



Optio Casement Window

# Strong, secure, superior.

Built to the highest UK standards, this effective and high performance solution offers clean lines and advanced functionality. Available in a 70mm frame depth, casement windows are the perfect choice for both residential and light commercial projects, whether new build or renovation. Windows can also be made to project in or out.



# DESIGN FEATURES

- > Certified under the Secured By Design scheme
- > Tested to PAS 24
- Green guide rated B
- Integrated deep head profiles for ease of trickle ventilation
- Unique polyamide thermal break design to improve thermal performance

# OPTIONS

- 70mm frame depth
- Project in or project out options
- > Externally glazed to accommodate low and high rise projects
- Glazing 24mm 40mm
- Available in a range of single or dual colour and anodised finishes
- Available in the following aesthetics: Chamfered and Square
- Available in the following configurations: top hung, side hung, bottom hung, fixed light, multi-light and French casement
- Available for Lifetime Homes (LFT)
- Double beaded option allowing for internal glazing without the use of dummy vents
- Dedicated fixing straps for ease of installation
- Designed with a Euro groove to accommodate standard locking hardware

# SPECIFICATIONS

erformance and accreditation	Outward opening
J-value (double glazing)	1.4 W/m²K
-value (triple glazing)	1.2 W/m²K
/indow energy rating (WER)	B - C
reen guide rating	A rated
coustic performance (dB)	Rw (C;Ctr) 42 (-1;-5) dB
ir tightness (Pa)	Class 4 (600 Pa)
ater tightness (Pa)	Class 9a (600 Pa)
ind load (Pa)	Class E2400 (2400 Pa)
ecurity	PAS 24
rd party certification	Q-mark
ecured by design	Yes

Opening	Open out
Top hung	<b>✓</b>
Side hung	<b>✓</b>
Bottom hung	<b>✓</b>
Fixed light	<b>→</b>
Multi-light	<b>~</b>
French casement	·

# Size limits

Top hung (max weight)	180 Kg
Side hung (max weight)	55 Kg
Bottom hung (max weight)	60 Kg (3 hinges)
Fixed light (max weight)	250 Kg

# System features

Frame depth	70mm	
Dual colour option	✓	
Multi-point locking	<b>✓</b>	
Glazing options	Internal and external bead	
Glazing thickness	24mm - 40mm	
Sightline (Frame to Vent)	75mm	
Sightline (Vent to Mullion)	89mm	
Sightline (Fixed Light)	43mm	

# Chamfered

Square	

U-Value (Double Glazing) - Windows are calculated using EN ISO 10077
- Part 2, 1230mm x 1480mm Side hung next to fixed light with Ug: 1.0 W/m²K using AW603 outerframe and AW610 vent

U-Value [Triple Glazing] - Windows are calculated using EN ISO 10077
- Part 2, 1230mm x 1480mm Side hung next to fixed light with Ug: 0.7 W/m²K using AW603 outerframe and AW610 vent Green Guide Rating - Calculated using the Green Guide 2008 ratings for domestic windows, Powder Coated Aluminium window (Profile <0.88kg/m) double glazed

Acoustic Performance (dB) - Tested using AW605 outerframe and AW620 vent, 10/16/8.4mm Acoustic Laminated Glass

Top Hung (max weight) - Based upon Sterling SPT26 top hung friction stay Side Hung (max weight) - Based upon Securistyle Sterling SPSH16 side hung friction stay Bottom Hung (max weight) - Based upon 3 x RW20M hinges

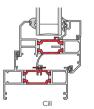
# CAD CROSS SECTIONS

CHAMFERED











# SPECIFICATIONS

Performance and accreditation	Outward opening	
U-value (double glazing)	1.4 W/m²K	
U-value (triple glazing)	1.2 W/m²K	
Window energy rating (WER)	B - C	
Green guide rating	A rated	
Acoustic performance (dB)	Rw (C;Ctr) 42 (-1;-5) dB	
Air tightness (Pa)	Class 4 (600 Pa)	
Water tightness (Pa)	Class 9a (600 Pa)	
Wind load (Pa)	Class E2400 (2400 Pa)	
Security	PAS 24	
3rd party certification	Q-mark	
Secured by design	Yes	
Configurations		
Opening	Open out	
Top hung	<b>✓</b>	
Side hung	<b>✓</b>	
Bottom hung	<b>✓</b>	
Fixed light	<b>✓</b>	
Multi-light	<b>✓</b>	
French casement	<b>✓</b>	
Size limits		
Top hung (max weight)	180 Kg	
Side hung (max weight)	55 Kg	
Bottom hung (max weight)	60 Kg (3 hinges)	
Fixed light (max weight)	250 Kg	
System features		
Frame depth	70mm	
Dual colour option	<b>✓</b>	
Multi-point locking	<b>✓</b>	
Glazing options	Internal and external bead	
Glazing thickness	24mm - 40mm	
Sightline (Frame to Vent)	75mm	
Sightline (Vent to Mullion)	89mm	
Sightline (Fixed Light)	43mm	
Aesthetics		
Chamfered	· /	

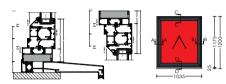
U-Value (Double Glazing) - Windows are calculated using EN ISO 10077 - Part 2, 1230mm x 1480mm Side hung next to fixed light with Ug: 1.0 W/m²K using AW603 outerframe and AW610 vent

U-Value (Triple Glazing) - Windows are calculated using EN ISO 10077 - Part 2, 1230mm x 1480mm Side hung next to fixed light with Ug: 0.7 W/m²K using AW603 outerframe and AW610 vent  $Green \ Guide \ Rating - Calculated \ using \ the \ Green \ Guide \ 2008 \ ratings \ for \ domestic \ windows, \ Powder \ Coated \ Aluminium \ window \ (Profile < 0.88kg/m) \ double \ glazed$ 

Acoustic Performance (dB) - Tested using AW605 outerframe and AW620 vent, 10/16/8.4mm Acoustic Laminated Glass Top Hung (max weight) - Based upon Sterling SPT26 top hung friction stay

# CAD CROSS SECTIONS

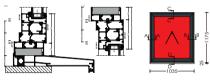
# CHAMFERED







# SQUARE







without the use of dummy vents

standard locking hardware

Dedicated fixing straps for ease of installation

Designed with a Euro groove to accommodate

Side Hung (max weight) - Based upon Securistyle Sterling SPSH16 side hung friction stay Bottom Hung (max weight) - Based upon 3 x RW20M hinges

58BW

# Optio Tilt Before Turn Window

# Innovative, versatile, intelligent.

Built to the highest UK standards, this effective and high performance solution offers clean lines and advanced functionality. Available in a 70mm frame depth, tilt before turn windows are the perfect choice for both residential and light commercial projects, whether new build or renovation. Windows can also be made to project in or out.



# SPECIFICATIONS

DESIGN FEATURES

> Tested to PAS 24

OPTIONS

Green guide rated B

thermal performance

Project in or project out options

low and high rise projects Glazing 24mm – 40mm

and anodised finishes

> 70mm frame depth

> Certified under the Secured By Design scheme

Integrated deep head profiles for ease of trickle ventilation

Unique polyamide thermal break design to improve

Internally or externally glazed to accommodate

Available in the following configurations: fixed light

Dedicated fixing straps for ease of installation

Designed with a Euro groove to accommodate

Available in a range of single or dual colour

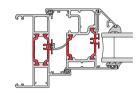
Available in the following aesthetics: Chamfered and Square

standard locking hardware

Performance and accreditation	Inward opening	
U-value (double glazing)	1.4 W/m²K	
U-value (triple glazing)	1.2 W/m²K	
Window energy rating (WER)	B - C	
Green guide rating	A rated	
Acoustic performance (dB)	Rw (C;Ctr) 42 (-1;-5) dB	
Air tightness (Pa)	Class 4 (600 Pa)	
Water tightness (Pa)	Class 9a (600 Pa)	
Wind load (Pa)	Class E2400 (2400 Pa)	
Security	PAS 24	
3rd party certification	Q-mark	
Secured by design	Yes	
Configurations		
Opening	Open in	
Fixed light	<b>✓</b>	
Size limits		
Top hung (max weight)	180 Kg	
Side hung (max weight)	55 Kg	
Bottom hung (max weight)	60 Kg (3 hinges)	
Fixed light (max weight)	250 Kg	
System features		
Frame depth	70mm	
Dual colour option	·	
Multi-point locking	~	
Glazing options	Internal and external bead	
Glazing thickness	24mm - 40mm	
Sightline (Frame to Vent)	75mm	
significe (France to verif)	, 0	

# CAD CROSS SECTIONS

# CHAMFERED



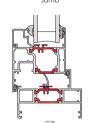




SQUARE







U-Value (Double Glazing) - Windows are calculated using EN ISO 10077 - Part 2, 1230mm x 1480mm Side hung next to fixed light with Ug: 1.0 W/m²K using AW603 outerframe and AW610 vent

Green Guide Rating - Calculated using the Green Guide 2008 ratings for domestic windows, Powder Coated Aluminium window (Profile <0.88kg/m) double glazed

43mm

Top Hung (max weight) - Based upon Sterling SPT26 top hung friction stay Side Hung (max weight) - Based upon Securistyle Sterling SPSH16 side hung friction stay

Bottom Hung (max weight) - Based upon 3 x RW20M hinges

Sightline (Vent to Mullion)

Sightline (Fixed Light)

Chamfered

Square

U-Value [Triple Glazing] - Windows are calculated using EN ISO 10077 - Part 2, 1230mm x 1480mm Side hung next to fixed light with Ug:  $0.7~W/m^2K$  using AW603 outerframe and AW610 vent

Acoustic Performance (dB) - Tested using AW605 outerframe and AW620 vent, 10/16/8.4mm Acoustic Laminated Glass

58BD

# Optio Entrance Door

# Popular, reliable, secure.

Available in a wide range of styles and formats, our stylish aluminium entrance door system is suitable for both light and medium-duty use. Designed with security and flexibility front of mind, every door in the range is available in single and double configurations making them ideal for almost any application.

# DESIGN FEATURES

- Certified under the Secured By Design scheme
- > Tested to PAS 24
- Multi-point locking mechanism
- Designed to incorporate standard and security hardware using the same prep detail
- Cloaking feature conceals lock and prevents any access to locking points

# OPTIONS

- Glazing 24mm 40mm
- > 58mm or 70mm frame depth to accommodate varying types of applications
- Low threshold option for Part M – Building regulation
- Available in a range of single or dual colour and anodised finishes
- Available for new build or refurbishment projects
- > Available in single or double door configuration

# SPECIFICATIONS

Performance & accreditations	Single open in	Single open out
Air permeability	Class 4 (600 Pa)	Class 4 (600 Pa)
Water penetration	Class 3a (100 Pa)	Class 7a (300 Pa)
Wind resistance	Class A3 (1200 Pa)	Class AE2400 (2400 P
Building regulations part L compliant	<b>✓</b>	<b>✓</b>
Building regulations part M compliant	<b>✓</b>	✓ ·
Building regulations part Q compliant	<b>✓</b>	<b>✓</b>
*U-value (double glazing)	1.7 W/m²K	1.7 W/m²K
†U-value (triple glazing)	1.4 W/m²K	1.4 W/m²K
Fire (EN1631-3)	npd	npd
Smoke (EN1631-3)	npd	npd
Security	PAS 24	PAS 24
3rd party certification	Q-mark	Q-mark
Secured by design	Yes	Yes
Durability EN1191 category	50,000 Cycles	50,000 Cycles
System depth		
Units (mm)	58mm and 70mm	58mm and 70mm
Design features		
Thermally broken	<b>~</b>	<b>~</b>
Low threshold	<b>✓</b>	<b>~</b>
Panel door	<b>/</b>	<b>~</b>
Feature design - rounded contours	~	~
Sightline (Head)	120mm	120mm
Sightline (Cill)	111mm	111mm
Sightline (Jamb)	120mm	120mm
Sightline (Meeting Stile)	208mm	208mm
Hardware		
Multi-point locking	<b>✓</b>	~
Barrel hinges	~	~
Finishes		
Single colour	<b>~</b>	<b>~</b>
Dual colour Textured	<b>✓</b>	· · · · · · · · · · · · · · · · · · ·
	· ·	· ·
Maximum sizes and weights	10000000 :: 01 (0:	100000000000000000000000000000000000000
Maximum door leaf size	1020mm x 2160mm	1020mm x 2160mm
Maximum door leaf weight	90 Kg	90 Kg

Double open in	Double open out
Class 2 (300 Pa)	Class 2 (300 Pa)
Class 7a (300 Pa)	Class 9a (600 Pa)
Class A2400 (2400 Pa)	Class A2400 (2400 Pa)
<b>✓</b>	<b>✓</b>
<b>✓</b>	✓
<b>✓</b>	<b>✓</b>
1.7 W/m²K	1.7 W/m²K
1.5 W/m²K	1.5 W/m²K
npd	npd
npd	npd
PAS 24	PAS 24
Q-mark	Q-mark
Yes	Yes
50,000 Cycles	50,000 Cycles
58mm and 70mm	58mm and 70mm
✓	<b>✓</b>
<b>✓</b>	<b>✓</b>
<b>✓</b>	<b>✓</b>
<b>✓</b>	_
100	100
120mm	120mm
111mm	111mm
120mm	120mm
208mm	208mm
<b>✓</b>	<b>✓</b>
✓	<b>✓</b>
<b>~</b>	<b>✓</b>
	✓
<b>✓</b>	<b>✓</b>
1020mm x 2160mm	1020mm x 2160mm
90 Kg	90 Kg
24mm - 40mm	24mm - 40mm

# CAD CROSS SECTIONS

# SQUARE













CHAMFERED



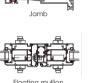






outerframe and AD200/AD201 vent.
† U-Value (Friple Glazing) - Single Doors are calculated
using EN ISO 10077 - Part 2, 1000mm x 2180mm
Single Door with Ug: 0.7 W/mfX using AW604
outerframe and AD200/AD201 vent. Double Doors
are calculated using EN ISO 10077 - Part 2, 2000mm
x 2180mm Single Door with Ug: 0.7 W/mfX using
AW604 outerframe and AD200/AD201 vent.

















BSF70

# Optio Bi-fold Door

# Welcoming, stunning, practical.

An intelligent combination of form and function, our highly versatile and market-leading Bi-fold door system gives you maximum control over the style and operation of the doors. Multiple panels can be added to accommodate the design specifications of your building, with the option to open in or out as required. The system also boasts a unique flush line pop-out handle that allows for square flush stacking panels when doors are fully open.





# DESIGN FEATURES

- Certified under the Secured By Design scheme
- > Tested to PAS 24
- ▶ Unique, pop-out handle that allows for maximum door opening and panels to stack square
- > Four stainless style rollers to ensure smooth and consistent operation

# OPTIONS

- Chamfered and square bead options
- ➤ Glazing 28mm 40mm
- Available in a range of opening configurations
- Available with heavy duty rollers; BSF70 HD
- Available in a range of single or dual colour and anodised finishes
- Low threshold 15mm step height
- All configurations available open in and open out
- Chamfered and square based options
- > Shootbolts top and bottom of the interlock for enhanced security
- Dedicated bottom bogey guide for consistent operation and enhanced security
- **)** Double track threshold allowing greater stability

# SPECIFICATIONS

7-5-2

7-6-1

Performance and accreditation	BSF70	BSF70
*U-value (double glazing)	1.6 W/m²K	1.6 W/
†U-value (triple glazing)	1.4 W/m²K	1.4 W/
Air tightness (Pa) (standard threshold)	Class 4 (600 Pa)	
Water tightness (Pa) (standard threshold)	Class 9a (600 Pa)	
Wind load (Pa)	Class AE2400 (2400 Pa)	
Security	PAS 24	
3rd party certification	Q-mark	
Secured by design	<b>✓</b>	
Configurations		
Opening	Open in and open out	Open in and
2-2-0	<b>→</b>	
3-3-0	<b>✓</b>	✓
3-2-1	<b>✓</b>	✓
4-4-0	<b>✓</b>	✓
4-2-2	<b>✓</b>	✓
4-3-1	<b>✓</b>	<b>✓</b>
5-5-0	<b>✓</b>	✓
5-3-2	<b>✓</b>	<b>✓</b>
5-4-1	<b>✓</b>	✓
6-6-0	<b>✓</b>	<b>✓</b>
6-3-3	<b>✓</b>	<b>✓</b>
6-4-2	✓	<b>✓</b>
6-5-1	✓	✓
7-7-0	✓	<b>✓</b>
7-4-3	· ·	~

Max vent weight	100 Kg
Sightline (Head)	110mm
Sightline (Cill)	130mm
Sightline (Jamb)	110mm
Sightline (Meeting Stile)	140mm

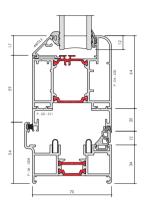
System features	
Frame depth	70mm
Dual colour option	<b>✓</b>
Multi-point locking	<b>✓</b>
Glazing options	Internal bead
Glazing thickness	24mm - 40mm

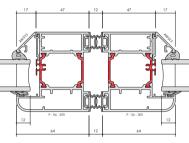
Open in and open out	
<b>✓</b>	
<b>✓</b>	
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130 Kg	
110mm	
130mm	
110mm	
140mm	
70mm	
<b>~</b>	
to be and the analytic	

Internal bead

24mm - 40mm

# CAD CROSS SECTIONS





\* Folding Doors are calculated using EN ISO 10077 - Part 2, 3000mm x 2180mm, 3-3-0 Door with Ug: 1.0 W/m²K (double glazed) 1.0 7 W/m²K (thiple glazed) using P-06-100 outerframe and P-06-200 vent. Single and Double Door value is calculated using EN ISO 10077 - Part 2, 2000mm x 2180mm Double Door with Ug: 1.0 W/m²K (double glazed) 1.0 7 W/m²K (thiple glazed) using P-06-100 outerframe and P-06-200 vent.

• U-Value (Double Glazing) - Folding Doors are calculated using EN ISO 10077 - Part 2, 3000mm x 2180mm, 3-3-0 Door with Ug: 1.0 W/m²K using P-06-100 outerframe and P-06-200 vent. Single and Double Door value is calculated using EN ISO 10077 - Part 2 2000mm x

is calculated using EN ISO 10077 - Part 2, 2000mm x 2180mm Double Door with Ug: 1.0 W/m²K using P-06-100 outerframe and P-06-200 vent.

outertrame and P-46-200 vent.

† U-Value (Tiple Glazing) - Folding Doors are calculated using EN ISO 10077 - Part 2, 3000mm x 2180mm, 3-3-0 Door with Ug: 0.7 W/m²K using P-06-100 outerframe and P-06-200 vent. Single and Double Door value is calculated using EN ISO 10077 - Part 2, 2000mm x 2180mm Double Door with Ug: 0.7 W/m²K using P-06-100 outerframe and P-06-200 vent.



BSC94

# Optio Inline Sliding Door

# Modern, versatile, premium.

A premium sliding door with slim sightlines, available in a variety of sliding configurations using single, dual and triple track systems. The BSC94 offers high levels of performance, from thermal U-Values of 1.5W/m2K (triple glazed), and with panel weights up to 400Kg. Smooth operation is guaranteed through the use of the highest quality fittings.



# DESIGN FEATURES

- Accepts 20 31mm double glazing
- Max 400kg panel weight
- Certified PAS 24
- Anti bi-metal polyamide strip to allow for varying expansion rates

# OPTIONS

- Available as Lift & Slide
- Slimmer sightline of 45mm available
- Multiple sliding configurations
- Mono, Dual or Tri rail options
- Available in single and dual colour; anodised finishes also available
- Range of hardware and security features

# SPECIFICATIONS

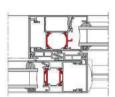
Performance and accreditation	BSC94
U-value (double Glazing)* (Ug = 1.0W/m²K) (Mono Rail)	1.7 W/m²K
U-value (triple Glazing)* (Ug = 0.7W/m²K) (Mono Rail)	1.5 W/m²K
U-value (double Glazing)* (Ug = 1.0W/m²K) (Dual Rail)	1.9 W/m²K
U-value (triple Glazing)* (Ug = 0.7W/m²K) (Dual Rail)	1.7 W/m²K
Green guide rating	C rated
Acoustic performance (dB)	Rw (C;Ctr) 36 (-1;-3) dB**
Air tightness (Pa)***	Class 4 (600 Pa)
Water tightness (Pa)***	Class 7a (300 Pa)
Wind load (Pa)***	C4 (1600 Pa)
Security – PAS24	<b>~</b>
Configuration & frame	
Opening	Inline sliding
Mono rail (105mm)	<b>~</b>
Dual rail (94mm)	~
Tri rail (155mm)	<b>~</b>
Size limits	
Max vent weight****	400kg
Max frame height+	3000mm
Max frame height with security features	2600mm
System features	
Dual colour option	~
Multi-point locking	~
Glazing options	Internal
Glazing thickness	20mm-31mm
Sightlines	85mm

BSC94SLIM	
×	
×	
1.9 W/m²K	
1.6 W/m²K	
C rated	
npd	
Class 4 (600 Pa)	
Class 7a (300 Pa)	
C4 (1600 Pa)	
×	
India a alialia a	
Inline sliding	
×	
<u> </u>	
<b>~</b>	
400kg	
3000mm	
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20mm-31mm

45mm

# CAD CROSS SECTIONS

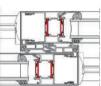


Mono Rail – Interlock





Mono Rail – Cill

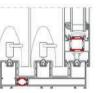


Dual Rail/Tri Rail –





Dual Rail – Cill









Dual Rail/Tri Rail – Standard Slimline Interlock



<sup>\*</sup>U-Values based on CEN size door (2000mm x 2180mm).
\*\*Sound insulation values are Rv reduction values and are based on tests using acoustic glazing.
\*\*All weather test data taken from BS EN 6375-1 based upon highest performing door configuration.

<sup>\*\*\*\*</sup>Based on using double rollers.

\*Dependent on wind load and lock variation.

Note: npd = No performance declared

Please visit www.aluk.co.uk to download all BIM components and CAD files.



Ready for the Royale treatment?



