

SWIFTFIT UNEQUAL PAIR DOORSET

TECHNICAL DATA SHEET

TDS018 REV 1

SAFEHINGE
PRIMERA

1. PRODUCT OUTLINE

90% of in-patient suicides occur in either the service user's bedroom or bathroom, with 49% of that number via the door or door hardware. Selecting the right doors that work for service users and staff is crucial, so we've worked hard to develop a robust and safe doorset for the mental health sector in the form of the Safehinge Primera Swiftfit unequal pair doorset, an anti-barricade pivot hung steel frame and timber leaf product designed for use in bariatric applications.

These doors are an essential life-saving safety product designed to be tamper-proof and resistant to abuse. To suit any aesthetic and size requirements that a customer may require, the 'Swiftfit' unequal pair doorset is a configurable product with numerous hardware, glazing and finish options available.

The inclusion of our mechanical or electronic locking systems also offers additional safety features, including mechanical overrides that provide leverage advantages for staff in the event of an intentional or accidental barricade situation. Electronic locking offers the service user the autonomy to control access to their living space, with staff always being able to override locking in the event of an emergency.

The use of a secondary leaf in the doorset provides staff the ability increase the opening to allow the passage of beds. When fitted with Safehinge Primera 'Rhino' bolts, the secondary leaf may also be used to assist in overcoming barricades.



The Swiftfit unequal pair doorset is available with numerous glazing options, including clear safety glass in a wide range of sizes and configurations, as well as Sureview privacy blinds, which offer staff a means to discretely observe a room without disturbing those occupying it, maintaining service user privacy and dignity.

Swiftfit unequal pair doorsets can also be equipped with the world's first full-door ligature alarm with live status monitoring, by turning the entire door into a weighing scale that detects vertical loads over 5kg. We explicitly designed our anti-ligature door alarm to detect and alert staff and caregivers in mental health facilities or other high-risk environments when there is an attempt to create a ligature on a door. The alarm provides an added layer of safety by detecting ligature attempts in real-time and allowing staff to intervene quickly and prevent harm as part of ligature risk assessment.

Swiftfit unequal pair doorsets are recommended for use in the following applications;

- Off-corridor WC, bathroom and showers in bariatric wards.
- Corridor spaces.
- Bariatric service user bedrooms .

2. COMPLIANCE

Fire Performance

Swiftfit unequal pair doorsets have been qualified for use in FD30 applications when tested to BS 476-22 1987. Doorsets required to be fire-rated are limited in size and specification by Field of Application BMT/CNA/F15136.

Smoke Performance

Fitted with perimeter smoke seals including the junction between each door leaf.

Mechanical Performance

Safehinge Primera conducts in house mechanical testing to ensure suitable levels of robustness.

Ligature Performance

The Swiftfit unequal pair doorset and its accompanying components are anti-ligature in design with testing carried out in house by Safehinge Primera engineers.

Acoustic Performance

No acoustic data currently exists for Swiftfit doorsets however, a threshold seal detail is available.

Specification

Doorset configuration - double door only.

Doorset action - single action or anti-barricade.

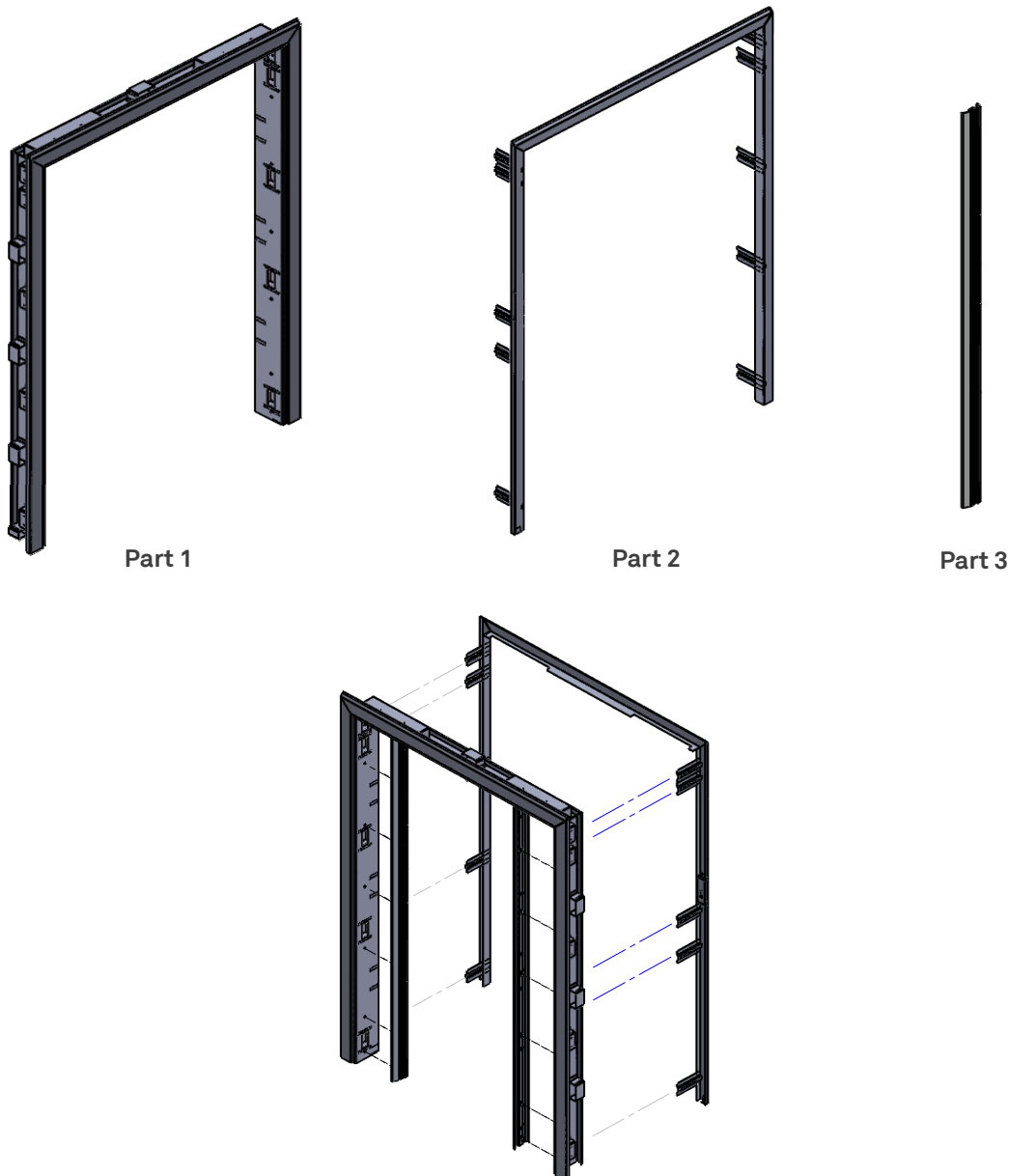
Opening direction - inward or outward opening .

Doorset handing - both left and right-hand configurations are available

3. SWIFTFIT STEEL FRAME

The Swiftfit unequal pair frame is a 4 piece steel frame designed to interlock around a structural opening. Each part of the frame is referred to simply as 'Part 1', 'Part 2' and 'Part 3'.

- Part 1 anchors the frame to the structural opening, fitting to the corridor side of the opening.
- Part 2 is secured to Part 1 from the room side of the structural opening.
- Part 3, also sometimes referred to as the 'add-on' is fitted to Part 2 and acts as a filler between the frame jamb and pivoted hinge. Two part 3's are used in the Swiftfit unequal pair doorset.



The external jambs, head and integral architraves are all manufactured with 1.5mm (approximately 17 gauge) thick mild steel. Behind these are bracketry and reinforcing components of equal or thicker gauge material. The welded assembly is engineered to provide secure anchoring into the structural opening, whilst the integral ligature resistant architraves surround the structural opening.

An average Swiftfit unequal pair steel frame weighs approximately 70Kg and is supplied with a powder coat finish of choice, alleviating any requirements for on-site finishing.

4. SWIFTFIT DOOR

The Safehinge Primera “Swiftfit” unequal pair doorset uses exclusively robust 54mm thick solid laminated timber door cores. Due to the pivoted design of the doorset system, the timber leaves feature a number of specialist morticing details not found on typical hinged doorsets. Unequal pair doorsets are provided with a primary leaf and a fixed 200mm wide secondary leaf.

Swiftfit unequal pair doorsets utilise the Halspan IT60 door core as standard however an alternative core can be provided if necessary, subject to suitability.

Manufacturer:	Halspan
Manufacturer Reference:	IT60
Core Thickness:	54mm
Core Material:	Three layer solid spruce/pine core mix
Inner Core Layer:	36mm x 12mm horizontally laid lamels
Outer Core Layer:	36mm x 12mm vertically laid lamels
Core Adhesion:	Bonded and dried under compression
Density:	450-550 kg/m ³
Outer Facing Material:	9mm MDF both sides
Facing Density:	830 kg/m ³
Facing Adhesion:	Dried under compression



To protect the edges, Swiftfit cores are bonded with 8mm hardwood lipping along the top, bottom and closing edge of the leaf. The hanging edge of the door is left unlipped for the Surehinge profile. This lipping can be provided either as ‘concealed’ to maintain a full coverage aesthetic facing across the door face, or ‘exposed’ to highlight door edges.

In addition to the cores 9mm MDF outer facings, both leaves can be finished with an additional decorative, protective facing applied to the both sides of the leaf. Safehinge Primera can offer the following facing materials in a variety of designs to suit customer requirements. Please refer to our document reference SOP193 for available species, cuts and colourways.

- Real wood veneer
- Formica laminate
- Acrovyn PVC (non-fire rated only)

When required, the perimeter of the leaves can be machined with channels to house fire and/or smoke seals for smoke and/or fire rated applications.

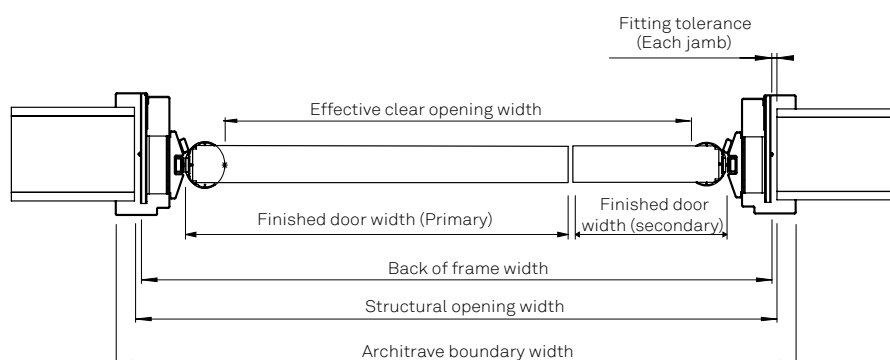
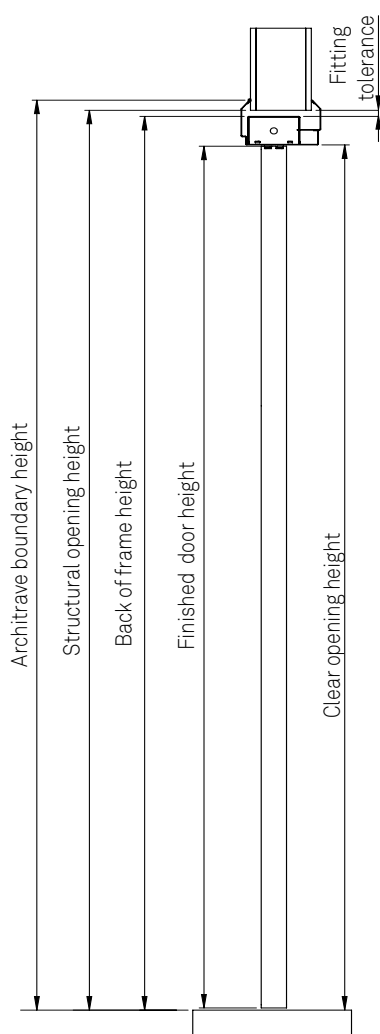
5. INSTALLATION

Swiftfit doorsets are capable of being installed into the following structural opening types;

- Cast dense concrete.
- Dense concrete blocks or brickwork.
- Masonry.
- Lightweight concrete.
- Lightweight aerated concrete.
- Timber stud partition.
- Steel stud partition.

Swiftfit frames have been designed to accommodate standard construction tolerances. Refer to document SST014 for full details.

Please note that there are specific floor tolerances and performance criteria that must be met to ensure proper function of the doorset.

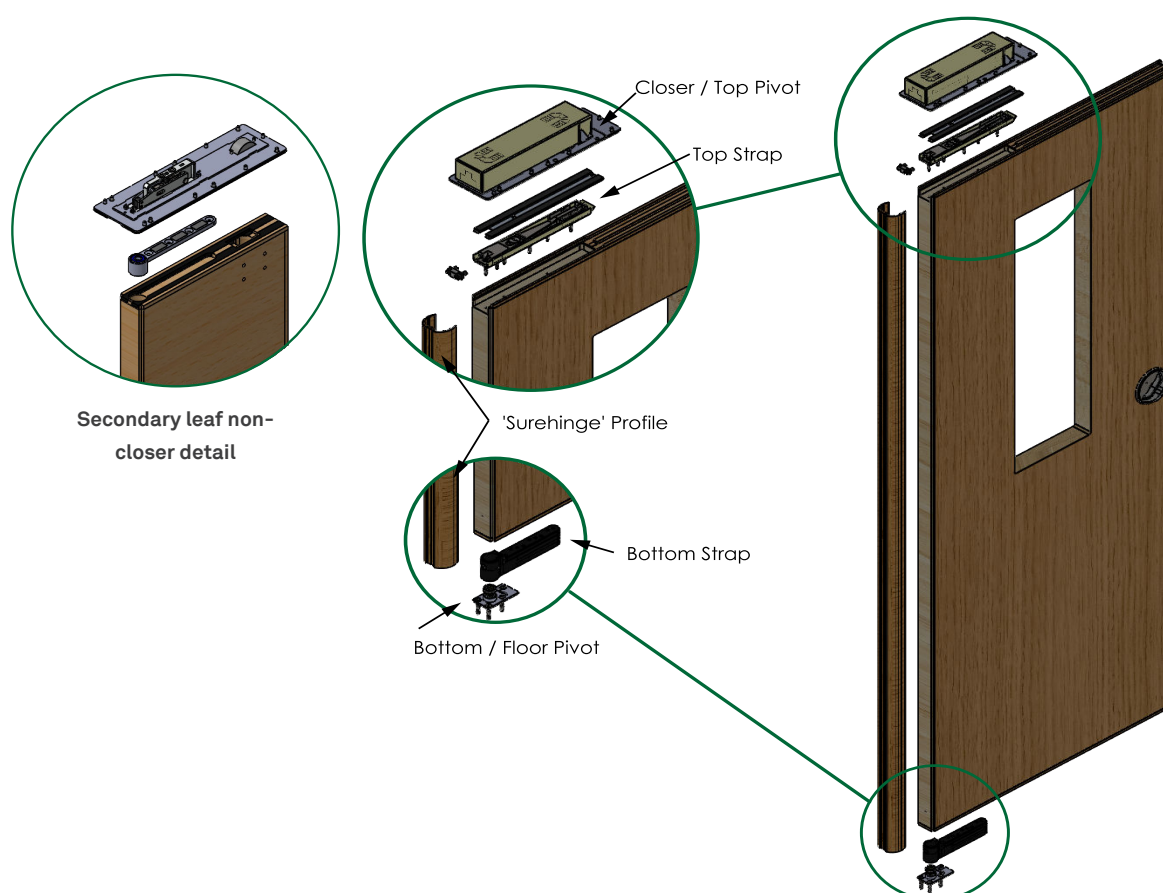


6. SUREHINGE PIVOT SYSTEM

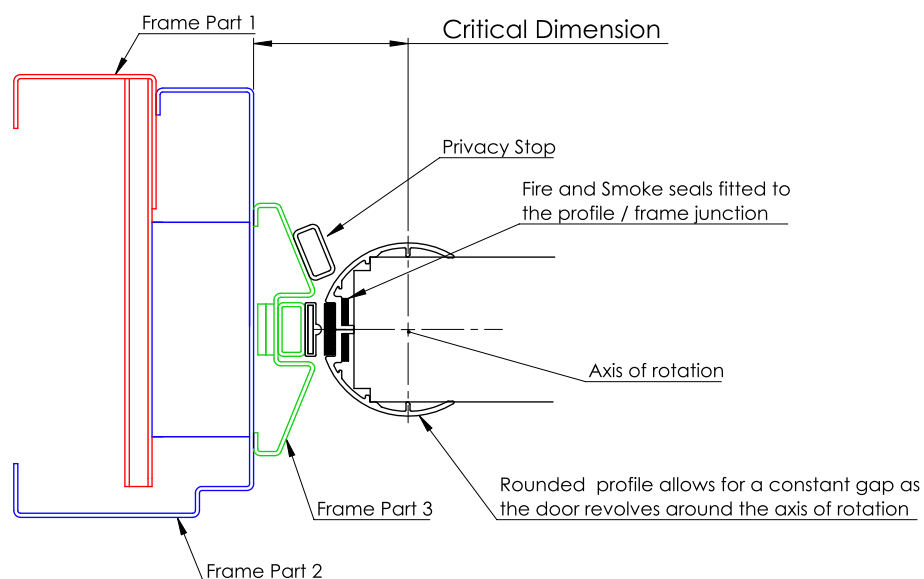
Since Swiftfit doorsets are designed to operate primarily within mental and behavioural health environments the doorset does not feature traditional hinges due to the increased ligature risks they pose. Instead, Swiftfit doorsets are pivoted in design, featuring a continuous hinge down the hanging edge of the leaf. This hinge is referred to as the Surehinge pivot system.

The Surehinge profile is an aluminium extrusion fitted to both faces of the door, down its entire length. The design of the profile is intended to create a circular hanging edge, concentric to the pivot points and providing a consistent gap between the leaf and frame at all stages of the opening and closing cycle, effectively creating a reduced ligature, anti-finger trap hinge.

The pivot system comprises of only a top and bottom pivot point with no intermediary points across the height of the door due to the ligature risks they would pose. The top pivot is in the form of a transom closer concealed in the frame head providing the doorset with both a pivot point and fire/smoke control measures. The bottom pivot is a 'frictionless' bearing plate secured to the floor, this bearing is adjustable in height to allow for control of undercuts and door gaps at the frame head. The leaf connects to both these pivot points via straps fitted to the leaf. Both the primary and secondary leaves utilise this pivot system in unequal pair doorsets however the secondary leaf uses a non-closer pivot point.

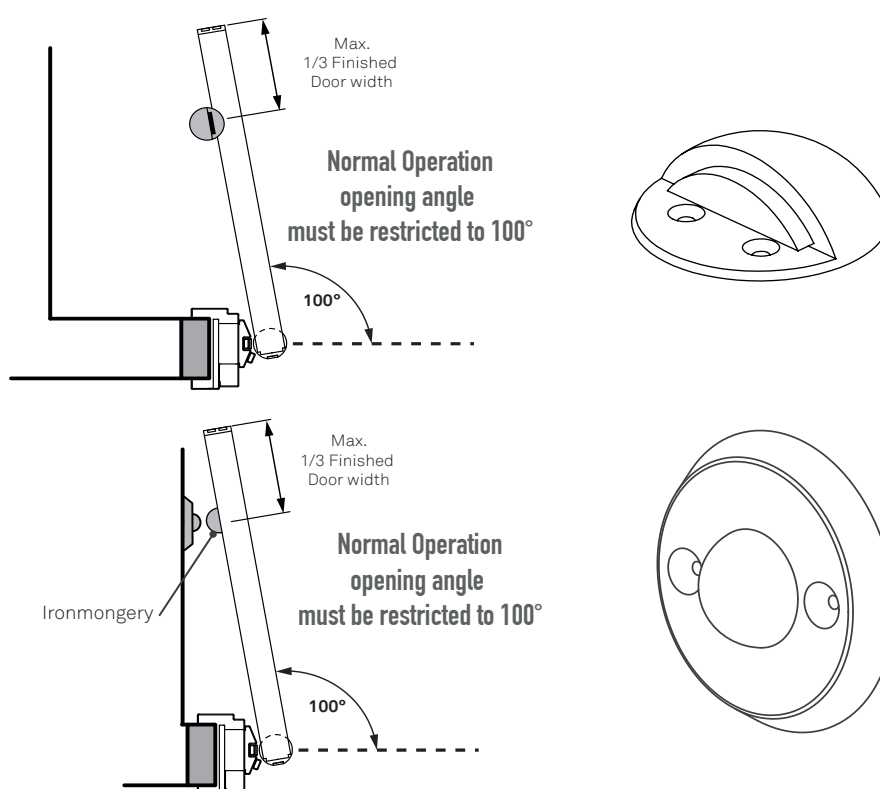


6. SUREHINGE PIVOT SYSTEM



By nature of their design, all pivot doors have a maximum opening angle beyond which they will 'bind' on the door frame. Binding exerts extreme forces on the door, frame and ironmongery and can lead to damage and operational failure. Although door closers with back check functionality can reduce this risk to a degree it is necessary that the appropriate measures are taken to prevent binding from occurring by installing stops to limit the opening angle on the primary leaf. Doorset surroundings must be taken into consideration if a stop is to be fitted for the secondary leaf.

These stops can either be in the form of a floor stop or, if the option is available, a wall stop.

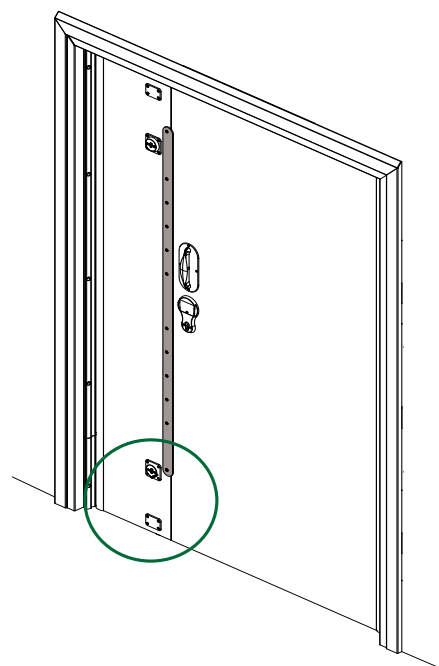


7. SECONDARY LEAF USAGE

Swiftfit unequal pair doorsets are designed with the intention that only the primary leaf is operable for everyday use, with the secondary leaf fixed by default, intended to only be unlocked temporarily to provide additional clearance for hospital beds or to assist in overcoming barricade situations. Secondary leaves are fitted with Safehinge Primera 'Rhino' bolts to lock in place with the ability to unlock limited to staff. Secondary leaves part of doorsets indicated as either single or anti-barricade action doorsets are also fitted with an astragal to limit the opening motion of the primary leaf.

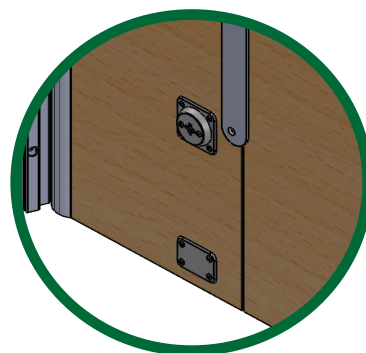
Astragal

- 4mm stainless steel.
- Fitted to the closing face of the secondary leaf of a single or anti-barricade action doorset to prevent the primary leaf opening in the unintended direction.
- In anti-barricade action doorsets the astragal is removed upon the opening of the secondary leaf.
- Powdercoat finish to match doorset aesthetics.



Rhino Bolts

- 2 point locking, 'Rhino' bolts fitted to both the top and bottom of the secondary leaf.
- Operable by the Safehinge Primera Lifeline key, limiting use of the secondary leaf to staff only.
- Supported by reinforcement plates to withstand service user abuse.
- Exclusively factory fitted.



Anti-Barricade

Swiftfit unequal pairs can be specified as anti-barricade. Overcoming a barricade with the Swiftfit unequal pair doorset requires two members of staff to ensure both the primary and secondary leaf are handled in a safe and controlled manner.

Placing a foot against the secondary leaf, one member of staff must disengage both the upper and lower 'Rhino' bolts using a Safehinge Primera Lifeline key. The member of staff should position themselves out of the primary leaf opening path to prevent injury should the primary leaf swing open once the secondary leaf is disengaged. Once the secondary leaf is opened and the astragal no longer prevents opening outwards, a second member of staff may then open the primary leaf to overcome the barricade.



Refer to OMT013 for further guidance on the unequal pair anti-barricade process.

8. DOOR CLOSERS

Swiftfit unequal pair doorsets feature the use of a concealed door closer installed inside the door frame rather than on the door's surface to provide a more secure, tamper-proof and reduced ligature solution on the primary leaf.

Constructed from durable materials that are resistant to damage, the concealed door closer works by controlling the speed and force of the door as it closes. When the primary door is opened, the internal springs are compressed; when released, the springs expand slowly, smoothly pulling the door closed. Depending on the closer used in the doorset, all stages of the closing and opening cycle can be adjusted to better suit the needs of the user.

Swiftfit primary leaves are available for use in different closer configurations, both mechanical and electrical to provide a robust anti-ligature and discreet solution for any use case. Secondary leaves have the additional option of using Safehinge Primera 'Top Centre Pivot' for non-closer applications.

S87 Mechanical Transom Closer

The S87 Transom Closer is suitable for single and double action doors. The closer offers adjustable closing power ranging from EN2 to EN5. The S87 allows for manual adjustment and control of both the closing (180°-15°) and latching speed (15°-0°).

Maximum door width - 1250mm

S804, S805 and S80F Electronic Transom Closer

The S804 and S805 transom closers are electro-magnetic multi-point 'hold open' units available in both EN4 and EN5 power ratings. The hold open functionality is available from approximately 75 degrees. These closers are suitable for both single and double action doorsets.

S80EN4 - Maximum door width of 1100mm

S80EN5 - Maximum door width of 1250mm

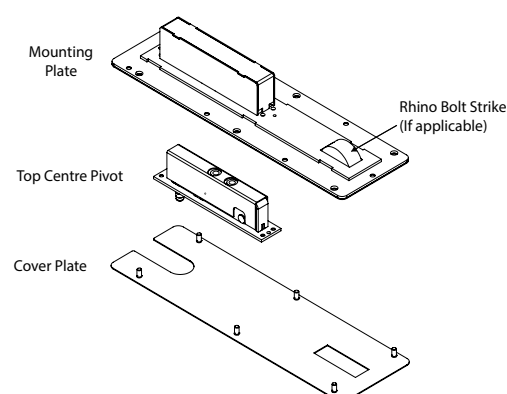
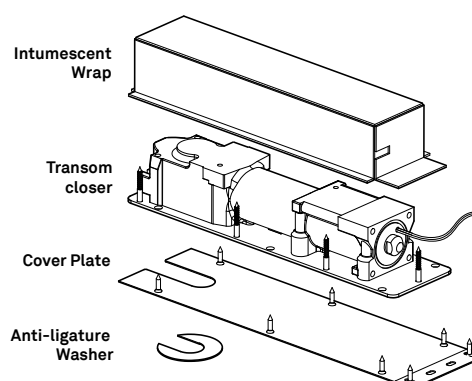
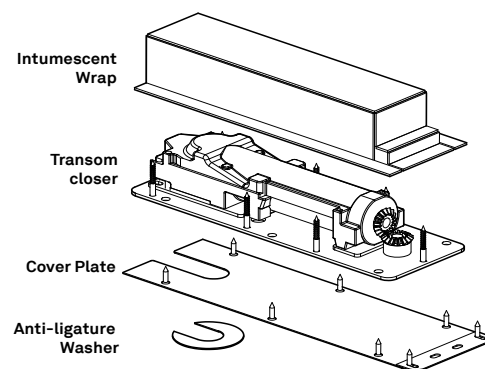
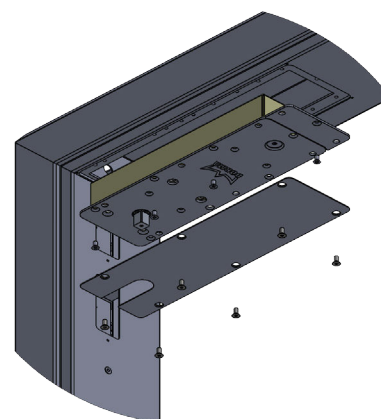
The S80F is an electro-magnetic free swing unit available only in EN4. The free swing functionality is activated once door is initially opened irrespective of opening angle (No latching speed adjustment).

S80F - Maximum door width of 1100mm

Top Centre Pivot

Safehinge Primera top centre pivots are designed to provide the necessary pivot point in the frame head to complete the surehinge pivot system in secondary leaves not required to be fitted with a closer. The 'Top Centre Pivot' provides a frictionless free swing motion with adjustable lateral movement to assist in setting door gaps.

'Top Centre Pivots' are used on the secondary leaf, paired with Rhino bolts.



9. LOCKSETS

Swiftfit unequal pair doorsets are exclusively factory-fitted with Safehinge Primera locksets. Safehinge Primera locksets have been designed and tested specifically for use in mental health environments, providing a reduced ligature solution that incorporates override functionality to assist staff in overcoming potential barricade situations.

Mechanical Locks

Safehinge Primera mechanical locks are available in a wide range of functions to meet the access and egress requirements for any application and are intended to be used in conjunction with Safehinge Primera anti-ligature ironmongery.



5-Way SOS

In the event of barricades, Safehinge Primera mechanical locks offer a robust override referred to as '5-Way SOS'; this 'Staff Override System' provides the user five possible override methods. Each method is designed to address any level of barricade ranging from simple holding of the handle to more determined and severe attempts.

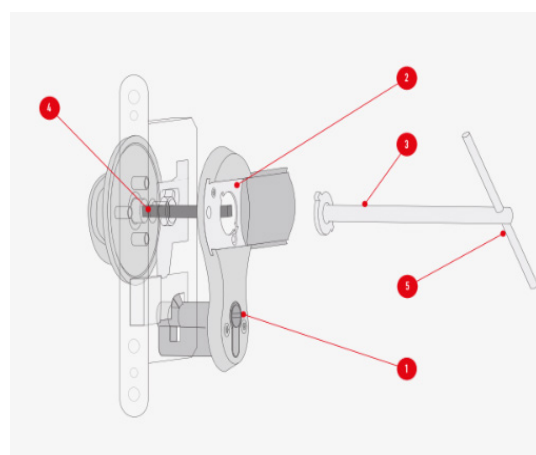
1. Key - Designed with two independent spindles, lock and turn/pull independently, allowing the key to provide a direct mechanical override

2. Keyway - In the event the cylinder has been tampered with and blocked by foreign objects (i.e. gum/paper etc.) the spindle can be directly accessed by removing the concealing plate.

3. Turn Leverage - The use of a T-bar emergency tool provides superior leverage to overcome a service user holding the handle.

4. Spindle - If the handle has been restricted from turning by greater, more static forces, the spindle is designed to shear to separate the bedroom side handle from the lock case.

5. Pull Advantage - The T-bar provides a significant power advantage to pull the door open (doorsets specified as anti-barricade only).



9. LOCKSETS

Electronic Locks

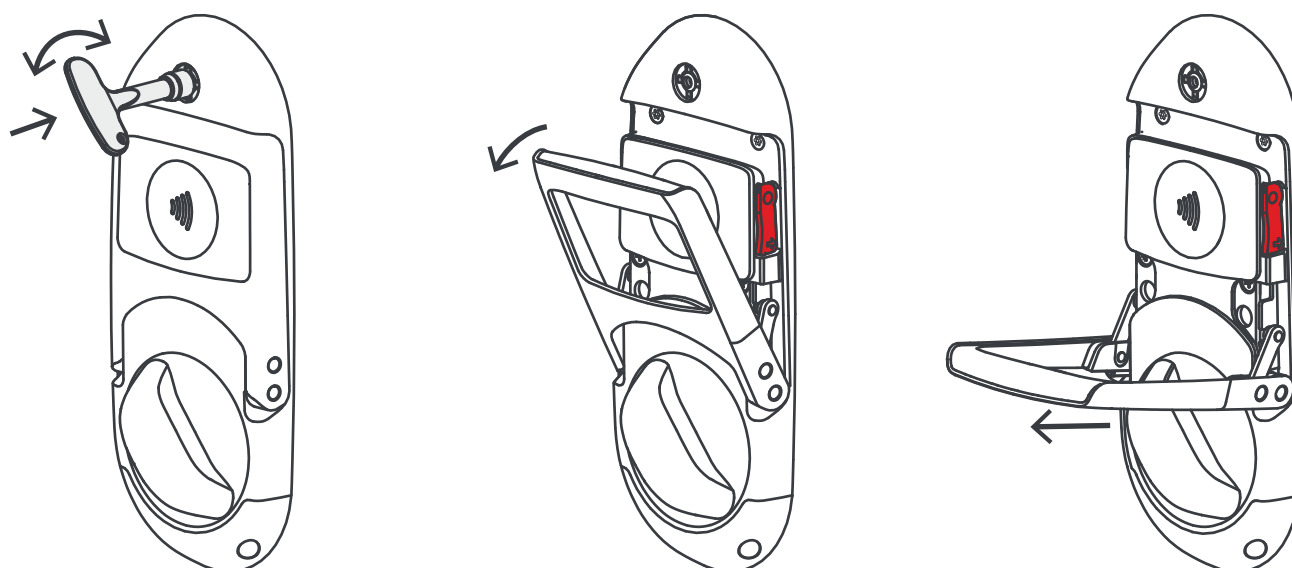
For applications requiring access control, an electronic alternative is available in the form of the Safehinge Primera Electronic Lockset. In addition to providing increased control of access to rooms in the building the Electronic Lockset is anti-ligature in design with an integral anti-barricade override mechanism providing a seamless access control solution for any mental health use case.

- Wirelessly powered, wireless power packs supplied by Safehinge Primera can last up to 12 months under normal use. No supplementary wiring allows for a far less intrusive retro-fit solution.
- System agnostic, the Electronic Lockset is designed to integrate into popular 3rd party access control systems.
- User based credential selection, access can be provided as key fobs and cards for staff or, for service user access, an adjustable wristband with <5kg break-forces.
- Single-key solution, the integrated override mechanism is operable by the Safehinge Primera Lifeline key providing staff the ability to operate the lockset, privacy blind and other Safehinge Primera room components all with one key.



Integrated Override

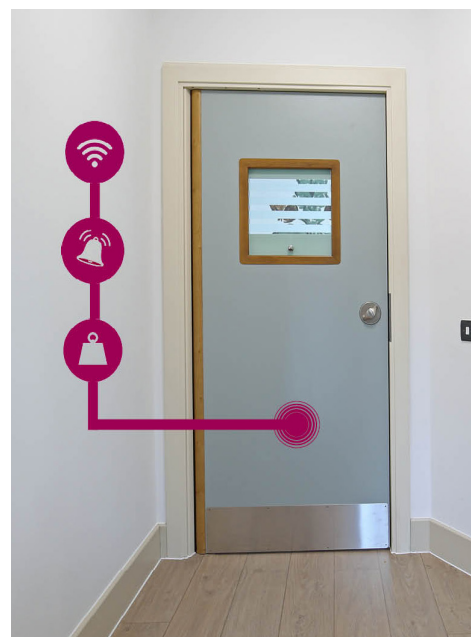
The Electronic Lockset is designed to assist in anti-barricade situations through the inclusion of an integrated lockset override mechanism. By presenting and turning the Safehinge Primera Lifeline key, an integrated handle will be released which, when pulled to 90 degrees, will both disengage the latch. In Swiftfit unequal pair doorsets specified as anti-barricade action, this handle may be used to provide the user a pull advantage during the barricade override process.



10. FULL DOOR LIGATURE ALARM

To provide the highest level of ligature resistance and patient safety, Swiftfit unequal pair doorsets can be fitted with the Safehinge Primera full door ligature alarm. This integrated alarm system bypasses the limitations of existing door top and edge detection systems by transforming the door itself into a 'weighing scale' that constantly measures loads across the door over its lifetime. Connecting into existing alarm systems, the Door Alarm will alert staff when increased loads are detected indicating a potential ligature attempt needing investigated. This alarm may be fitted to the primary leaf only or both primary and secondary leaves.

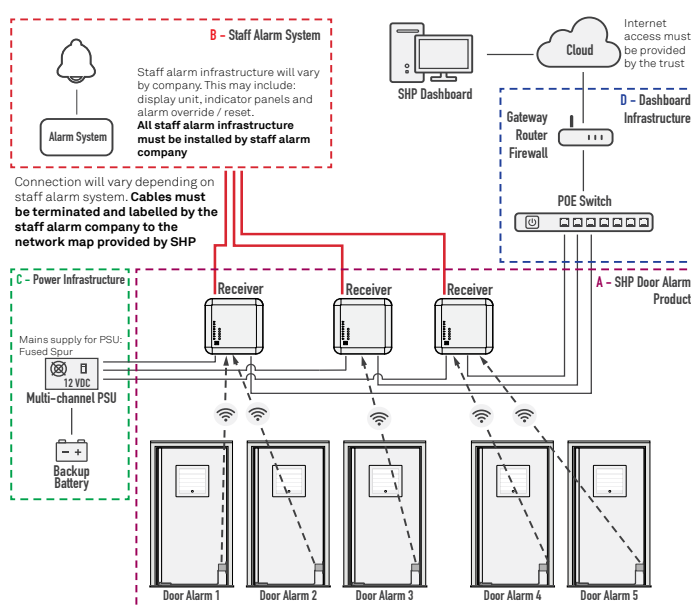
- **Discreet design.** The Door Alarm is integrated into the door itself, not visible or accessible to patients, reducing the potential for tampering and patient intrigue.
- **Wirelessly powered.** Wireless power packs and communication to staff alert systems reduces the need for wiring to the door, reducing the risk and simplifying installation. Power packs can last 6-12 months depending on use.
- **Intelligent load detection.** The Door Alarm is programmed to recognise and account for natural load increases that result from typical door behaviour such as the opening and shutting of the door, reducing false alarm rates.
- **Highest level of Ligature detection.** The Door Alarm is capable of detecting ligatures anywhere across the door in both the open and closed position.
- **Patient specific calibration.** Alarm sensitivity and trigger loads can be adjusted to suit lower bodyweight patient groups. Trigger load is 7kg by default.
- **Data Insights.** Non personally identifiable information is collected to provide fast resolution of any faults. Historical data can be reviewed to provide trend analysis and clinical insights, improving quality of care.



Door Alarm Infrastructure

The Door Alarm system is designed to connect directly to existing staff alarms. Each door alarm unit wirelessly communicates to a Safehinge Primera Door Alarm Receiver which is then connected to the staff alarm system by the most appropriate means for that system. Each receiver is capable of connecting up to 8 individual doorsets and must be installed in a nearby non-patient areas such as roof spaces or riser cupboards powered by a 12V DC supply and appropriate backup battery.

The receiver is then connected to the staff alert system (by the system provider) and to the SHP dashboard via the cloud to allow for remote monitoring of the Door Alarm Units.



Safehinge Primera can provide an optional Service Level Agreement (SLA) program to aid in the maintenance of the Door Alarm system.

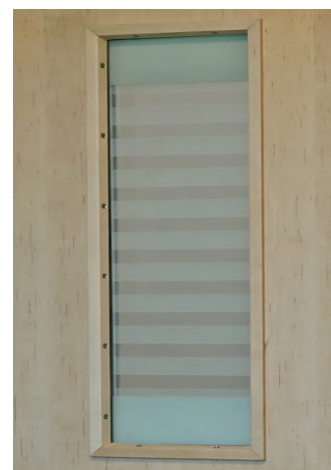
11. PRIVACY BLINDS

Swiftfit unequal pair doorsets are designed to incorporate the use of privacy blinds to assist in service user observation practices in a manner that balances both the dignity to the room occupant and the staffs ability to conduct regular check ups. These privacy blinds are available in a range of configurations and aesthetics to suit most use cases. Privacy blinds can only be fitted to the primary leaf in unequal pair doorsets.

Sureview Privacy Blind

The Sureview privacy blind is a triple-pane privacy glass assembly comprised of a layer of fire glass opposing a layer of toughened glass. Between these two layers sits an additional layer of toughened glass that can be actuated up and down to 'open' and 'close' the blind.

- Available in either 27mm or 36mm thick panels with the 36mm option containing a 9mm thicker layer of toughened glass, suitable for use cases requiring an increased level of robustness.
- Available in a square assembly (400mm x 400mm) or rectangular (800mm x 250mm) to suit the required clear view.
- Operable by the Safehinge Primera Lifeline key on the corridor side, maintaining service user dignity by limiting the ability to observe to approved members of staff only.
- Optional panel operation on the inside of the room through the use of an anti-ligature thumb turn on the bedroom side, providing the occupant the ability to view out of the room freely.
- Panels can be customised with printed panels and coloured beading to match the aesthetics of the ward.
- 27mm must be used with hardwood timber beading whilst 36mm panels are secured with stainless steel beading.

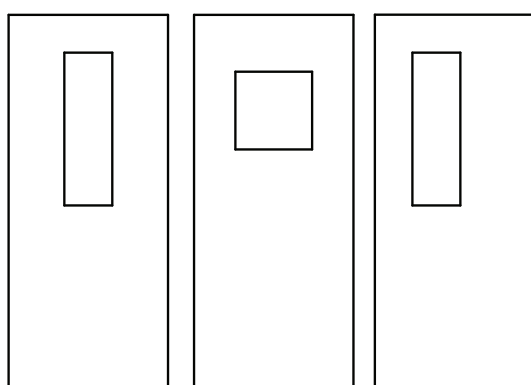


For applications in which privacy blinds are not necessary, single pane clear glass options are available for use with timber beading.

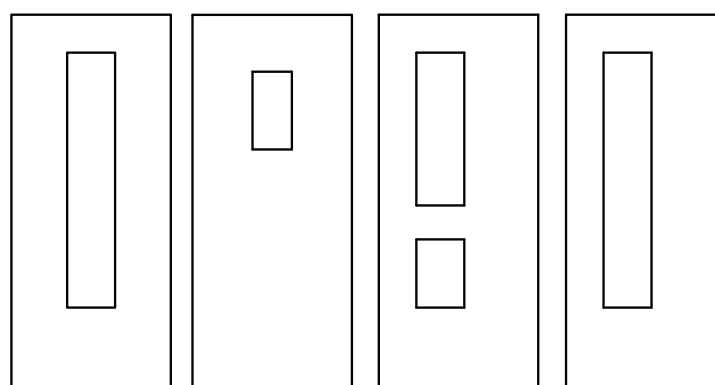
Sizing.

Detailed below are the standard vision panel configurations for use in unequal pair primary leaves.

Sureview & Clear Glass



Clear Glass Only





t 0330 058 0988

e info@safehingeprimera.com

w www.safehingeprimera.com

Blackpool Office

Unit 8 Bankfield House

250 Bristol Avenue

Blackpool

FY2 0JF

Glasgow office

44 Speirs Wharf

Glasgow

G4 9TH