

Bi-fold doors
available in:
aluminium, hardwood
timber, aluminium/timber,
PVCu, glass/aluminium,
glass/timber &
glass/glass

Enjoy the extra space and **BRING THE OUTSIDE IN** with
Folding Sliding Doors
Trade Edition

Contents

INTRODUCTION



Why choose a Bi-Fold door? It's the latest must have for **modern living**.

- p3** Welcome
- p4** What's important
- p5** Applications
- p6** New Horizons
- p7** Space & light
- p8** Functionality
- p9** Security
- p10** Weather
- p11** Thermal efficiency

TIMBER DOORS



Timber is the most **thermally efficient** material used in the glazing industry. We have further improved on nature by engineering our FD68 timber products.

p12 70mm hardwood timber (European Oak & Meranti)

ALUMINIUM DOORS



All aluminium profiles in our systems are **thermally broken** for greater thermal efficiency.

- p14** 70mm aluminium
- p16** 45mm aluminium
- p18** 70mm aluminium / hardwood timber clad

PVCu / VINYL DOORS



We use an **aluminium reinforced PVCu** profile. Match your properties existing windows and doors.

p20 70mm PVCu / vinyl

GLASS DOORS



The **latest editions** to our bi-fold range. Available in **aluminium/glass** (triple glazed) and **timber/glass*** (triple and double glazed) and **glass/glass** (triple glazed).

- p22** Glass & aluminium, triple glazed
- p23** Glass & hardwood, double & triple glazed options
- p23** Glass & glass, triple glazed

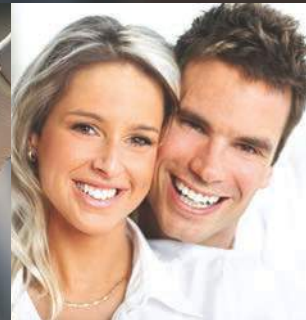
BI-FOLD OPTIONS



Personalise your door with a configuration to suit and a **choice of glazing, hardware, finishes & coating options**.

- p24** Finishes/coatings
- p26** Glazing options
- p28** Configurations
- p30** Tracks & rollers
- p31** Bottom track options
- p32** Hardware
- p33** Ventilation

INFORMATION



Have **peace of mind** with information and specification at a glance.

- p34** How to measure
- p35** Specification
- p36** Contact details

Welcome

Ask yourself... **why compromise on security, weather resistance, performance or choice?**

‘ All our doors have a **dual running fully encapsulated track system**, so that it cannot be lifted off it's track. A track system with **unobstructed level access** and **uncompromised weather** and **security** as standard.

Unique design **steel rollers engineered for ease of operation, strength** and **durability**.
Aesthetically pleasing, unique design flat handles ensure flat folding with **uncompromising operation**.

Choose from our **extensive range** of folding sliding doors, each combine our **innovative design** and **state of art folding sliding door technology**.

Expect more with wider **openings** and **limitless door configurations**.

Your choices are far from compromised.

’

Choice Custom made to suit your design, available in Aluminium, Timber, Wood Clad Aluminium, PVCu & Glass

Function Inward, outward, right and left, opening to suit you

Security 5 point locking. High security locking features incorporated into each system.
Document Q compliant FD72* Aluminium system (*detail on application)

Durable Using our own roller design, 'Fold N Slide' hardware keeps the door running smooth



Weatherproof CE Compliant BS EN 14351-1: 2006

Efficient U values from as low as 1.09 to keep you warm in the cold & cool in the heat

Aesthetics Perfectly balanced profiles, giving maximum strength with minimum frame

Quality Every purpose made part is designed in house, all door systems are manufactured in the UK

Things we consider
important

numerous applications



**EXTENSIONS / PATIOS /
CONSERVATORIES /
BALCONIES / WINDOWS /
DINING AREAS /
SWIMMING POOLS /
SUMMER ROOMS /
HOME OFFICE / ANNEX
CORNERS / CAR PARKING
ROOM DIVIDERS /
NEW BUILDS / STORES /
COMMERCIAL USE /
RESTAURANTS**

There are so many situations in which a folding sliding door can be a solution to improving your living space and the environment around you. Break down those barriers by creating a wider opening with a folding sliding door and bring the outside, inside.





All our bi-fold
door systems
are also available
in Corner Sets
and Windows

Open your door to

new horizons

Folding sliding doors can be **installed in a huge range of situations**, in fact we offer you with so much flexibility and choice that the solutions are almost endless



- Gone are the days of French doors with a glass panel on either side.
- Gone are the days of the sliding door, which, when you think about it, is just a door with a large window at the side.
- Why block half of your available opening?

Why not take full advantage of the outdoor space you have, open your horizons and bring the outside in.



let there be
space & light

“ *With a family of three children, all under 10 years old, space is important to me and my wife*

We wanted to create a family living space as part of the kitchen area and open this into the garden to bring the indoors and outdoors together. An orangery with folding sliding doors was the perfect solution and has transformed the way we all live.

We have much more time together as we are not in separate rooms and the addition of a raised deck and a hot tub has made the garden fun to use for the children and when we have our friends around in the evening.

The folding sliding doors make the biggest difference - we wonder why we didn't have them fitted sooner!

The Hinkley Family, Surrey ”

“ *Our garden has become like another room!*

With three growing children, my wife and I decided that we would like to create a large family room by knocking together our kitchen and dining room. We also wanted the children to make more use of the garden.

We knew that replacing our old French doors with folding sliding doors would really open up the family room into the garden.

The doors are made in the UK, the sales team were very professional and friendly and made the ordering process so easy. They contacted us several times to check our requirements and to confirm delivery.

We have been delighted with the quality of the doors.

It is incredible how different our house now feels – simply because of the amount of light flooding in and the way in which the garden feels connected to, and a part of the house!

The West Family, London ”



Functionality

“The quality of being suited to serve a purpose well”

Our doors are so easy to use and very practical for every day use.

Transform the way you interact with your home, by choosing to install a bi-fold door.

Blend the outside with the inside, and enjoy the benefits it brings.

*For illustration purposes we have used the FD72 aluminium door system





security

... is one of our main concerns on door design, that is why the security and integrity of our doors have been tested to destruction in UKAS approved testing laboratories.



Encapsulated running gear within the track and hidden hinge fixings

During these tests our doors were hammered, rammed, pounded, pulled, pushed, lifted and crow barred by forces that equaled a 20 stone man trying to force entry.

All our running gear is also fully encapsulated within the track so that the door cannot be lifted off its track. This makes it resistant to attack from potential intruders.



Hardened steel hook locks



High security hinges, non face fixed.



Top and bottom shoot bolts, locate directly into both top & bottom track



Security cylinder locking, anti-snap, anti-bump, anti-pick, anti-drill & anti tamper



Tongue and groove (interlocking) door panels to prevent lever opening



PAS024 security testing

- Encapsulated running gear within the track, preventing it from being attacked
- Passed tests equivalent to a twenty stone man trying to force entry
- 5 point multi-locking, with 'Secured by Design' (SBD) anti-snap cylinders
- Hardened steel hook locks & dead bolts
- Top and bottom shoot bolts, locate directly into both the top & bottom track
- Internally glazed for all systems (option to upgrade to laminated glass)
- High security hinges to prevent the pins from being removed and the hinge being forced from the door
- Tongue & groove (interlocking) door panels to prevent lever opening
- Document Q, Security - Dwellings PAS 24:2012. Selected FD72 & FD68 configurations only



Weatherproof

Our system has been tested at a **UKAS accredited** testing station and passed the **PAS23 weather test** to **extreme weather conditions**. Our HD82 system has also been Independently tested in accordance with **USA hurricane** standards **upwards of 4000 Pascal's (Pa)**

Weatherproofing is a main concern when it comes to door design.

Most systems on the market are weather tight, with high performance rubber seals and brush seals. However, there are some systems that have little or no seals at all. One crude but easy test is to close a folding door onto a sheet of paper and try to pull the paper out. If it pulls out easily there is not a watertight compression on the seals.



'Laboratory' tests for water ingress, wind resistance and air permeability



High performance rubber seals and brush seals

PVC Nitrile (synthetic rubber) gaskets, are fitted as standard and used to seal the double glazed units into the panels and protect the door from water ingress. There are also PVC Nitrile seals between each panel to **prevent water, wind** and **noise** from entering the property. The **main properties of PVC Nitrile** are its **outstanding heat, acoustic** and **thermal resistances**.

We use **2 rubber PVC Nitrile seals** on each side of each panel and high **performance seals** on the top and bottom of the panel.

Our HD82 system (*available USA only*) achieves the demanding USA hurricane **Miami Dade Building Code Compliance**, achieving the **highest ever pass rate** for a UK folding sliding door, **reaching 5160 pascals, equal to a 204mph wind**.

thermal efficiency

All of our systems have been **thermally simulated** to indicate the **true thermal value**, helping you choose the right option for your property and helping you save money on your fuel bills

TIMBER, U Value (W/m²k) of complete unit: 1.09 - 1.59

Timber is the most thermally efficient material used in the glazing industry

ALUMINIUM, U Value (W/m²k) of complete unit: 1.42 - 1.8

All aluminium profiles in our systems include a **thermal break** for greater thermal efficiency

ALUMINIUM/TIMBER, U Value (W/m²k) of complete unit: 1.52 - 1.8

Solid timber with **thermally broken** aluminium profiles for combined thermal efficiency

GLASS, U Value (W/m²k) of complete unit: 1.37 - 1.79

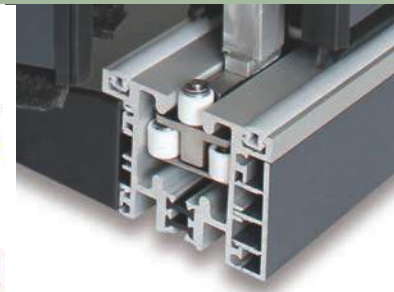
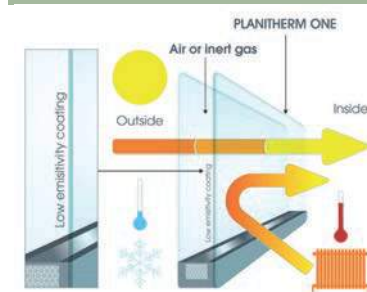
Triple glazed as standard for greater thermal efficiency.

PVCu, U Value (W/m²k) of complete unit: 1.24 - 1.77

We use the VEKA Matrix profile, one of the best on the market today

All of our systems are **double glazed* with Low-E glass as standard** (*FD75 triple glazed), have been tested for water ingress & air permeability and are **CE compliant**. Increased thermal efficiency can be achieved by upgrading your glass choice (emissivity options of 1%, 3%, 5% & 10%) or to triple glazed units with Krypton gas, *please ask for further details.*

- Weather tested to over 300 pascals
- Thermally Broken aluminium as standard
- Tested for water ingress and air permeability
- High performance rubber seals and brush seals
- Double or triple glazed with Low-E glass
- All systems CE compliant



A low U-value is useful during cold days when heating is needed. It is also helpful during hot days when it is important to keep the heat out.

Thermally broken aluminium sections and thermally broken aluminium tracks reduce thermal loss through transfer.

U-Values

The thermal rating of a window or door is measured in U-Values, the lower the U Value the better the rating.



Many companies will give you a U-Value based on the centre pane value or the U-Value of the glass (better than 'A' rated). This value will always be lower than the actual value of the complete window or door.

All our U-Value calculations are based on the whole door which is frame plus glass.

hardwood timber

For a traditional or natural look you cannot beat the feel and warmth that timber brings!

Timber - Ideal for all locations, used extensively near coastal regions.

All our timber systems are expertly crafted by our fully trained staff, and all our timber profiles are manufactured using engineered hardwood for extra strength and to reduce expansion and warping.

Engineered timber is, quite simply, a timber profile which consists of more than one layer. By placing (using heat, pressure & adhesive) each layer so that the grain runs perpendicularly it becomes virtually impossible for the timber to swell or shrink with changes in humidity and so it dramatically increases the stability. Improved strength and sound insulation is also achieved.



Manufactured using engineered hardwood timbers (Oak or Eucalyptus).



Anti-rot and anti-fungal treated with a low maintenance spray finish.



Bespoke glazing options can easily be incorporated to your order.

- Engineered hardwood profiles to reduce expansion and warping
- Anti-rot & anti-fungal treated frames
- Factory sprayed with long life, low maintenance finishes
- Environmentally sourced timber from sustainable forests



The timber frames are dipped into an anti-rot, and anti-fungal treatment to protect the frames from both the harsh rays of the sun and water ingress.

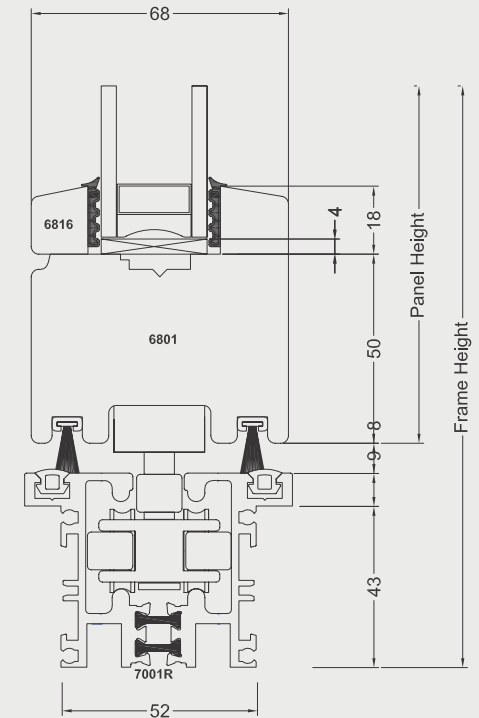
They are then finished to your specification using either a natural stain or a RAL colour of your choice, or if preferred we can provide the doors unfinished so you can paint or stain to your desired finish.

You can choose to enhance the natural look timber provides or choose any RAL colour finish to marry with existing architecture (see pages 28-29 for further details).

Specification - Wood (Timber FD68)

| | |
|---|---|
| Frame width: | 68mm |
| Frame thickness: | 68mm |
| Maximum opening width: | 15000mm |
| Maximum opening height: | 3000mm |
| Panel height range (min/max): | 750mm - 2884mm |
| Panel width range (min/max): | 440mm - 1000mm |
| Material: | European Oak / Red Wood |
| Standard colour: | Unfinished natural timber |
| Optional colours: | Any RAL colour or natural stain |
| U Value (W/m2k) complete unit: | 1.09 - 1.59 |
| Guarantee (Manufacturers): | 10 years |
| Anti-fungal treated: | ✓ |
| Anti-rot treated: | ✓ |
| Laminated timber (reduces expansion / warping): | ✓ |
| Glass units, standard (optional): | 24mm double glazed, low-E tempered (triple glazed or laminated) |

Profile drawing - Timber (FD68)



70mm aluminium

The 70mm aluminium system offers a modern look coupled with strength and durability



Customise
with a choice of
hardware, RAL
colour, special
finish & glazing
options

“ Minimum maintenance required to keep it looking great, making the 70mm aluminium bi-fold door our most popular system ”



Thermally broken aluminium frame, meaning no transfer of temperature



Heavy duty panel cleats for strength and durability (two per corner)



Copyright of Matt Sweeting

**THERMALLY
BROKEN**



Specification - 70mm Aluminium (FD72)

| | |
|-----------------------------------|---|
| Frame width: | 60mm |
| Frame thickness: | 70mm |
| Maximum opening width: | 15000mm |
| Maximum opening height: | 4000mm |
| Panel height range (min/max): | 800mm - 3884mm |
| Panel width range (min/max): | 440mm - 1100mm |
| Material: | Aluminium |
| Standard colour: | White (RAL 9016) |
| Optional colours: | Any RAL colour / dual colour |
| U Value (W/m2k) complete unit: | 1.42 - 1.83 |
| Guarantee (Product): | 25 years |
| Guarantee (Manufacturers): | 10 years |
| Aluminium thickness: | 1.75mm |
| Glass units, standard (optional): | 28mm double glazed, low-E tempered (triple glazed or laminated) |

**MODERN
STRONG
AND
EXTREMELY
DURABLE**



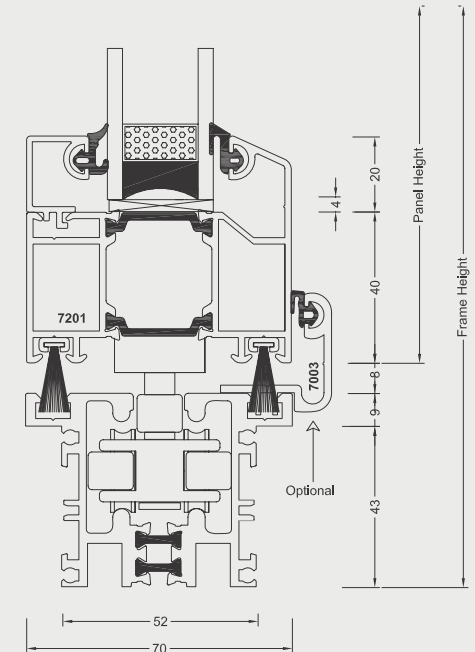
Copyright of Matt Sweeting



**Aluminium -
Ideal for larger
openings and
commercial
properties.**

- Thermally broken for greater thermal efficiency
- Heavy-duty cleats for strength and durability
- Hard wearing material & finish
- Resistant to scratching and denting (1.75mm wall)
- Contemporary appearance • No condensation
- Any RAL or Dual colour option
- Approved Document Q, Security -Dwellings PAS 24:2012* (New Build compliant) Selected configurations only, enquire for further details

Profile drawing - 70mm Aluminium (FD72)



45mm aluminium

This system offers slim sight lines and a smaller stacking space, ideal for internal solutions



“ *The 45mm aluminium system, ideal for internal room dividers, large openings, commercial properties or where UK building regulations are not required (Oct 2010).* ”



Thermally broken internal aluminium frame, slim profile, slim stacking doors

It offers a modern look, coupled with strength and durability and requires minimum maintenance to keep its looks.

INTERNAL BI-FOLD DOOR



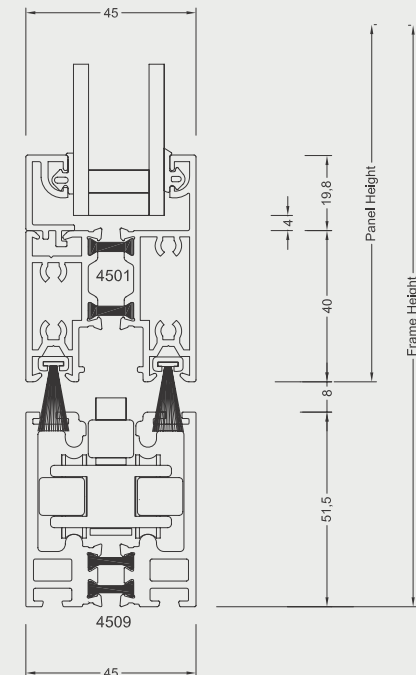
- **Modern looking profiles**
- **Narrow sight lines**
- **Thermally broken for greater thermal efficiency**
- **No condensation**
- **Resistant to scratching and denting (1.75mm wall)**
- **Ideal for internal use**

This system is only recommended for internal use only in the UK as it does not comply to the new UK building regulations October 2010. It may meet the stringent guidelines set but will have to be Krypton filled to achieve a 1.8 u-value.

Specification - 45mm Aluminium (FD45)

| | |
|---|---|
| Frame width: | 60mm |
| Frame thickness: | 45mm |
| Maximum opening width: | 10000mm |
| Maximum opening height: | 3000mm |
| Panel height range (min/max): | 800mm - 2884mm |
| Panel width range (min/max): | 440mm - 900mm |
| Material: | Aluminium |
| Standard colour: | White (RAL 9016) |
| Optional colours: | Any RAL colour / dual colour |
| U Value (W/m ² k) complete unit: | 1.42 - 1.83 |
| Guarantee (Manufacturers): | 10 years |
| Aluminium thickness: | 1.75mm |
| Glass units, standard (optional): | 20mm double glazed low-E tempered (laminated) |

Profile drawing - 45mm Aluminium (FD45)



aluminium & timber



Ideal for all locations, used extensively near coastal regions and areas highly exposed to the sunlight

**70mm
THERMALLY
BROKEN
ALUMINIUM
AND
TIMBER**

It offers a strong, durable and maintenance free finish outside while still providing the warmth and character that timber brings inside.

By bringing both our timber and aluminium systems together, we have created the Ali-Clad folding sliding door, an aluminium system clad internally with hardwood solid timber.



Aluminium to the outside, solid hardwood (Oak) timber to the inside



Anti-rot, anti-fungal treated and spray finished (or natural) internal timber.

**THE
BEST
OF
BOTH
WORLDS**

- Thermally broken poly-powder coated aluminium frame
- Thermally efficient (thermally broken track and frame)
- Timber can be easily changed or removed for painting
- Choice of Oak or Eucalyptus solid hardwood timber

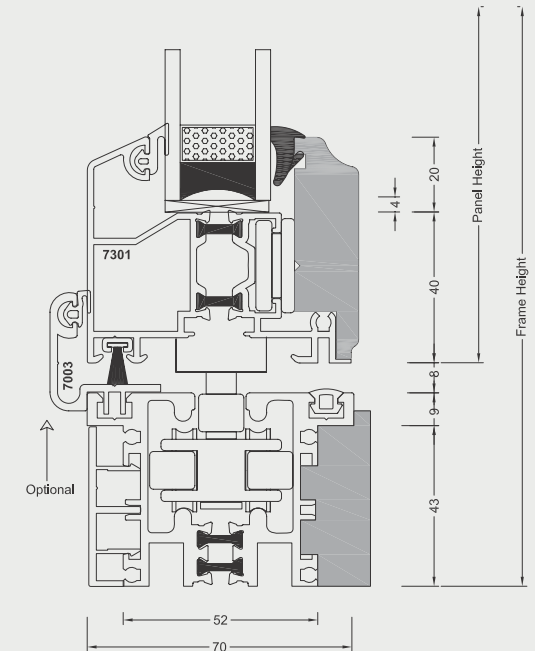


- Discreetly locked on timber profiles
- Thicker than standard aluminium walls for greater strength
- Water trap and outlet to prevent water ingress
- No nailed on glazing beads
- Dual colour, RAL coated frame & spray finished (or untreated) timber
- Timber anti-rot and anti-fungal treated

Specification - 70mm Aluminium / Timber (FD73)

| | |
|-----------------------------------|---|
| Frame width: | 60mm |
| Frame thickness: | 70mm |
| Maximum opening width: | 15000mm |
| Maximum opening height: | 4000mm |
| Panel height range (min/max): | 800mm - 3884mm |
| Panel width range (min/max): | 450mm - 1100mm |
| Material: | Aluminium / Hardwood timber |
| Standard colour: | White (RAL 9016) / unfinished timber |
| Optional colours: | Any RAL colour or natural stain |
| U Value (W/m2k) complete unit: | 1.52 - 1.81 |
| Guarantee (Manufacturers): | 10 years |
| Aluminium thickness: | 1.75mm |
| Anti-fungal & anti-rot treated: | ✓ |
| Solid timber cladding: | ✓ |
| Glass units, standard (optional): | 28mm double glazed, low-E tempered (triple glazed or laminated) |

Profile drawing - Aluminium / Timber (FD73)



70mm PVCu



Golden Oak



Rosewood

... matching your existing PVCu windows with our PVCu bi-fold door is easy!

This 70mm system is constructed from aluminium reinforced PVCu profile, with attributes for high in strength and having fantastic thermal values.



PVCu bi-fold doors externally opening, stacking to the left (viewed internally)



Making the most of space available

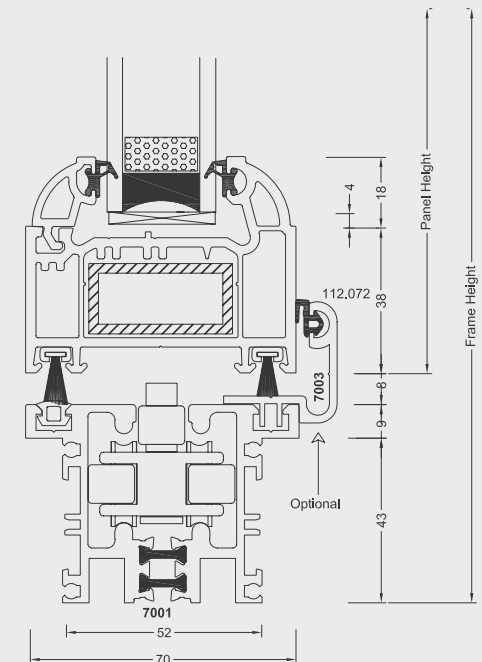


- CE & CPD compliant
- Manufactured to the highest standards
- BS6375 weather performance
- Cost effective solution
- High thermal efficiency
- Reinforced profile
- Narrow sight lines
- No face fixed hardware
- Flush track
- Fully inline system
- Durable

Specification - PVCu (FD71)

| | |
|-----------------------------------|--|
| Frame width: | 70mm |
| Frame thickness: | 70mm |
| Maximum opening width: | 8000mm |
| Maximum opening height: | 2400mm |
| Panel height range (min/max): | 800mm - 2284mm |
| Panel width range (min/max): | 400mm - 800mm |
| Material: | PVCu |
| Standard colour: | White PVCu profile |
| Optional colours (laminated): | Golden Oak / White, Rosewood / White Golden Oak / Golden Oak, Rosewood / Rosewood |
| U Value (w/m2k) complete unit: | 1.24 - 1.77 |
| Guarantee (Manufacturers): | 10 years |
| Profile Thickness: | 2mm |
| Glass units, standard (optional): | 28mm double glazed, low-E tempered (triple glazed or laminated) |

Profile drawing - PVCu (FD71)



glass/aluminium

FLUSH GLAZED,
frameless glass bi-fold
with **aluminium** (FD75)*
**reversible design*

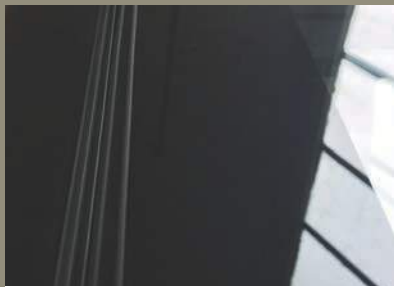
RAL colour flush glazing and frame

The **ONLY UK** designed and manufactured
all glass wall folding sliding door available.
Thermally efficient, triple glazed, argon gas filled,
unique architectural designed bi-fold door incorporates
open in or open out, stacking left or stacking right,
glazed in or glazed out configurations, with maximum
security and integrity with no compromises



Silk-screen printed glazing and powder coated aluminium, all to your specification

- Engineered from 3 layers of high impact insulated glass
 - Reversible design, flush glazing internal or external
- Choice of screen printed coloured glass & coated frames
 - Maximum security and integrity with no compromises
 - Suitable for residential & commercial applications



Reflection illustrating the frame, gasket seal and glass door



Exterior detail illustrating security Satin Nickel hinge option

The FD75 glass wall offers an ultra modern contemporary appearance

Powder coated thermally broken aluminium frames for structural stability and strength blended with a unique designed glass retaining system ensuring that no glazing beads are required and that the structural integrity of the glass panels remain intact in all opening situations.

The design of the system also ensures the glazing chambers are fully ventilated thus ensuring longevity of the triple glazed units.



FD46 is an ultra slim all glass triple flush glazed folding sliding door



FD76, Glass flush glazed, frameless glass bi-fold with hardwood timber*

FD46

An ultra slim all glass triple flush glazed folding sliding door. Open in, open out options.

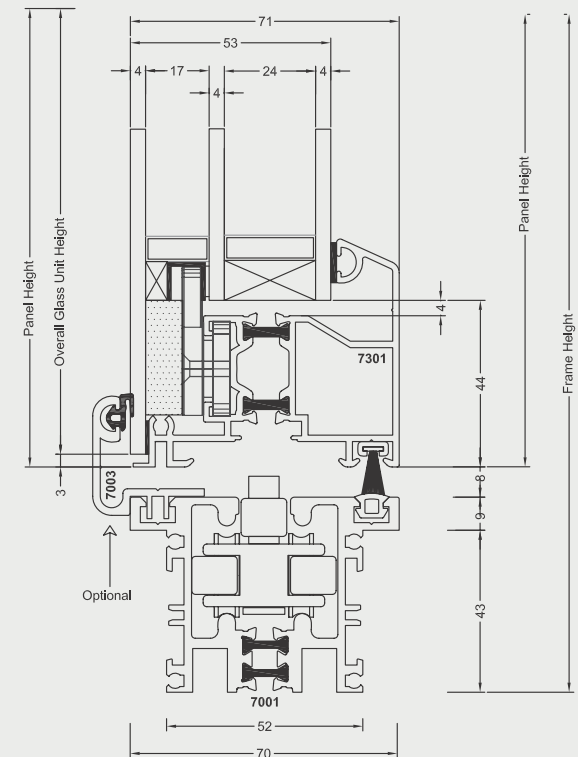
FD76

A combination of classic meets new. Open in, open out and *reversible, double glazed and triple glazed options will be available to achieve fantastic U-values!

Specification - Glass (Glass/Aluminium FD75)

| | |
|-----------------------------------|--|
| Frame width: | 60mm |
| Frame thickness: | 70mm |
| Maximum opening width: | 15000mm |
| Maximum opening height: | 3000mm |
| Panel height range (min/max): | 750mm - 2884mm |
| Panel width range (min/max): | 440mm - 1000mm |
| Material Door panels: | Glass outer* / Aluminium inner* reversible |
| Material Outer Frame: | Aluminium |
| Standard colour: | Glass / RAL |
| Optional colours: | Glass tint or clear / RAL colour |
| U Value (w/m2k) of complete unit: | 1.37 - 1.79 |
| Guarantee (manufacturers): | 10 years |
| Aluminium Thickness: | 1.75mm |
| Glass units, standard (optional): | 52mm triple glazed tempered (laminated) |

Profile drawing - Glass/Aluminium (FD75)





finishes & coatings

A folding sliding door can be **factory sprayed, powder coated** or **anodised** to accommodate all tastes. There are hundreds of colours to choose from, whether your choice is timber, aluminium or aluminium & timber clad, **we can coat it to your desired finish.**

Aluminium & Aluminium-Timber clad

Powder coating ►

All of our aluminium products are powder coated which exceeds the current industry standard.

There are hundreds of RAL colours that you can choose from.

Our powder coatings have a life expectancy of up to 25 years and are maintenance free.

To choose your colour accurately and to get a more precise idea of what the colour looks like, it is advised that you obtain a printed RAL colour chart from your local decorators' merchant.

Anodised / special finishes

Please enquire direct with any special requests.

Timber

Translucent coatings & bespoke colours

All of our timber products are factory sprayed as standard with the highest quality coatings on the market. Choose a natural stain to enhance your choice of woodgrain or choose any RAL paint reference to match an existing building project or existing windows & doors, or if you prefer left natural, the choice is yours.

Our factory spray coatings are applied to the timber in **three coats at 250 microns per coat**, this is comparable with up to 15 coats of brush-applied paint.

Our factory spray coatings are low maintenance and have a very long life span, **Up to 10 years before requiring first maintenance.**



Finished in anodised Bronze with metallic RAL beading with satin nickel hardware.



Choose a woodgrain stain to match architectural surroundings.



Specify your doors to be left natural, so you can match perfectly on site.



Commercial & corporate

All our doors are hard wearing and are perfect for both domestic and commercial use. Make a statement with your choice of colour or finish or simply choose to be easily recognised and match your corporate colours.

These examples have been reproduced in print to give a representation of colour and finish, as realistic as possible, further information can be found at <http://www.teknos.co.uk>

Please note, because wood is a natural material, surface texture and shade may vary slightly

OAK - Teknos colour options



EUCALYPTUS - Teknos colour options





a touch of
glass

OUR STANDARDS ARE HIGH

Double glazed, argon filled, Low-E coated toughened (tempered) glass, 28mm constructed units fitted with Super Spacer® Bars

4mm toughened glass outside, 20mm cavity and 4mm toughened Low-E glass inside.

Low-E (K) coating on the inside, gives the glass better thermal properties and allows most natural light to enter freely but reflects a significant portion of short-wave heat energy. In summer, long-wave heat energy radiating from objects is reflected back outside, lowering cooling cost. In winter, internal longwave heat energy is reflected back inside, lowering heating costs.

Toughened glass is a safety glass, shatters into small pieces, is about 4 times stronger than standard glass, is resistance to thermal stress and impact resistance.

Argon, has a 34% lower thermal conductivity than air.

Super Spacer® bars

Standard windows use a highly conductive metal spacer bar to hold the two panes of glass apart, which sucks heat from inside to the outside. Super Spacer® is a no-metal warm edge, pre-desiccated, structural foam spacer system which allows for expansion and contraction (*a major cause of fractures in conventional sealed units*).

We offer a huge selection of glass, each with its own unique thermal U-Value properties, some specific to your door choice, our sales team can readily advise.

An **important choice** to make when purchasing your door is what **type of glass** to put in them. **Glass** has a **significant effect** on the heat your house loses at night, **the heat it gains** during the day and **noise levels** from outside. Glass helps to determine the level of **comfort, security** and **privacy in your home**.

UPGRADES

Triple-glazed units, low-e coated toughened glass

For increased thermal & acoustic properties, as well as increasing security. Our triple glazing units use Planitherm One 4mm toughened glass outside, 8mm cavity, 4mm toughened, 8mm cavity, 4mm toughened Low-E glass on the inside.

Laminated Glass

Laminate resists penetration - glass may break but the plastic inner layer retains overall integrity and continues to act as a barrier.

- (1) Protects against break-ins by preventing or slowing down burglary attempts.
- (2) Withstands repeated blows from heavy objects such as bricks, hammers, crowbars and similar hand held heavy objects. Depending on the extent of the attack, the product remains integral and protects the premises adequately and limits penetration whilst awaiting replacement.

Krypton Gas Standard in some instances, but also available as an upgrade, enquire for details.

OPTIONS

Georgian Bar (Internal), applied internally to glazing

Placed between two panes of glass achieving a Georgian window style, available in different designs, sizes and colours

- This has the benefit of larger surface glass areas for cleaning
- Designs - Horizontal, Traditional Georgian Grid or Bespoke
- Colours - White, Rosewood, Black, Grey, Cream & Light oak

Unglazed door option Please be aware that this option does not come with a DECLARATION OF PERFORMANCE' certificate. Please speak to us if you require an unglazed option.

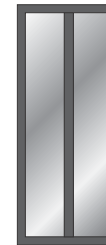
OPTIONS *continued*



Transoms / Mullions

Transoms are horizontal glazing bars that match the profile of the door. It divides the glass into two separate units, a unit at the top and a unit at the bottom of each door panel. Transoms are 80mm wide for Aluminium/uPVC and 60mm wide for timber doors.

The Transom is built into the panel at your indicated measurement, from the bottom of the panel to the centre of the transom.



Mullions are vertical glazing bars that match the profile of the door. It divides the glass into two separate units, a unit to the left and a unit to the right of each door panel. Mullions are 80mm wide for Aluminium/uPVC and 60mm wide for timber doors.

The Mullion is built into the panel at your indicated measurement, from the left of the panel to the centre of the mullion.



DEEP BOTTOM RAIL (timber option ONLY)

Option ONLY available for Timber door sets. Set within the door frame, we can add increments of 68mm deep timber bar(s) to increase the bottom rail. Used for decorative/aesthetic purposes, to match interior skirting etc.



Illustration of a double glazed unit

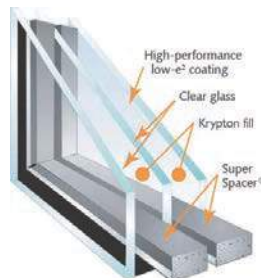


Illustration of a triple glazed unit



Laminated glass, retains the overall integrity of the glass.



Anti-sun tinting, colours available in grey, bronze, green and blue.



Georgian bar, available in 18mm and 25mm bar widths.

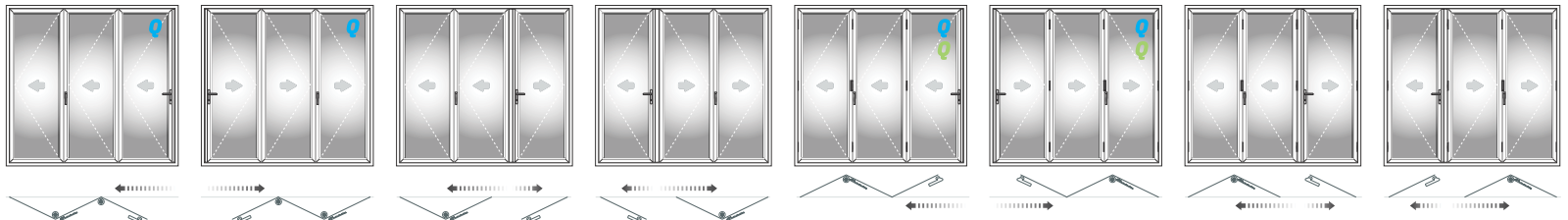
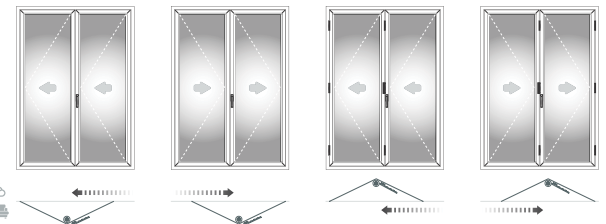
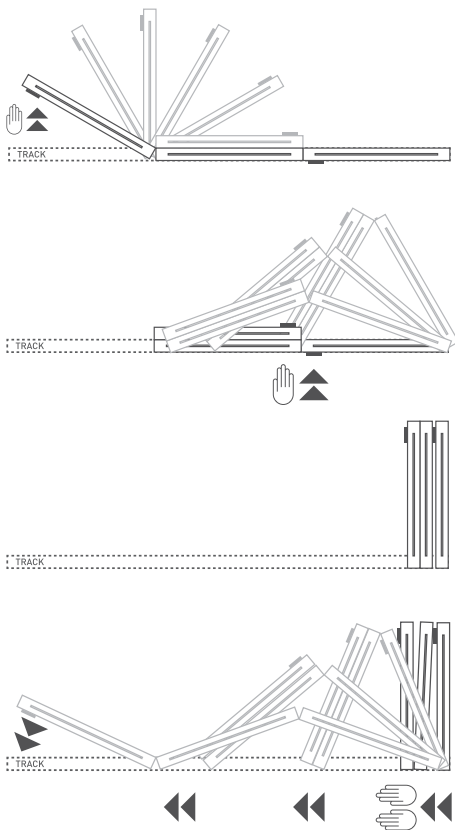
Standard

configurations

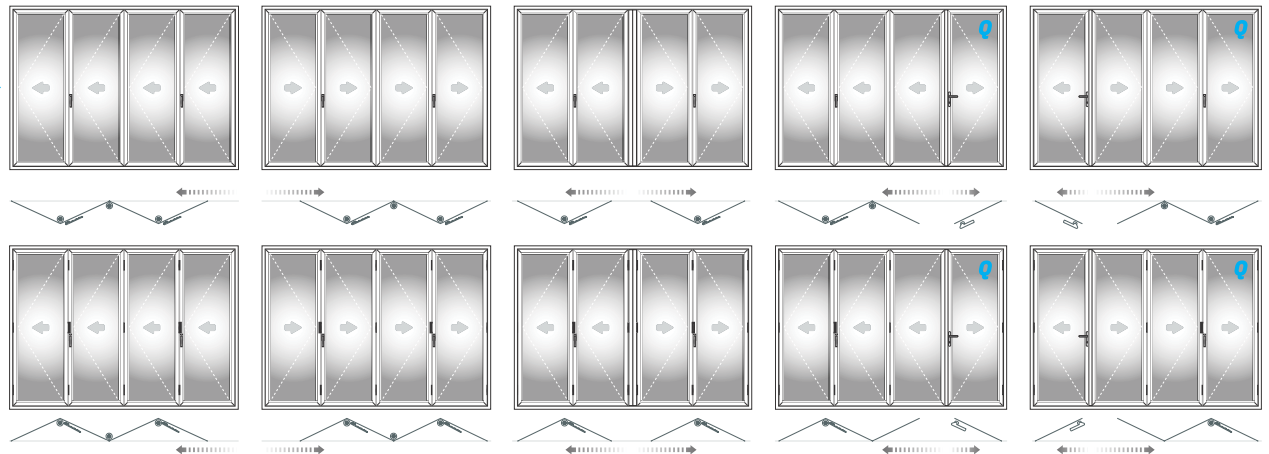
STACKING
How will your doors stack when in use? Where will you have most room?

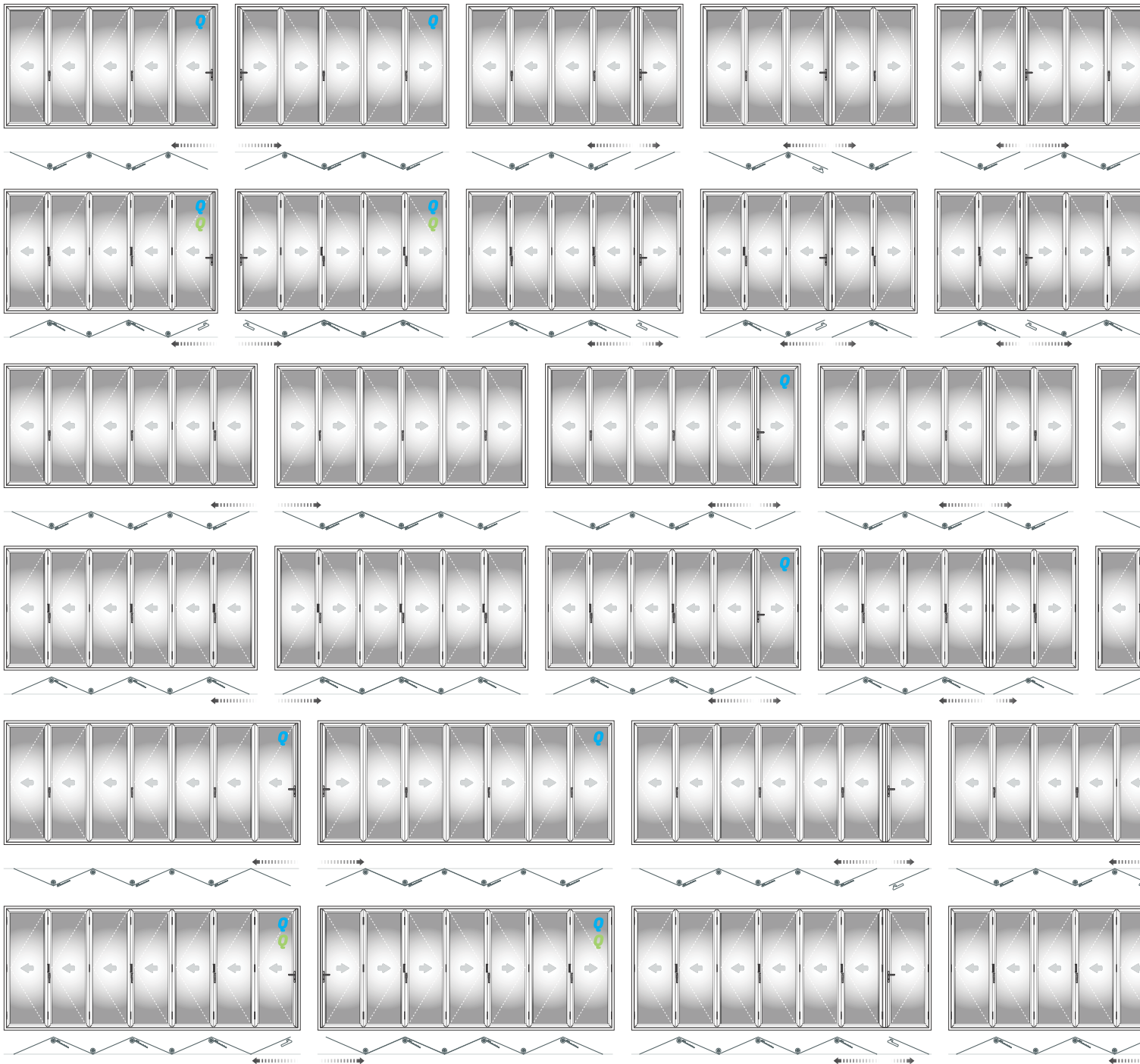
A bi-fold door can accommodate all tastes, applications and building requirements. There are over 100 opening styles, including: inward opening, outward opening, stacking to the left, stacking to the right and stacking both ways. Opening configurations ranging from 2 panels one way to 7 panels both ways.

Remember, this is only a general selection of what is available, for options not illustrated / inclusion of static panels etc please contact our planners who will greatly assist.



Our Bi-fold doors are always viewed from the inside, so when ordering always give the opening direction of your door as you look at it from the inside.





Traffic Door!
 A traffic door is an **every day access door**, that can be used independently without having to open all of the door set.
 Bi-fold doors fold in pairs, ie, a 3 panel configuration access door naturally falls to the left or right.

Blue Q = FD72
Green Q = FD68
Q's - Denote which configurations are Approved Document Q compliant, other configurations are available, please ask.

Tracks & rollers

Be cautious when choosing your bi-fold door system, as the track plays a vital part in the security of your door. If an intruder can get access to the track, they have easy access to your home with the simple lift of a crow bar. We utilise our own hardware brand (Fold'N'Slide) which is uniquely designed, independently tested and accredited. All our rollers are fully encapsulated within the track.

... all our door sets come with the same ergonomically designed heavy duty rollers.

Fitted and located to both the top and bottom of the door, integral to the track, the rollers distribute the weight evenly. They incorporate a hinge and are fitted to join each pair of sliding door panels together, with an average of 200kg per door set the steel wheels make the door glide easily and effortlessly, while not wearing the track.

- Sealed bearings for maintenance free use
- Top hanging, bottom rolling (or both) for ease of operation
- Fully adjustable for optimum performance
- Aesthetically pleasing, robust, durable and stable roller system
- Not prone to attack from intruders as the roller is hidden within the track
- Available in black, white or satin nickle as standard
- Stainless steel option recommended for coastal regions
(within 5 miles of coast)



FOLD 'N' SLIDE™
SYSTEMS HARDWARE



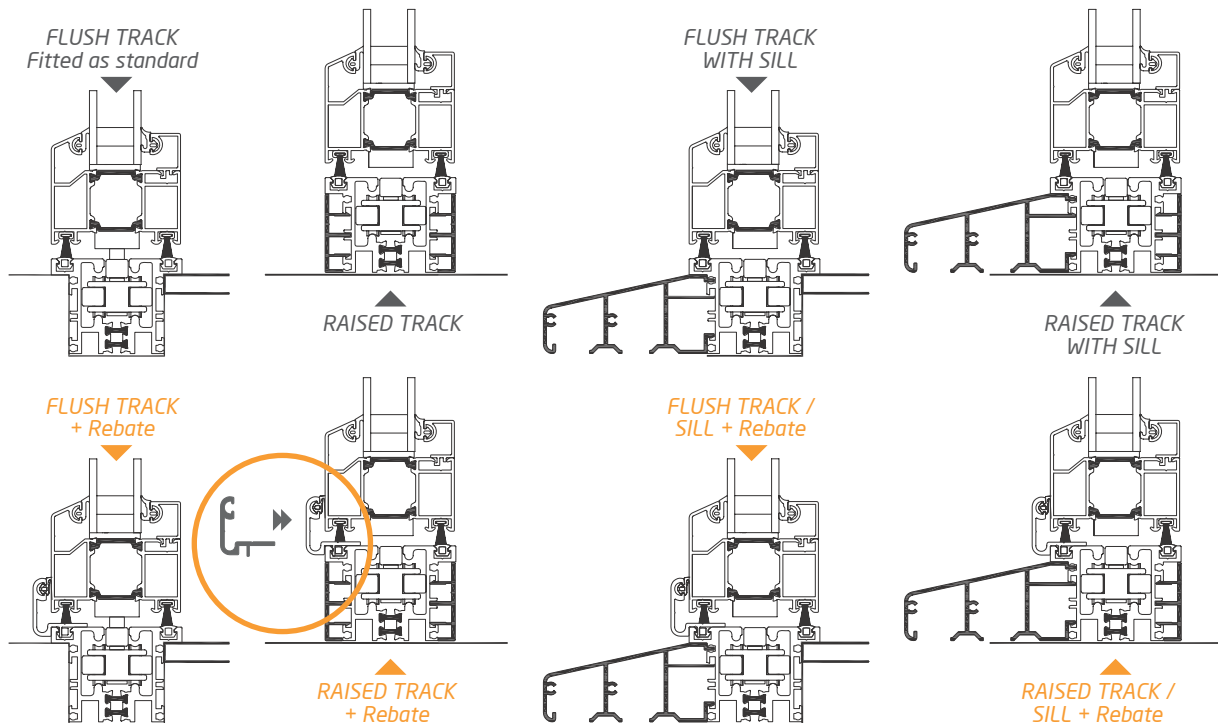
**Please note,
some gaskets are removed
from this corner sample,
for clarity*

Bottom track options



We manufacture an inline out of sight track system, this track system is strong and secure, and **all running gear is concealed** (which ever option you choose) and **is resistant to attack** from potential intruders, we offer both **inward** and **outward opening options**. Our **flush track option is also water resistant**, many other systems do not offer these options.

There are **threshold details to suit all applications**, some people prefer a step on the inside and outside, some prefer a step on the outside only. But for the many, they prefer **flush threshold** that blends the **inside floor with the outside floor**, especially those with children, elderly or someone in a wheel chair.



TRACK STYLES

FLUSH TRACK (AS STANDARD)

This options gives you a **flush floor level** from the inside of the property to the outside of the property.

- No trip hazard (only 8mm bevelled upstand)
- Water resistant (If area is prone to water pooling many people sink an external drain to flow water away from the doors)
- Strong, a car can run over it to gain access to a garage
- Ideal for internal use with no trip hazard
- Colour options; anodised silver, bronze or black

RAISED TRACK

This options does not give you a flush floor level from the inside of the property to the outside of the property. The track itself is the same as the flush option, only it is not sank under the floor level on installation.

FLUSH TRACK WITH SILL

This option offers a step down out of your property with no trip hazard, and with a sill to drain way from the doors.

- Sill projection 90mm

RAISED TRACK WITH SILL

This option offers a step down out of your property, with a sill to drain way from the doors.

- Sill projection 90mm

BOTTOM TRACK REBATE (OPTION)

For added weather proofing properties. Advised for areas subject to adverse weather conditions, such as coastal areas.

- Fitted to the bottom track (externally for inward opening, internally for outward opening), an aluminium finished clip is located to bridge the bottom pile seal to give increased weather proofing properties to your door set.
- Finished to the same colour as your chosen frame.

Choice of Hardware



Lever/lever handle (internal shot) finished in Satin Nickel

Lever Handle

Fitted to the main access door, an aesthetically pleasing and durable locking door handle ergonomically designed and engineered. You can choose a lever/lever handle or lever/flat handle option, the latter reduces the stacking widths of the doors. Each handle set comes complete with 3x keys.

Flat Handle

The primary use is to operate the shootbolt mechanism, a simple twist of the handle locates the shootbolts into position within the top & bottom track securing the door into position. All door systems are supplied with flat handles.

- Additional flat handles can be purchased to be externally fitted

Pull Handle

All outward opening door systems are supplied with the correct number of pull handles fitted to your door. Located internally to assist the locking into position of the bi-fold door when operating the flat handle.

Colour options for handles (lever/flat/pull):

Available in Black, White, Gold, Chrome or Satin Nickel as standard, Stainless steel (recommended for coastal regions) as an upgrade.

Butt Hinges

All our door sets are fitted with these extremely strong and durable hinges (Black, White or Satin Nickel as standard).

The security hinges are fitted within the frames interlocking tongue and groove profile, making it impossible for intruders to attack the hinge.

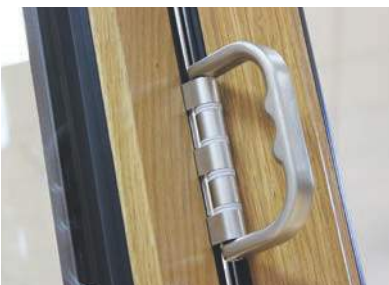
- Heavy duty security folding door butt hinges
- Security is provided via the secret grub screw (non visible)
- Stainless Steel option recommended for coastal regions



Flat handles, illustrating the hardware colour options available



Lever/flat handle option for reduced stacking space



Pull handle, to assist the locking into position of the bi-fold door



Stainless steel butt hinge, recommended for coastal regions

We are constantly improving our products therefore reserve the right to update our hardware range.



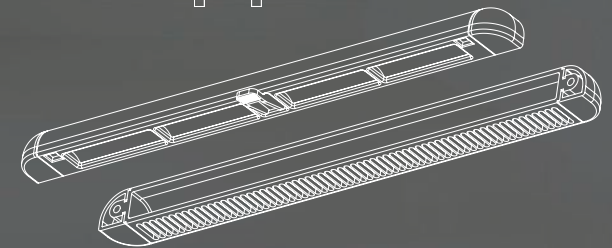
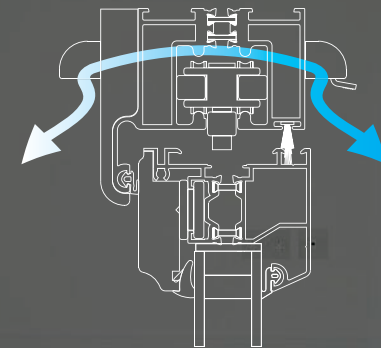
VENTILATION

Trickle Vent(s) option

Do you satisfy Part F Building regulations, with your chosen option? IT IS YOUR RESPONSIBILITY, SO PLEASE CHECK <http://www.planningportal.gov.uk>

Trickle vents are fitted to the top track and allow air flow. Each trickle vent supplies 2500mm² equivalent area models for compliance with approved Document F 2006

- Robust smooth slim and elegant design
- Positive open and close action
- Fitted with Integral flyscreen in external hood.
- Finished in either white, black or brown



criteria & how to measure

How do you open that space in your home to incorporate a bi-fold door?

The first thing that you need is an opening to accommodate the door, the opening must be of sound structure to allow the bi-fold door to be installed correctly. The opening walls and floor must be constructed from structural timber, steel, brick, concrete or concrete block. *Thermalite, cinder blocks or breeze blocks are not suitable to obtain a firm structural fixing.*

The head of the opening must be constructed from steel, structural timber or concrete. *Light metal lintels and timber sub-frames are not suitable to obtain a firm structural fixing.*

The next step is to measure your opening please refer to the diagrams 'Self Builder information'.

Frame Width Measurement from wall to wall of the prepared opening, then minus a tolerance of 10-20mm

Frame Height Measured from the underside of the top support to the underside of the bottom track, then minus a tolerance of 10-20mm

Square Metre Area of the door; width x height equals the Sq/Mt of the door, weight is approximately 30kgs per Sq/Mt

- We recommend that you allow between 10mm to 20mm of tolerance between the opening structure and the door frame to allow ease of installation.
- When measuring it is advisable to use a spirit level to indicate the correct size of door you require. Note: Always use the smallest measurement
- Always include your chosen bottom track option in your measurements and remember to allow for floor finishes, tiles, carpet etc

Threshold When deciding the way that you would like your threshold to be situated, always make allowances in your measurement to accommodate the bottom track. Note: the frame height includes the bottom track.

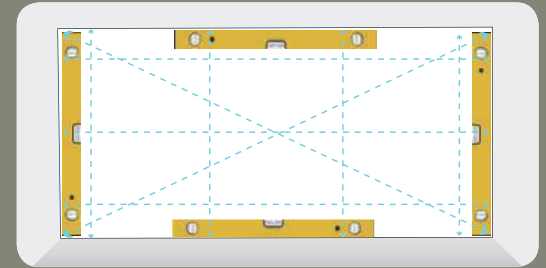
Once you have your opening size, you need to decide which direction you would like your door to fold and if you would like it to fold to the left or to the right, inward or outward or both.

Folding sliding doors are available made to your measurements and can be up to 4M high and 15M wide. The maximum panel width being 1100mm. Depending on the system you require, please see system specification on the corresponding product page.

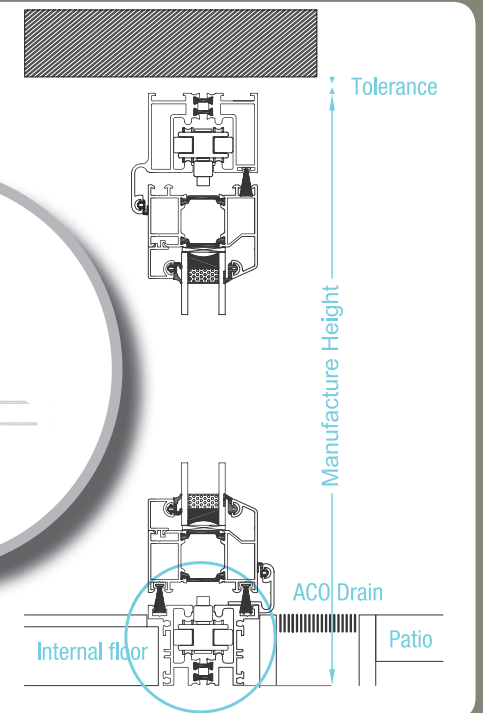
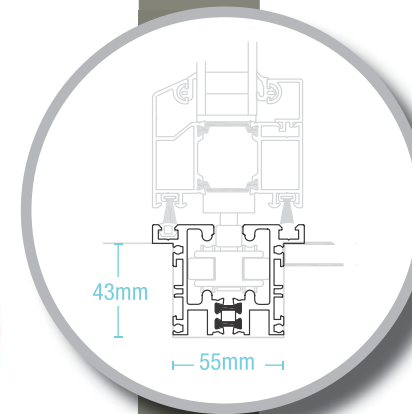


HOW TO MEASURE Self builder information!

We manufacture precisely to your specification, SO PLEASE CHECK!



Measure the prepared opening



Frame height includes the bottom track
We fit the flush track as standard, please allow for the 43mm profile depth if choosing this option

Functionality

| | |
|--|---|
| Child friendly | ✓ |
| Finger safe gaskets | ✓ |
| Low threshold (zero trip hazard) | ✓ |
| Easy to operate (effortlessly smooth) | ✓ |
| Slim flat handles (for reduced door stacking) | ✓ |
| Structurally strong (built to last) | ✓ |
| In-line system (Inward & outward opening options, offering a practical functionality, to your living space & home) | ✓ |

Thermal Efficiency

| | |
|---|---|
| Weather Proofing, UKAS PAS23 weather tested | ✓ |
| Thermally Broken aluminium as standard | ✓ |
| Tested for water ingress and air permeability | ✓ |
| High performance rubber seals and brush seals | ✓ |

Security

| | |
|--|---|
| Encapsulated running gear | ✓ |
| Hardened steel hook locks | ✓ |
| Dead bolts | ✓ |
| Top and bottom shoot bolts | ✓ |
| Internally glazed | ✓ |
| Security hinges (none of which are face fixed to the door) | ✓ |
| Tongue and groove interlocking panels | ✓ |
| Laminated glass option | ✳ |
| Security tested to a PAS024 (equivalent) level | ✓ |

Environmental

| | |
|--|---|
| FSC Certified Hardwood timber (Environmentally sourced from sustainable forests) | ✓ |
|--|---|

Materials - product overview

| | |
|---|---|
| Timber (70mm, engineered hardwood for strength & integrity) | ✓ |
| Aluminium (45mm) Internal Doors for UK, external use USA / others | ✓ |
| Aluminium (70mm) External Doors | ✓ |
| Alu-Clad (70mm Aluminium/Timber) | ✓ |
| PVCu (70mm vinyl) | ✓ |
| Glass, (70mm Triple Glazed Doors Glass/Aluminium) | ✓ |
| Glass, (70mm Double /Triple Glazed Doors Glass/Timber) | ✓ |
| Glass, (45mm Triple Glazed Doors Glass/Glass) | ✓ |

Configurations - 127 Door opening options available

| | |
|---|---|
| Inward Opening | ✳ |
| Outward Opening | ✳ |
| Left folding-stacking | ✳ |
| Right folding-stacking | ✳ |
| Left & Right folding-stacking both ways | ✳ |

Glass

| | |
|--------------------------------------|---|
| Double-glazed glass units (standard) | ✓ |
| Triple-glazed glass units (optional) | ✳ |
| Low-E coated glass (standard) | ✓ |
| Tempered glass (optional) | ✳ |
| Laminated glass (optional) | ✳ |
| Internally glazed/beaded (standard) | ✓ |
| Super Spacer (optional) | ✳ |
| Argon gas filled (optional) | ✳ |
| Krypton gas filled (optional) | ✳ |

Tracks & Rollers

| | |
|---|---|
| In-line out of sight track system | ✓ |
| Flush track as standard | ✓ |
| Sill option track | ✳ |
| Concealed running gear | ✓ |
| Top & Bottom rollers to distribute weight load | ✓ |
| Steel wheels (sealed bearings for maintenance free use) | ✓ |

Finishes & Coatings**Timber;**

| | |
|---|---|
| FSC Certified hardwood timber (from sustainable managed forests) | ✓ |
| Red Wood (hardwood) option | ✳ |
| European Oak (hardwood) option | ✳ |
| Anti-rot treated as standard | ✓ |
| Anti-fungal treated as standard | ✓ |
| Engineered (Laminated), spliced, glued & pressure treated as standard | ✓ |
| Natural stain, factory sprayed 3 coats at 250 microns per coat | ✓ |
| Low maintenance, life span of up to 10 years before require attention | ✓ |

Aluminium;

| | |
|---|---|
| Powder coated, RAL colours (bespoke choice of colour) | ✳ |
| Maintenance free, life expectancy of up to 25 years | ✓ |

PVCu / Vinyl;

| | |
|---|---|
| Aluminium reinforced PVCu profile as standard | ✓ |
| Maintenance free, life expectancy of up to 25 years | ✓ |

HARDWARE / Lever handle

| | |
|--|--|
| Ergonomically designed to fit all major door bolt locking systems: | 92mm Centres |
| Non-handed allowing use as a left or right hand handle: | supplied with spring cassette |
| Colour/finish options: | White / Black / Gold / Chrome / Satin Nickel / Stainless Steel |
| Supplied with spindles and 2 sets of screws: | to suit profiles 58-70mm |
| <i>Technical Information;</i> | |
| Corrosion resistance: | BS EN 1670 - grade 5 (500 Hrs Salt Spray) |
| Handle/Backplate: | Zinc Alloy BS1004A or Aluminium A360 |
| Spindle: | Steel C1008, Zinc plated and yellow passivated |
| Powder Coating (minimum thickness): | White and Black (60 microns) |
| PVD/Chrome Coating (multiple layer plating process): | Gold / Chrome / Satin Nickel |

HARDWARE / Flat handle

| | |
|--|--|
| Ergonomically engineered to fit all major modern door bolt locking systems | ✓ |
| Non-handed allowing them to be used as either a left or right hand handle | ✓ |
| Colour/finish option available in: | White/Black/Gold/Chrome/Satin Nickel/Stainless Steel |
| Supplied with spindles and 2 sets of screws (attached to doors) | ✓ |
| <i>Technical Information;</i> | |
| Corrosion resistance: | BS EN 1670 - grade 5 (500 Hrs Salt Spray) |
| Handle/Backplate: | Zinc Alloy BS1004A or aluminium A360 |
| Spindle: | Steel C1008, Zinc plated and yellow passivated |
| Powder Coating (minimum thickness): | White and Black (60 microns) |
| PVD/Chrome Coating (multiple layer plating process): | Gold / Chrome |

HARDWARE / Pull Handle

| | |
|--|--------------------------------|
| Material; | Aluminium Alloy |
| <i>Technical Information;</i> | |
| Powder Coating (minimum thickness): | White and Black (60 microns) |
| PVD/Chrome Coating (multiple layer plating process): | Satin Nickel / Stainless Steel |

HARDWARE / Butt hinges

| | |
|--|--|
| Heavy duty security folding door butt hinges | ✓ |
| Security: | provided via the secret grub screw (non visible) |
| Colour/finish option available in; | White / Black / Satin Nickel / Stainless Steel |
| <i>Technical Information;</i> | |
| Hinge Body: | Zinc Alloy BS1004A |
| Top/Bottom Bush: | Nylon 6 |
| Pins Stainless Steel: | Steel |
| Powder Coating (minimum thickness): | White, Black, Satin Nickel (60 microns) |

HARDWARE / Roller

| | |
|--|--|
| Aesthetically pleasing and durable Roller System | ✓ |
| Ergonomically designed heavy duty roller system | Steel wheels |
| Sealed bearings, durable and stable construction | ✓ |
| Fully adjustable for optimum performance | ✓ |
| Colour/finish option available in: | White / Black / Satin Nickel / Stainless Steel |
| <i>Technical Information;</i> | |
| Roller Shaft/Carrier: | Aluminium A360 |
| Roller Wheels/Carriage: | Steel / Stainless Steel |
| Powder Coating (minimum thickness): | White, Black, Satin Nickel (60 microns) |

All information correct at time of going to press, October 2016

Key

| | |
|----------------------|---|
| Available (standard) | ✓ |
| Choice / optional | ✳ |
| Not available | ✗ |

