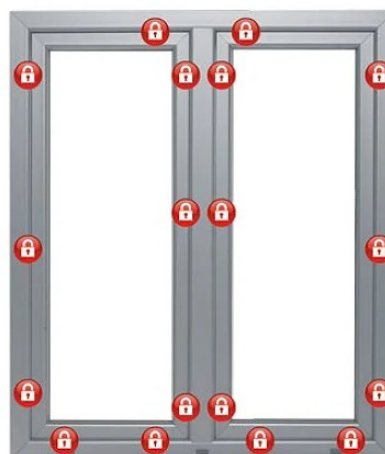
white
RAL 9016

1.4 HARDWARE OPTIONS

Tilt and Turn window hardware has locking points placed around the whole perimeter of the window sash.

Advantages:

- Safety
- Air and Water tightness
- Significantly better sound insulation
- Available in two options:



STANDARD VISIBLE HINGES



INVISIBLE HINGES

Not available for Tilt only windows



1.5 MUNTIN BARS

Muntin bars are decorative slats, visually dividing the glass into several parts. They are available in in-pane variants or glued. They come in different widths and colors. Thanks to this, you can choose them for any interior and give it a unique aesthetic appearance.

Available Muntin Bars

GBG – Grids Between Glass

Grids placed in cavity between glass panes

Available in various colors

Available thickness: 8mm, 18mm, 26mm, 45mm

SDL – Simulated Divided Light

Grids glued to the glass pane from the inside and outside.

Cavity between glass filled with DUPLEX profile. Available in Veneer colors to match the frame and sash.

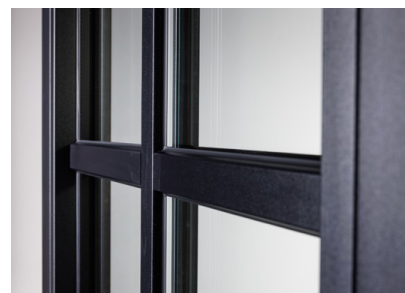
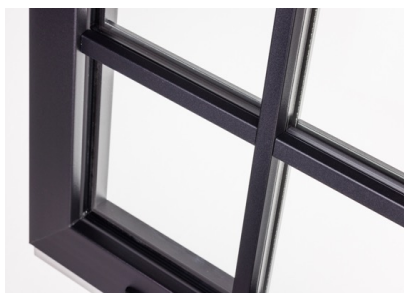
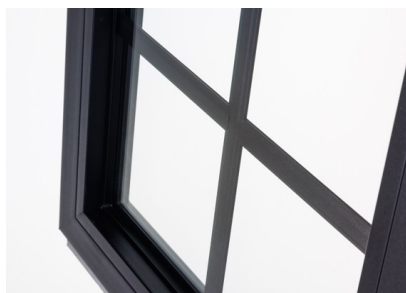
Available thickness: 25mm, 40mm, 55mm

SDL without DUPLEX – Simulated Divided Light

Grids glued to the glass pane from the inside and outside.

Available in Veneer colors to match the frame and sash.

Available thickness: 25mm, 40mm, 55mm



1.6 UNIQUE SHAPES

PIXEL Windows are available with various untypical shapes



circle



circle with transom



half-circle



circle quarter



arched



elliptical



arched transom



cathedral



trapezoid



triangle

1.7 EFFIAIR EFFICIENT VENTILATION

EffiAir is a new window functionality. Thanks to the separation of the sash from the frame, a 1/4 inch gap around the perimeter of the window is created. This builds a healthy indoor climate through natural ventilation. What's more, in this position the fitting still guarantees secure closure of the locked window.



- used air flows out of the room through the upper part of the window,
- and fresh, cool air flows in through the bottom
- fittings with ventilation*
- secure closure
- possibility to ventilate when nobody is home
- better protection against wind and rain
- no drafts or slamming windows
- healthy indoor climate thanks to natural air exchange
- fittings available in these window systems: PIXEL and PAVA
- no window screens necessary

Learn about the advantages of perimeter ventilation:

Air exchange
Easy to operate
Energy efficiency
Anti-burglary protection
Noise protection / reduction
Protection against insects
Pet friendly
Temperature drop*

Tilted window

+
+

35.6°F/10min

Window with effiAIR function

+
+
+
+
+
+
+
+

32.90°F/10min

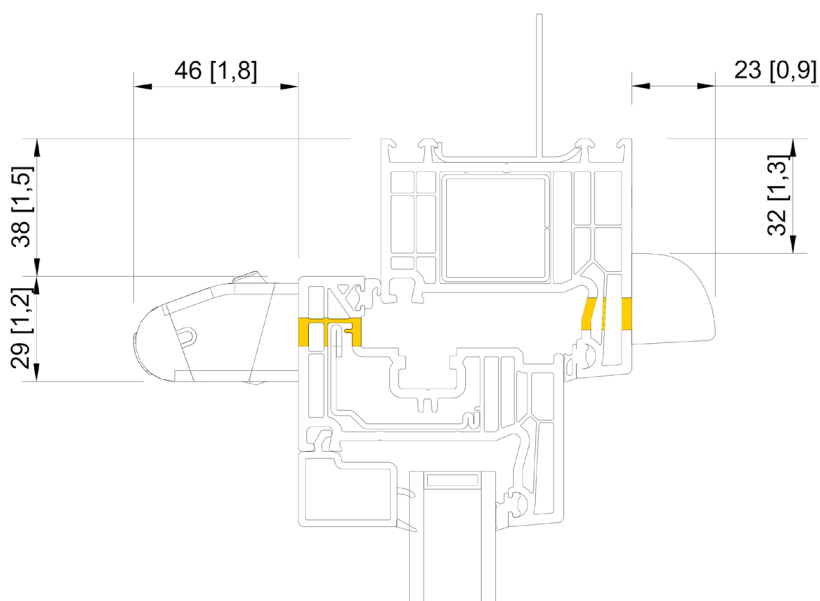
* Source: Study of the Technical University of Münster.

1.8 TRICKLE VENTS

Hygroregulated ventilators are a reasonable and economical solution that will bring freshness to your interior. Controlled automatically, they will comfortably accompany you in your daily life.



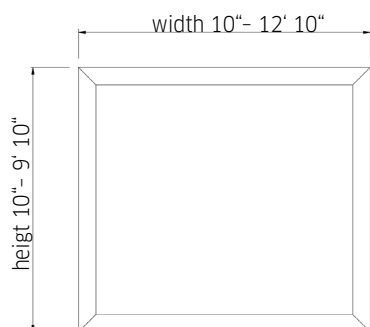
- Hygroregulated ventilators function by means of a polyamide strip, which, depending on the level of humidity, automatically closes or opens the elements of the device.
- These vents will work well wherever there is increased humidity. They will be an ideal choice for bathrooms, kitchens, laundry-type utility rooms and even bedrooms.
- Hygroregulated ventilators can easily match the style of the interior: the outer casing can be covered with the color of your choice from the rich RAL palette.



PIXEL with Trickle Vent Section

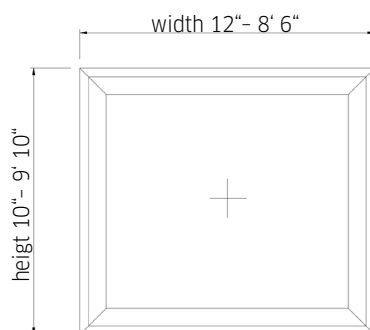
2

SIZES



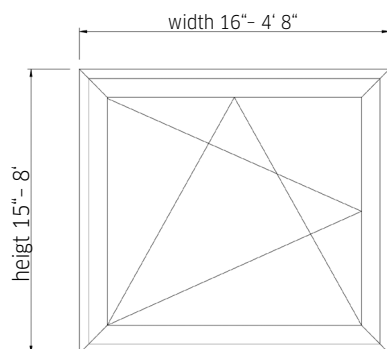
FIXED FRAME

Max. Width: 12' 10"
 Max. Height: 9' 10"
 Max. Weight: 550 lbs
 Max. Area: 75 sqf



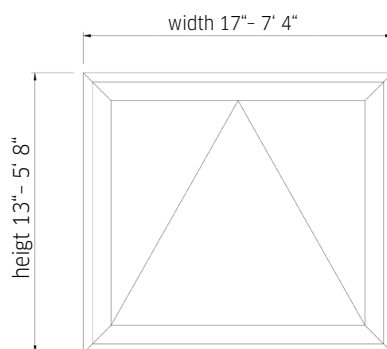
FIXED SASH IN FRAME

Max. Width: 8' 6"
 Max. Height: 8' 6"
 Max. Weight: 550 lbs
 Max. Area: 75 sqf



TILT & TURN WINDOW

Max. Sash Width: 4' 8"
 Max. Sash Height: 8'
 Max. Weight: 220 lbs for standard hinges
 286 lbs for invisible hinges
 Max. Sash Area: 24 sqf



TILT ONLY WINDOW

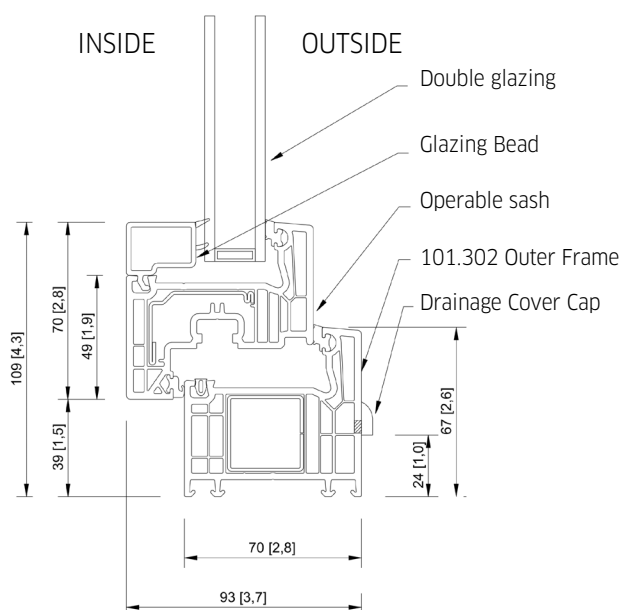
Max. Sash Width: 7' 4"
 Max. Sash Height: 5' 8"
 Max. Weight: 176 lbs
 Max. Sash Area: 24 sqf

3

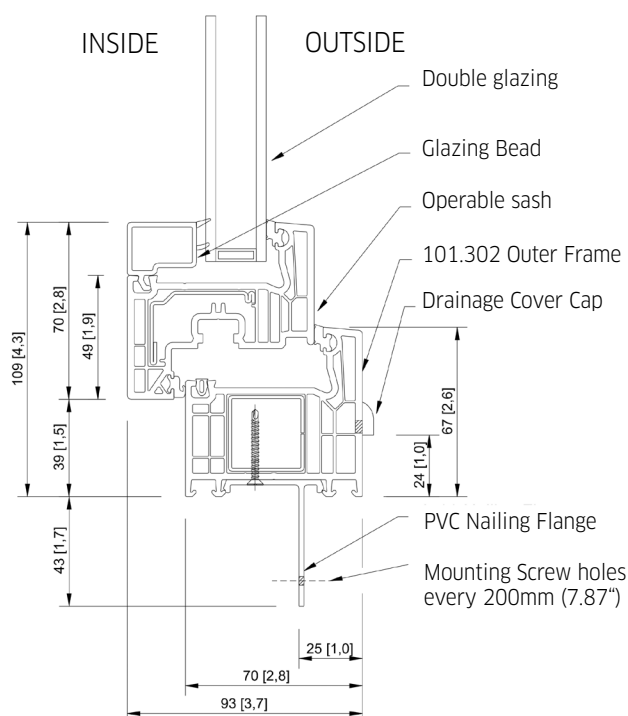
CROSS SECTIONS

3.1 TYPICAL FRAME AND SASH CROSS SECTIONS

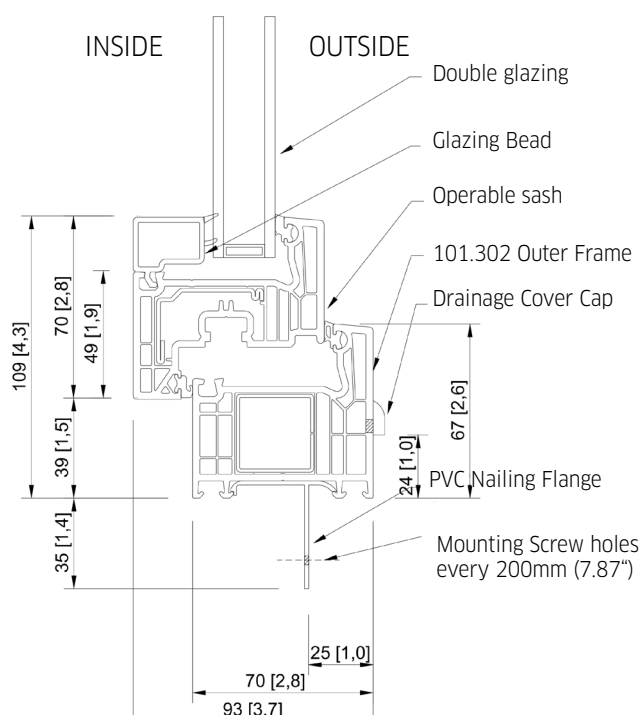
Typical PIXEL cross section (Frame + Sash)



PIXEL Cross section with Aluminum Nailing Flange (Frame and Sash)

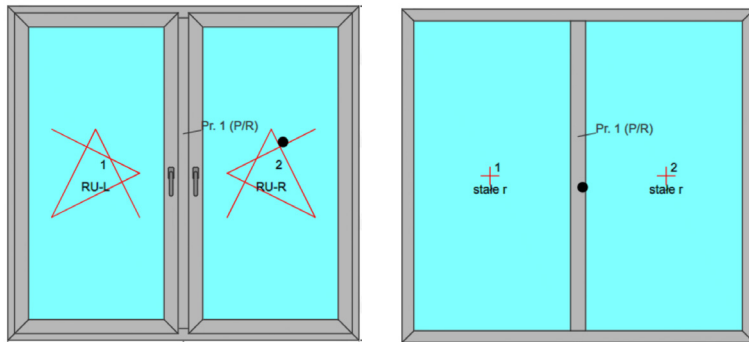


PIXEL Cross section with PVC Nailing Flange (Frame and Sash)



NOTE: PVC Nailing Fin is designed for the sealing and positioning purposes. For the proper structural installation fixing clips or direct bolts to be used as per installation instructions

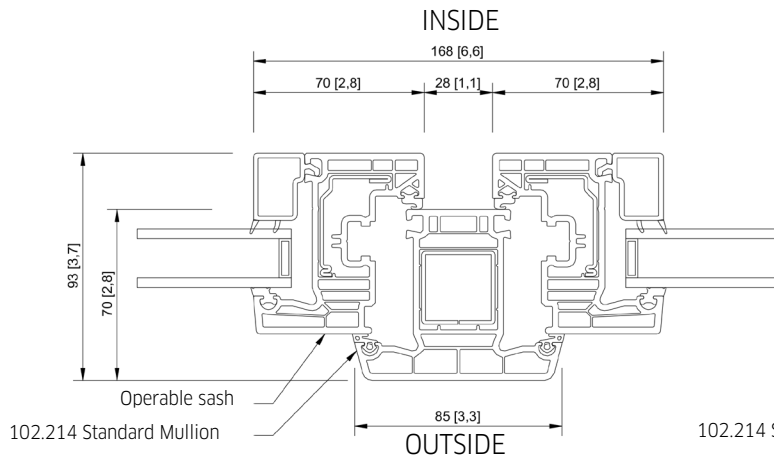
3.2 MULLION CROSS SECTIONS



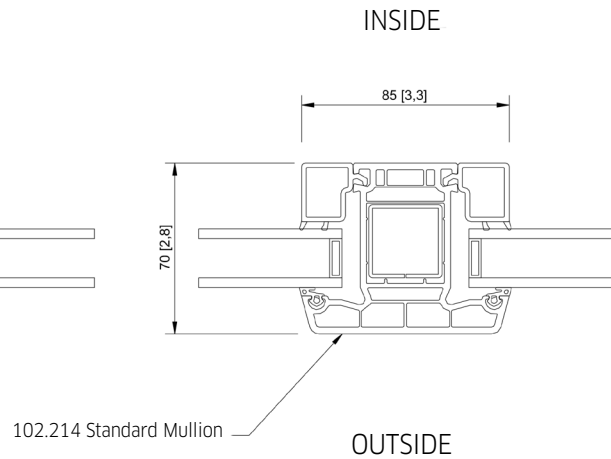
NOTE: Mullions shown are the vertical members of the window place inside one window frame

Standard Mullion 102.214+113.025 (steel reinforcement)

NOTE: For the accurate static calculations please contact OKNOPLAST technicians



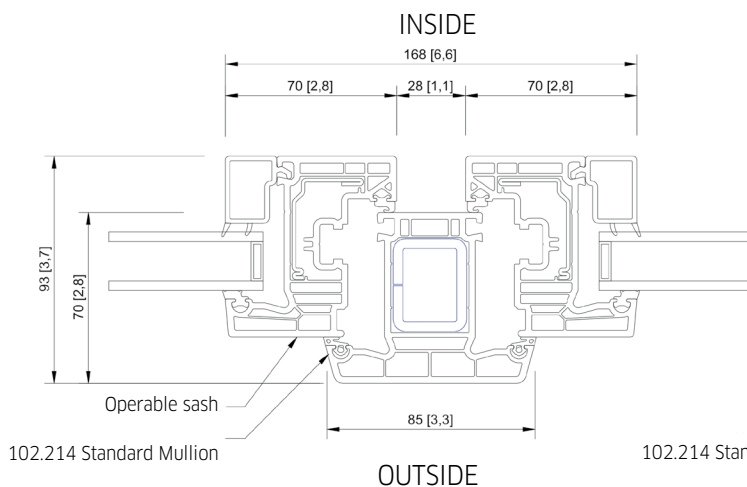
Standard Mullion cross section with sash both sides
DP - up to 25psf
Max. mullion span 74



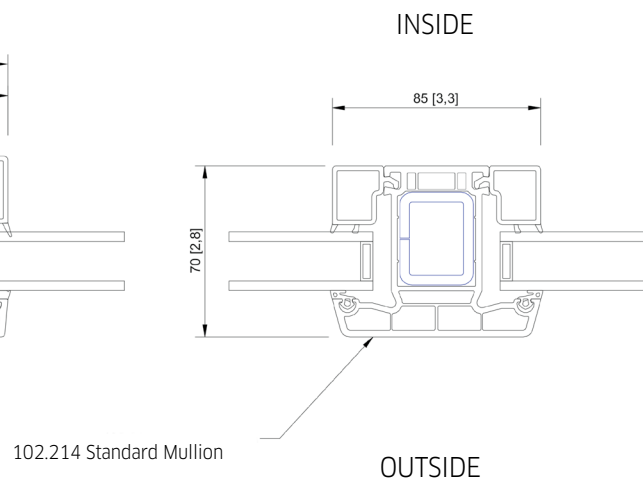
Standard Mullion cross section without sash
DP - up to 15psf
Max. mullion span 74

Static Mullion 102.218+113.271.4 (steel reinforcement)

NOTE: For the accurate static calculations please contact OKNOPLAST technicians

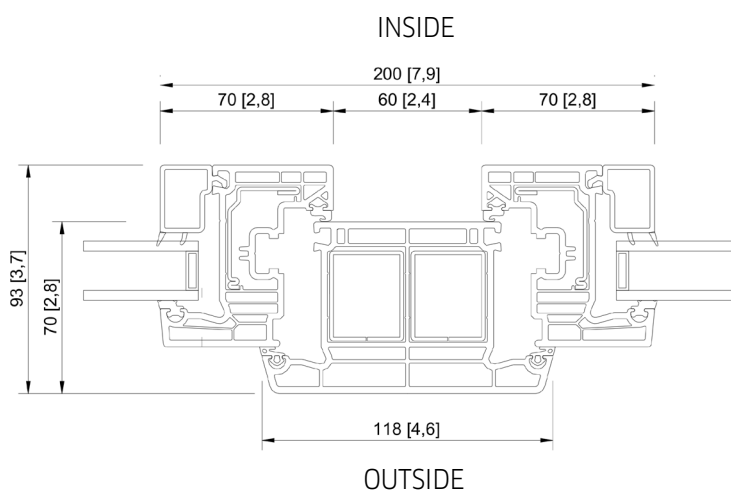


Static Mullion cross section with sash both sides
DP - up to 30psf @ 83" Mullion length



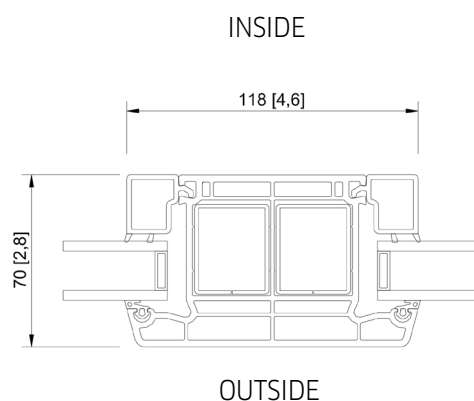
Static Mullion cross section without sash
DP - up to 25psf @ 75" Mullion length

Wide Mullion 102.238+113.271



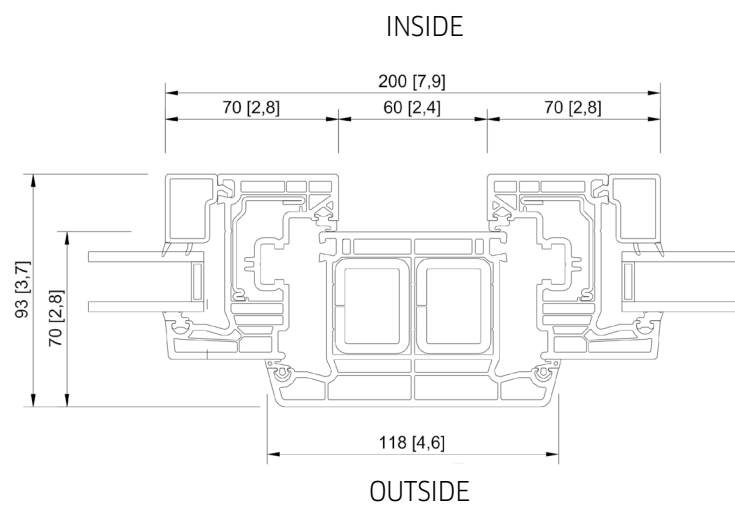
Wide Mullion cross section with sash both sides
DP - up to 35psf @ 78" Mullion length
Max. mullion span 87

**NOTE: For the accurate static calculations
please contact OKNOPLAST technicians**



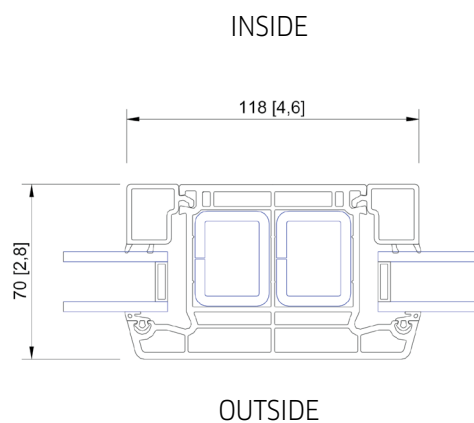
Wide Mullion cross section without sash
DP - up to 30psf @ 78" Mullion length
Max. mullion span 87

Wide Static Mullion 102.238+113.271.4



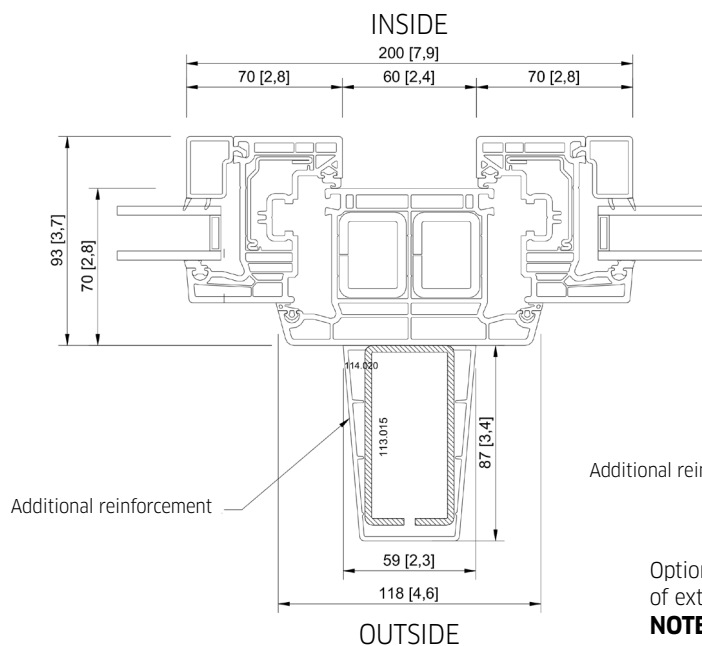
Wide Static Mullion cross section with sash both sides
DP - up to 60psf @ 78" Mullion length
Max. mullion span 96

**NOTE: For the accurate static calculations
please contact OKNOPLAST technicians**

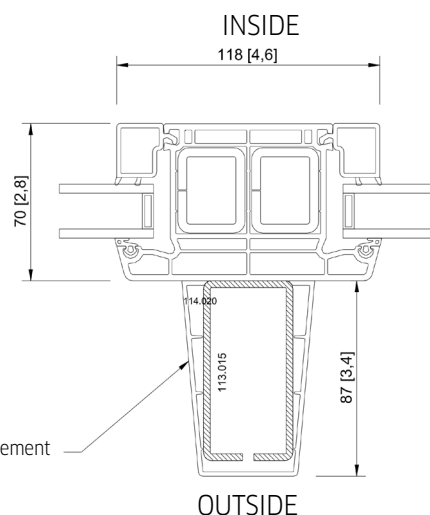


Wide Static Mullion cross section without sash
DP - up to 50psf @ 78" Mullion length
Max. mullion span 96

Additional reinforcement (ZARGA) 114.020+113.015



NOTE: For the accurate static calculations please contact OKNOPLAST technicians



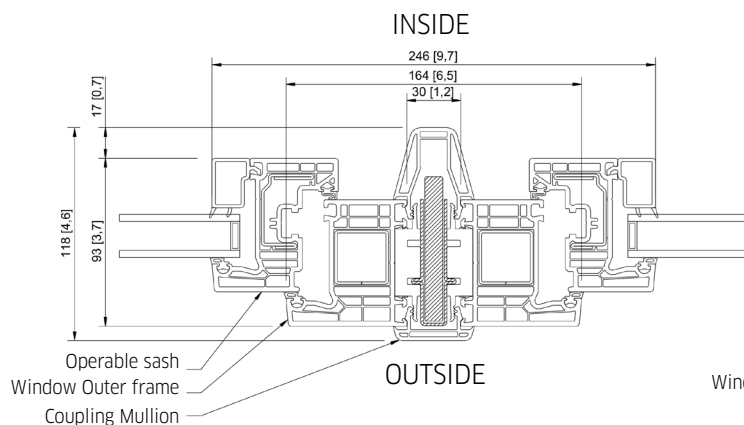
Optionally additional external reinforcement can be used in case of extensive mullion span or wind loads.

NOTE. Bottom and Top cover caps are not available.

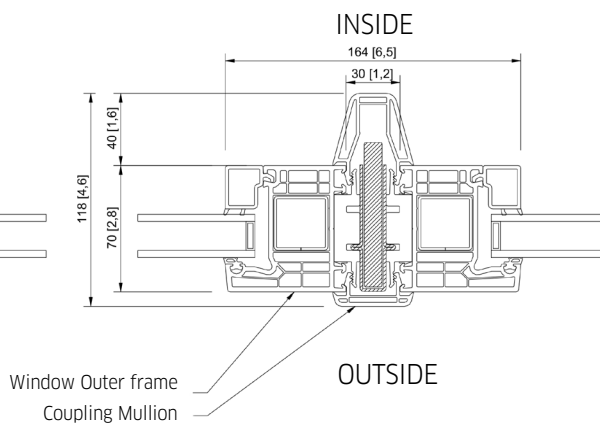
3.3 COUPLING MULLION CROSS SECTIONS

B1.4 Coupling Mullion 116.211 / 116.210.B1.4

NOTE: Coupling Mullions shown are the vertical members connecting two separate window frames



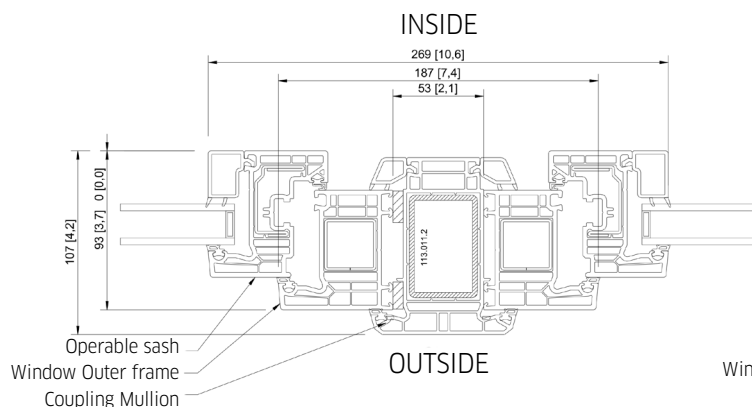
B1.4 Coupling Mullion cross section with sash both sides
Max. mullion span 96



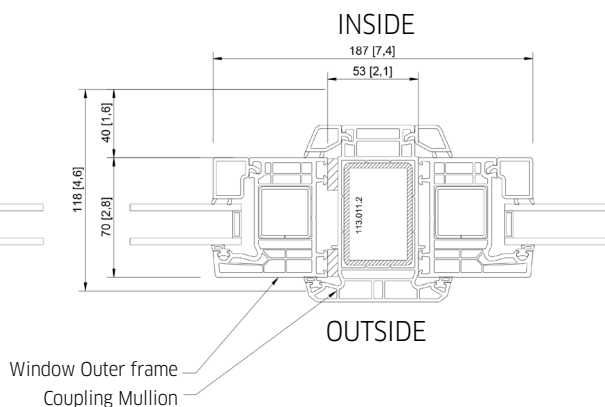
B1.4 Coupling Mullion cross section without sash
Max. mullion span 96

Façade Coupling Mullion 116.202

NOTE: For the accurate static calculations please contact OKNOPLAST technicians



116.202 Coupling Mullion cross section with sash both sides
Max. mullion span 96



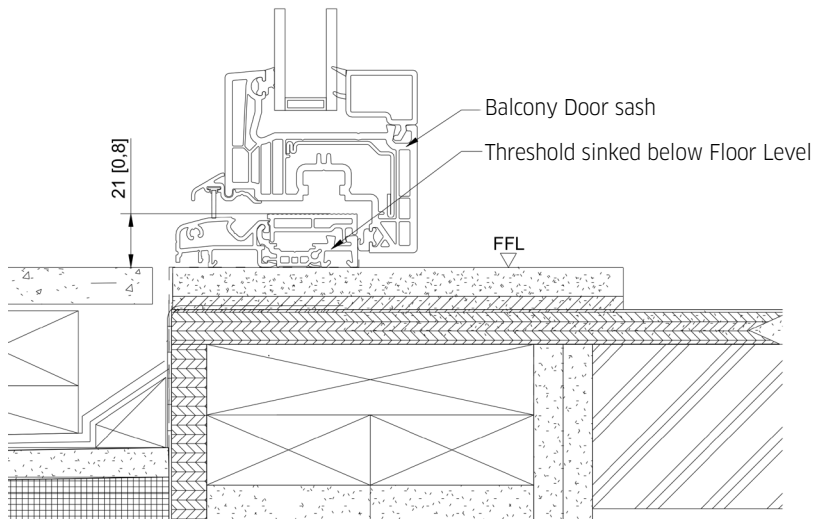
116.202 Coupling Mullion cross section without sash
Max. mullion span 96

3.4 BALCONY DOOR

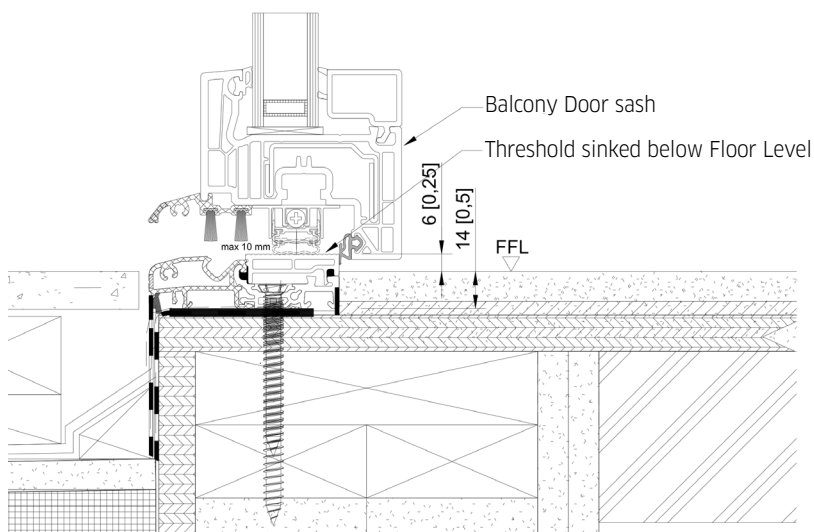
PIXEL is also available with low threshold - WinStep for use as a balcony door



WINSTEP - STANDARD - HEIGHT OF THRESHOLD 0.8"



Typical detail for standard Low Threshold



ADA Threshold - optionally 0.25" threshold is available which is compliant with ADA requirements

4

TAPEE - BRICKMOULD PROFILES

4.1 ASSEMBLY OPTIONS

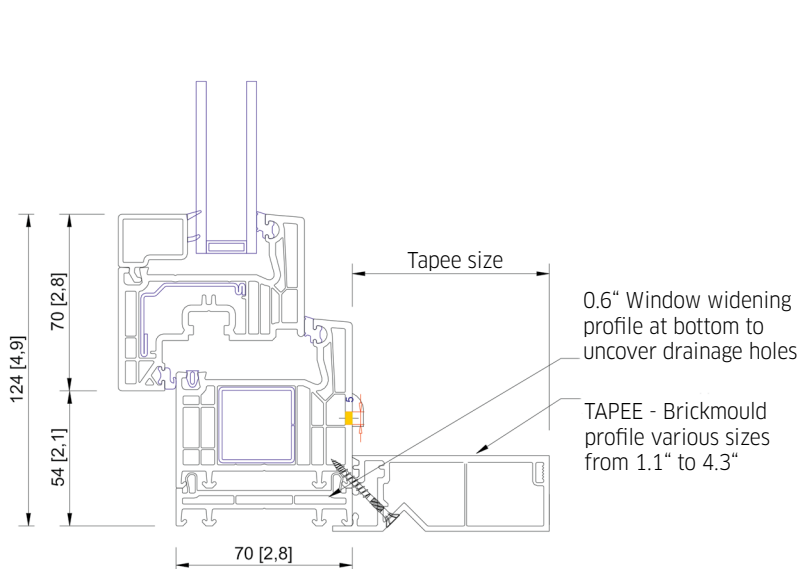
Tapee mounted at four sides of the window



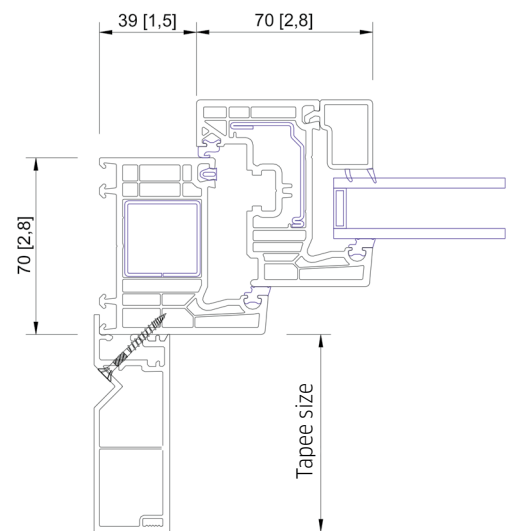
Tapee mounted on top and sides with PVC sill at bottom



CROSS SECTIONS



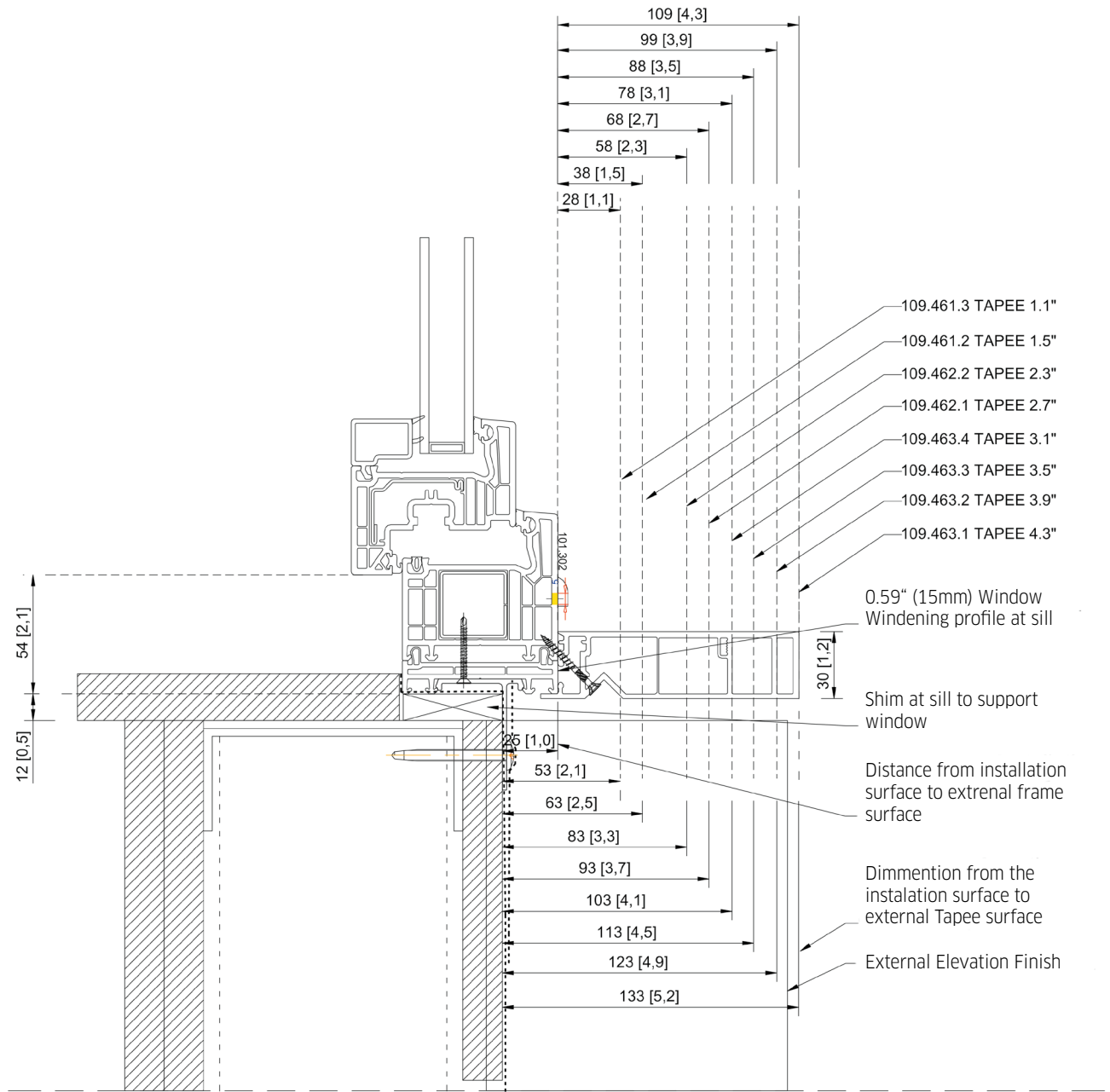
Window bottom section with Tapee (Brickmould)



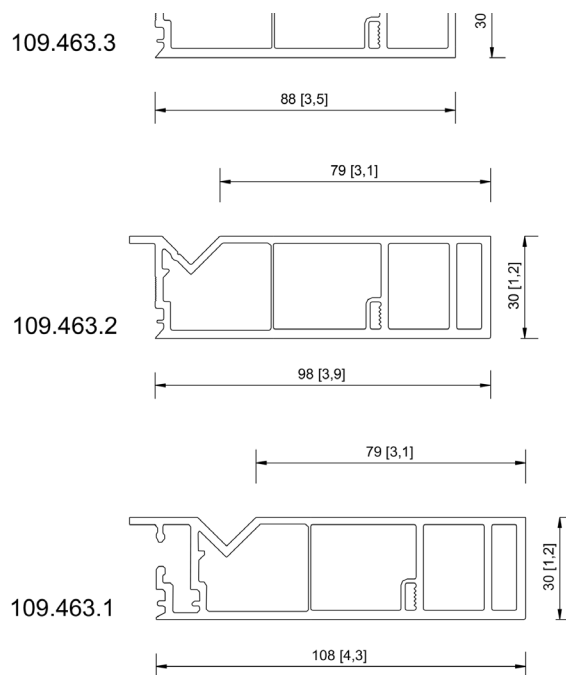
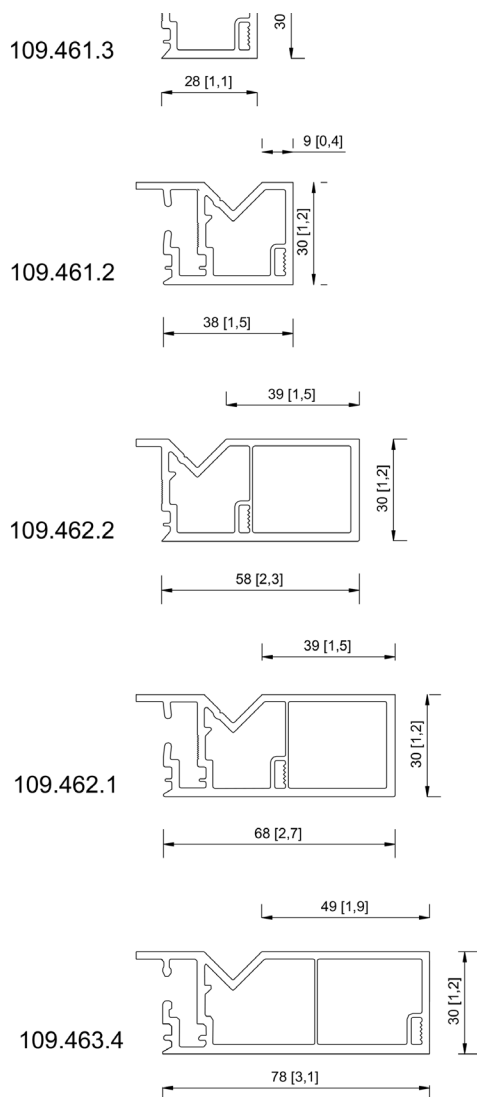
Window jamb section with Tapee (Brickmould)

TAPEE SIZES SCHEDULE

WINDOW WITH NAILING FLANGE 50×39 INSTALATION

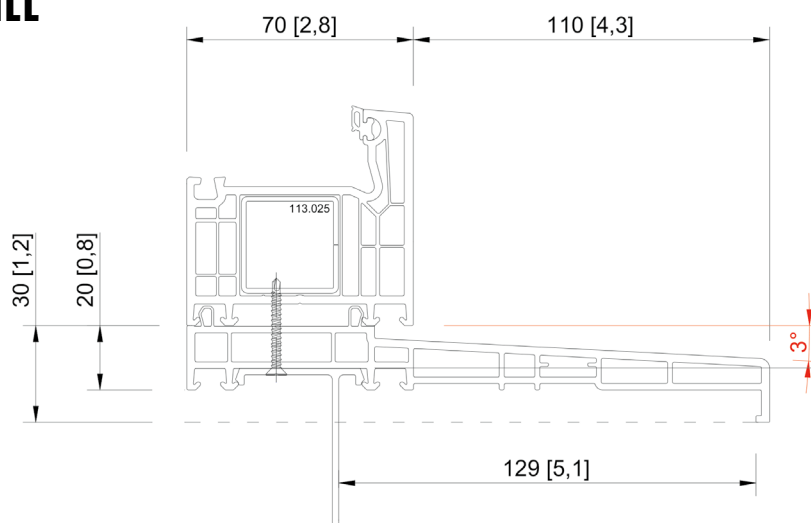


TAPEE PROFILES



PIXEL WITH PVC WINDOW SILL

WINDOW WITH NAILING FLANGE 50×39



5

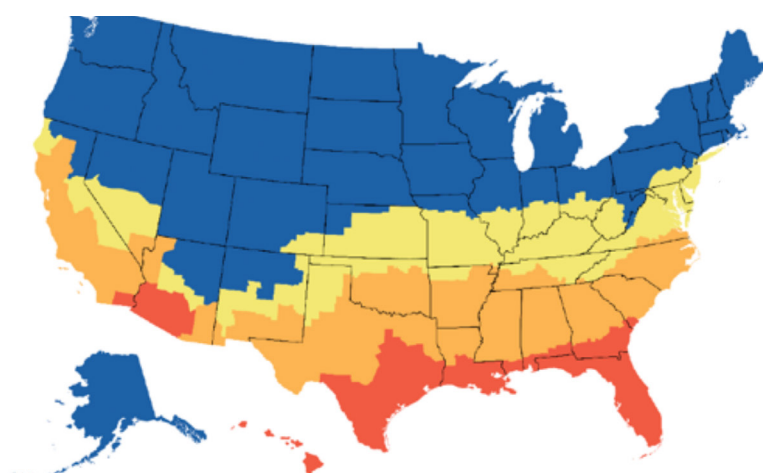
TECHNICAL PARAMETERS

It is very important to carefully check the requirements we should meet before starting to quote windows for a project. These should be included in the specifications of each project. If we have not received such, we should ask the designer to provide them.

5.1 NFRC REQUIREMENTS

Depending on the location and climate zone, each project may have different window thermal requirements. They are determined by designers to meet the requirements of local standards and provide buildings with the best possible thermal efficiency. Depending on whether the project is located in a warm or cold climate zone, windows and glass will have to meet different requirements. For example, in cold zones more weight is given to U-value and in warm zones to SHGC (solar heat gain coefficient).

This is best shown on the Energy Star climate zone map



CLIMATE ZONE	U-FACTOR	SHGC	
Northern	$\leq 0,22$	$\geq 0,17$	PERSPECTIVE
	$\leq 0,23$	$\geq 0,35$	EQUIVALENT ENERGY PERFORMANCE
	$\leq 0,24$		
	$\leq 0,22$	$\geq 0,40$	
	$\leq 0,22$		
North-Central	$\leq 0,25$	$\leq 0,40$	
South-Central	$\leq 0,28$	$\leq 0,23$	
Southern	$\leq 0,32$	$\leq 0,23$	

This is very important for us because the selection of the right profile system and glazing has a very large impact on the price.

5.2 STRUCTURAL REQUIREMENTS

Another very important factor is the structural strength requirements of the windows. Depending on the location, the requirements for wind resistance and window tightness change significantly. Such information should also be obtained from the designer and taken into account when pricing the windows.

Depending on these requirements we will be able to design windows that meet all the requirements, but also those that are not oversized and at the same time expensive or difficult to install.

In some of the specifications from designer the DP's shown are Allowable Stress DP (ASD). This mean we consider values shown as the final designed pressures for our windows. Sometimes the SP's shown are Ultimate Designed Pressure and in this case we have to multiply the pressures by 0.6 to achieve ASD. It is usually described below the schedule. Please see pictures below.

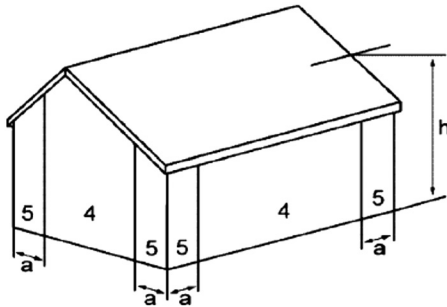
5.2.1 ALLOWABLE STRESS DESIGNED PRESSURE (ASD)

COMPONENTS & CLADDING DESIGN PRESSURES

CODE: ASCE7-05 (IBC2006, IBC 2009)

Mean Roof Height (ft):	33
Design Wind Speed (MPH):	105
Exposure Category	B
Building Classification/Occupant Category:	II
Topographical Factor:	1

Building Length (ft):	NA
Building Width (ft):	NA
Building Height (ft):	33
Wall Zone 5 - a (ft):	3



Sq.ft of opening	Zone4		Zone5	
	Pos	Neg	Pos	Neg
10	20.3	-22.2	20.3	-27.3
20	19.3	-21.2	19.3	-25.5
50	18.1	-20.0	18.1	-23.0
100	17.2	-19.0	17.2	-21.2
500	15.0	-16.9	15.0	-16.9

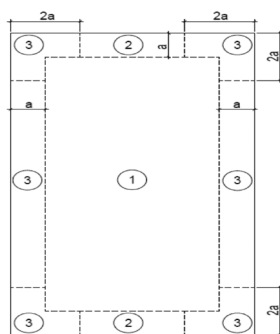
NOTE: The pressures and loads shown have been converted to comply with WDMAIAAM.A. standards and NAFS Performance rating system. This system is based on Allowable Stress design pressures.

5.2.2 ULTIMATE DESIGNED PRESSURE

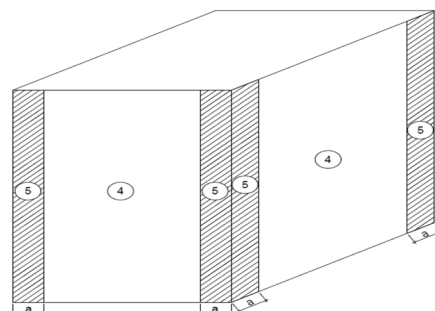
COMPONENTS AND CLADDING PRESSURES										
EFFECTIVE WIND AREA(SF)	ROOF ZONE PRESSURES (PSF)						WALL ZONE PRESSURES (PSF)			
	ZONE1		ZONE2		ZONE3		ZONE4		ZONE5	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
10.0	16	-38	16	.59	16	-80	26	-26	26	47
20.0	16	-36	16	-56	16	-76	26	-26	26	47
50.0	16	.33	16	-52	16	-71	24	-25	24	42
100.0	16	-31	16	49	16	-68	22	-24	22	.38
500.0	16	-16	16	42	16	-59	19	-21	19	-28

Notes:

1. Table pressure are for the square foot(SF) effective wind areas shown. For other effective wind areas, linear interpolate between values shown above.
2. Positive pressure acts toward the surface and negative pressure acts away from the surface.
3. Minimum design pressure for components and cladding are 16psf per ASCE 7-16 30.2.2.
4. Values given are for a 700 year mean recurrence interval as required for strength calculations.
5. "a" is equal to 10% of the least horizontal dimension but not less than 3 feet
6. a=30'-0"
7. Pressures are calculated based on figure 30.5-1(ASCE7-16).
8. For calculations using the allowable stress design(ASD) method, multiply the above values by 0.6.



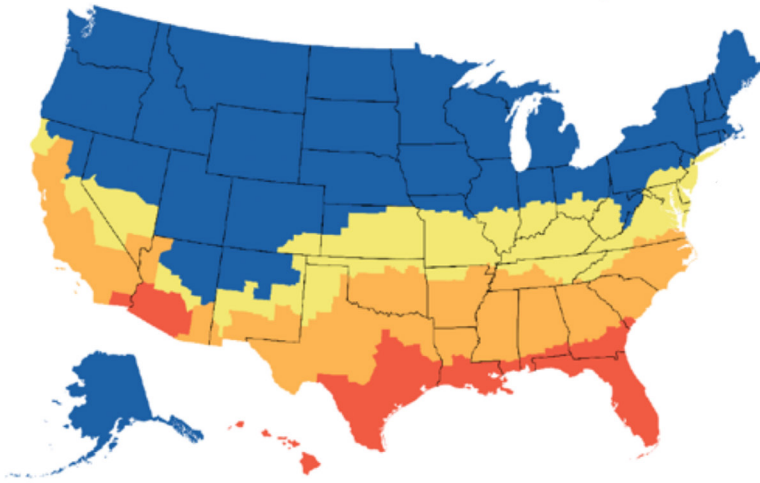
FLAT ROOF PLAN (GENERIC BUILDING SHOWN)



WALLS (GENERIC BUILDING SHOWN)

5.3 NFRC - THERMAL PROPERTIES

ENERGY STAR 7.0 Requirements



CLIMATE ZONE	U-FACTOR	SHGC	PERSPECTIVE
Northern	≤0,22	≥0,17	EQUIVALENT ENERGY PERFORMANCE
	≤0,23	≥0,35	
	≤0,24	≥0,40	
	≤0,22	≥0,40	
	≤0,22	≥0,40	
North-Central	≤0,25	≤0,40	
South-Central	≤0,28	≤0,23	
Southern	≤0,32	≤0,23	

PIXEL FIXED LITE - Double Glazing

				Index		Thermal properties			ENERGY STAR 7.0			
	GLASS TYPE	DGU		Annealed	Tempered	U-Val-ue	SHGC	VT	North	North central	South central	South
DOUBLE GLAZING	Clear insulated (4mm glass)	24	No grids	SZ-2-TRM-5001-ne	SZ-2-HAR-5003-ne	0.27	0.51	0.66				
		24	Grid GBG			0.27	0.41	0.52				
	Clear insulated (6mm glass)	26	No grids	SZ-2-TRM-5302-ne	SZ-2-HAR-5211-ne	0.26	0.48	0.64	V			
		26	Grid GBG			0.27	0.39	0.51				
	Clear PLUS (ONE) - 4mm glass	24	No grids	SZ-2-2-TRM-5229-ne	SZ-2-HAR-5229-ne	0.26	0.4	0.58	V			
		24	Grid GBG			0.26	0.32	0.46				
	Clear PLUS (ONE) - 6mm glass	26	No grids	SZ-2-TRM-5513-ne	SZ-2-TRM-5354-ne	0.26	0.48	0.64	V			
		26	Grid GBG			0.26	0.31	0.47				
	Clear SUPER (Double ONE) - 4mm glass	24	No grids	SZ-2-TRM-5231-ne	SZ-2-TRM-5102-ne	0.26	0.30	0.51				
		24	Grid GBG			0.26	0.25	0.40				
	Clear SUPER (Double ONE) - 6mm glass	26	No grids	SZ-2-TRM-5107-ne	SZ-2-HAR-5107-ne	0.26	0.31	0.55				
		26	Grid GBG			0.26	0.26	0.44				
	Heat control (Sunguard) - 4mm glass	24	No grids	SZ-2-TRM-5221-sn	SZ-2-TRM-5223-sn	0.26	0.29	0.56				
		24	Grid GBG			0.2v6	0.23	0.44			V	V
	Heat controll (Sunguard) - 6mm glass	26	No grids	SZ-2-TRM-5110-an	SZ-2-TRM-5111-sn	0.26	0.28	0.56				
		26	Grid GBG			0.26	0.21	0.41			V	V
	Heat Control + (Sunguard + ONE) - 4mm glass	24	No grids	SZ-2-TRM-5332-sn	SZ-2-TRM-5271-sn	0.26	0.26	0.52				
		24	Grid GBG			0.26	0.21	0.41			V	V
	Heat Control + (Sunguard + ONE) - 6mm glass	26	No grids	SZ-2-TRM-5113-sn	SZ-2-TRM-5112-sn	0.26	0.28	0.56				
		26	Grid GBG			0.26	0.21	0.41			V	V
	Heat control Ultra (SNX60) - 4mm glass	24	No grids	SZ-2-TRM-5452-sn	SZ-2-TRM-5453-sn	0.26	0.22	0.48			V	V
		24	Grid GBG			0.26	0.18	0.38			V	V
	Heat control Ultra (SNX60) - 6mm glass	26	No grids	SZ-2-TRM-5454-sn	SZ-2-TRM-5455-sn	0.26	0.22	0.47			V	V
		26	Grid GBG			0.26	0.18	0.38			V	V
	STOPSOL GREY - 4mm glass	24	No grids		SZ-2-STO-5060-sz	0.27	0.17	0.13			V	V
		24	Grid GBG			0.26	0.11	0.10			V	V
	STOPSOL GREY - 6mm glass	26	No grids		SZ-2-HAR-5032-ne	0.27	0.17	0.13			V	V
		26	Grid GBG			0.26	0.11	0.10			V	V

PIXEL TILT & TURN - Double Glazing

				Index		Thermal properties (4mm glass)			ENERGY STAR 7.0			
				4 mm glass								
GLASS TYPE	DGU			Annelaed	Temepred	U-Value	SHGC	VT	North	North central	South central	South
Double glazing	Clear insulated (4mm glass)	24	No grids	SZ-2-TRM- 5001-ne	SZ-2-HAR- 5003-ne	0.28	0.43	0.56				
		24	Grid GBG (szprosy)			0.28	0.34	0.44				
	Clear insulated (6mm glass)	26	No grids	SZ-2-TRM- 5002-ne	SZ-2-HAR- 5008-ne	0.28	0.42	0.56				
		26	Grid GBG (szprosy)			0.28	0.33	0.44				
	Clear PLUS (ONE) - 4mm glass	24	No grids	SZ-2-TRM- 5229-ne	SZ-2-HAR- 5229-ne	0.27	0.34	0.52				
		24	Grid GBG (szprosy)			0.27	0.27	0.41				
	Clear PLUS (ONE) - 6mm glass	26	No grids	SZ-2-TRM- 5513-ne	SZ-2-HAR- 5515-ne	0.27	0.34	0.51				
		26	Grid GBG (szprosy)			0.27	0.27	0.40				
	Clear SUPER (Double ONE) - 4mm glass	24	No grids	SZ-2-TRM- 5231-ne	SZ-2-TRM- 5102-ne	0.27	0.28	0.47				
		24	Grid GBG (szprosy)			0.27	0.22	0.36				
	Clear SUPER (Double ONE) - 6mm glass	26	No grids	SZ-2-TRM- 5107-ne	SZ-2-HAR- 5107-ne	0.27	0.27	0.48				
		26	Grid GBG (szprosy)			0.27	0.22	0.37				
	Heat controll (Sunguard) - 4mm glass	24	No grids	SZ-2-TRM- 5221-sn	SZ-2-TRM- 5223-sn	0.27	0.25	0.48				
		24	Grid GBG (szprosy)			0.27	0.20	0.38			V	V
	Heat controll (Sunguard) - 6mm glass	26	No grids	SZ-2-TRM- 5110-an	SZ-2-TRM- 5111-sn	0.27	0.25	0.48				
		26	Grid GBG (szprosy)			0.27	0.20	0.38			V	V
	Heat Control + (Sunguard + ONE) - 4mm glass	24	No grids	SZ-2-TRM- 5332-sn	SZ-2-TRM- 5271-sn	0.27	0.25	0.49				
		24	Grid GBG (szprosy)			0.27	0.20	0.38			V	V
	Heat Control + (Sunguard + ONE) - 6mm glass	26	No grids	SZ-2-TRM- 5113-sn	SZ-2-TRM- 5112-sn	0.27	0.19	0.42				
		26	Grid GBG (szprosy)			0.27	0.18	0.35			V	V
	Heat control Ultra (SNX60) - 4mm glass	24	No grids	SZ-2-TRM- 5452-sn	SZ-2-TRM- 5453-sn	0.28	0.19	0.41			V	V
		24	Grid GBG (szprosy)			0.28	0.16	0.32			V	V
	Heat control Ultra (SNX60) - 6mm glass	26	No grids	SZ-2-TRM- 5454-sn	SZ-2-TRM- 5455-sn	0.27	0.19	0.41			V	V
		26	Grid GBG (szprosy)			0.27	0.16	0.32			V	V
	STOPSOL GREY - 4mm glass	24	No grids		SZ-2-STO- 5060-sz	0.28	0.18	0.15			V	V
		24	Grid GBG (szprosy)			0.28	0.14	0.12			V	V
	STOPSOL GREY - 6mm glass	26	No grids		SZ-2-HAR- 5032-ne	0.28	0.15	0.12			V	V
		26	Grid GBG (szprosy)			n.a.						

PIXEL FIXED LITE – Triple Glazing

				Index		Thermal properties			ENERGY STAR 7.0			
	GLASS TYPE	TGU		Annelaed	Temepred	U-Value	SHGC	VT	NORTH	NORTH CENTRAL	SOUTH CENTRAL	SOUTH
Triple glazing	Energy STD - 4mm glass	40	No grids	SZ-3-TRM-5003-ne	SZ-3-HAR-5067-ne	0.16	0.40	0.58	V			
		40	Grid GBG			0.18	0.33	0.46	V	V		
	Energy STD - 6mm glass	40	No grids	SZ-3-TRM-5126-ne	SZ-3-HAR-5032-ne	0.17	0.39	0.57	V	V		
		40	Grid GBG			0.18	0.32	0.46	V	V		
	Energy PLUS (ONE) - 4mm glass	40	No grids	SZ-3-TRM-5468-nee	SZ-3-HAR-5022-ne	0.16	0.35	0.54	V	V		
		40	Grid GBG			0.16	0.28	0.43	V	V		
	Energy PLUS (ONE) - 6mm glass	40	No grids	SZ-3-TRM-5122-ne	SZ-3-HAR-5281-ne	0.17	0.34	0.53	V	V		
		40	Grid GBG			0.18	0.28	0.42	V	V		
	Energy SUPER (Double ONE) - 4mm glass	40	No grids	SZ-3-TRM-5404-ne	SZ-3-TRM-5197-ne	0.16	0.30	0.51	V	V		
		40	Grid GBG			0.16	0.24	0.40	V	V		
	Energy SUPER (Double ONE) - 6mm glass	40	No grids	SZ-3-TRM-5038-ne	SZ-3-TRM-5855-ne	0.17	0.29	0.50	V	V		
		40	Grid GBG			0.18	0.24	0.40	V	V		
	Energy Heat Controll (Sunguard) - 4mm glass	40	No grids	SZ-3-TRM-5208-ne	SZ-3-TRM-5207-sn	0.20	0.45	0.59	V	V		
		40	Grid GBG			0.20	0.36	0.47	V	V		
	Energy Heat Controll (Sunguard) - 6mm glass	40	No grids	SZ-3-TRM-5223-sn	SZ-3-TRM-5417-sn	0.17	0.26	0.50	V	V		
		40	Grid GBG			0.18	0.21	0.50	V	V	V	V
	Energy Heat Controll Ultra (SNX) - 4mm glass	40	No grids	SZ-3-TRM-5473-ne	SZ-3-TRM-5479-ne	0.16	0.18	0.41	V	V	V	V
		40	Grid GBG			0.17	0.15	0.32		V	V	V
	Energy Heat Controll Ultra (SNX) - 6mm glass	40	No grids	SZ-3-TRM-5481-ne	SZ-3-TRM-5198-ne	0.17	0.20	0.42	V	V	V	V
		40	Grid GBG			0.18	0.16	0.34		V	V	V

PIXEL TILT & TURN – Triple Glazing

				Index		Thermal properties			ENERGY STAR 7.0			
	GLASS TYPE	DGU		Annelaed	Temepred	U-Value	SHGC	VT	NORTH	NORTH CENTRAL	SOUTH CENTRAL	SOUTH
Triple glazing	Energy STD - 4mm glass	44	No grids	SZ-3-TRM-5110-ne	SZ-3-HAR-5012-ne	0.19	0.35	0.51	V			
		44	Grid GBG (szprosy)			0.19	0.28	0.39	V	V		
	Energy STD - 6mm glass	44	No grids	SZ-3-TRM-5198-ne	SZ-3-HAR-5266-ne	0.19	0.34	0.50	V	V		
		44	Grid GBG (szprosy)			0.19	0.27	0.39	V	V		
	Energy SUPER (Double ONE) - 4mm glass	44	No grids	SZ-3-TRM-5004-ne	SZ-3-TRM-5107-ne	0.18	0.26	0.44	V	V		
		44	Grid GBG (szprosy)			0.18	0.21	0.34	V	V		
	Energy SUPER (Double ONE) - 6mm glass	44	No grids	SZ-3-TRM-5039-ne	SZ-TRM-5484-ne	0.19	0.26	0.43	V	V		
		44	Grid GBG (szprosy)			0.19	0.21	0.33	V	V		
	Energy Heat Controll (Sunguard) - 4mm glass	44	No grids	SZ-TRM-5230-sn	SZ-TRM-5491-ne	0.22	0.39	0.51	V	V		
		44	Grid GBG (szprosy)			0.22	0.31	0.41	V	V		
	Energy Heat Controll (Sunguard) - 6mm glass	44	No grids	SZ-TRM-5231-sn	SZ-3-TRM-5417-sn	0.19	0.23	0.43	V	V		
		44	Grid GBG (szprosy)			0.19	0.18	0.34	V	V	V	V
	Energy Heat Controll Ultra (SNX) - 4mm glass	44	No grids	SZ-3-TRM-5473-ne	SZ-3-TRM-5479-ne	0.18	0.18	0.37	V	V	V	V
		44	Grid GBG (szprosy)			0.19	0.14	0.29		V	V	V
	Energy Heat Controll Ultra (SNX) - 6mm glass	44	No grids	SZ-3-TRM-5474-ne	SZ-3-TRM-5481-ne	0.19	0.17	0.37	V	V	V	V
		44	Grid GBG (szprosy)			0.19	0.14	0.29		V	V	V

5.4 SOUND REDUCTION PROPERTIES

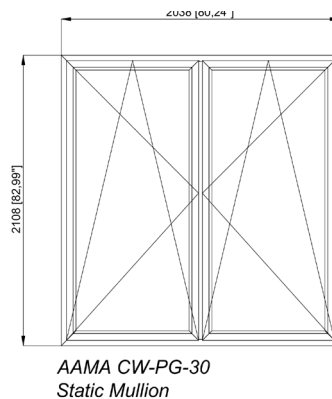
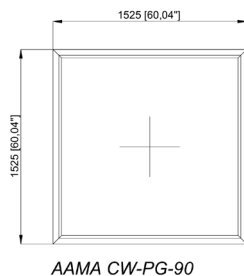
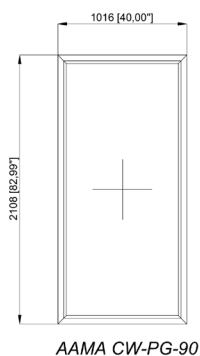
Glass construction			Sound Reduction	
Outer pane (mm)	Spacer bar (mm)	Inner pane (mm)	STC	OITC
4	16	4	32	26
4 Temp	18	4 Temp	33	27
6	16	33.1 Lam	36	29
4	16	6	37	30
44.2 Lam	16	6	41	34
10	20	44.1 Lam PHON	42	35
66.2 lam	16	44.2 lam	44	36
66.2 lam	18	44.2 lam	46	36
66.2 lam PHON	18	44.2 lam	46	39
66.2 lam PHON	18	44.2 lam PHON	47	37

Values of Transmission Loss based on measurement of Sound reduction index in accordance with EN-ISO 10140-2:2010

NOTE: To achieve above parameters glass thickness, spacer bar thickness and glass pane spec must be kept. Glass coating does not affect STC rating.

5.5 AAMA STRUCTURAL PERFORMANCE

Windows shown below are examples of the structural performance test which were committed in ASTM accredited laboratories



NOTE: For the specific site conditions and assemblies which are not shown in schedule above the static performance simulations are to be provided by OKNOPLAST technicians

