Product datasheet

Swift SEW bi-folding doors

Technical details	Max width 5000mm Max height 7000mm (subject to max 32.5m^2 opening) Panel thickness 62mm Door U-value 1.1W/m^2/°C. (1) Sideroom required 290 mm to 310 mm Headroom required 450mm Weight 30kg/m^2 Power supply 415V, 3P+N, 16A Opening speed 8 seconds.
Performance	Performance in accordance with BS EN 13241-1:2003 (note these figures are based on a Swift (note Swift-SEW) tested in Aug'05) • Forces for Manual Operation – Pass • Watertightness – Class 2 (50pa) • Air Permeability – Class 2 • Life expectancy – more than 20 years • Wind pressure (2) - 1.1kN/m^2 (6m high door), 0.9kN/m^2 (6.5m high door). Acoustic performance of the panel – Average weighted SRI, RW Index tested at 29dB. Overall door 25dB (1)

Standard details

Type of door	Side hung bi-folding door with two leaves folding to each side. Leaves are mounted onto the inside face of the opening and fold inwards at 90°.(3)
Finish	Standard (4) Outside face finished in a choice of 6 stock colours: Colorcoat® LG Plastisol in White (00-E-55), Goosewing Grey (10-A-05), Honesty (10-C-31), Aztec Yellow (10-E-55), Mushroom (10-B-19) or Colorcoat® Prisma in Silver Metallic (RAL 9006). Inside face in Colorcoat® LG Plastisol in White (00-E-55).
Locking and handles	An electro mechanical lock within the drive motor automatically holds the door in the closed position. A stainless steel bottom guide pin engages with a yellow cast-aluminium floor shoe fitted to the threshold, and holds the leading edges in place. A black thermoplastic easy-grip pull handle is fitted internally to each door leaf for manual operation of the door.

Note (1) – U-value and acoustic figures based on a 4,000 mm (W) x 6,000 mm (H) door without windows or wicket doors, and without taking into account inevitable apertures for railway tracks and OLE cut-outs generally associated with doors for rail projects.

Note (2) – Wind pressure capacities are based on panel strengths calculated from physical tests carried out in our works. Calculations given are for standard panel construction with 0.65mm skins, without cut-outs for windows, and with each panel supported at all four corners. Greater wind pressures can be withstood using thicker door skins, and with additional panel reinforcement. For further advice on wind pressures please consult Jewers Doors.

Note (3) – Outward opening doors are available on request, subject to the geography of the site and must be designed with an external track / drive canopy and external mag-locking posts to secure the doors leaves open in windy conditions.

Note (4) – It is recommended that any door panel, which is exposed to significant direct sunlight, should be finished in a light colour. The insulation properties of the panel are so good that, if dark colours are used, the surface temperature of the panel can become unbearably hot, and the panel surface may ripple slightly, or taller panels may temporarily bow, until the temperature falls. This does not however affect the structural integrity of the door. For further advice on colour selection please consult the manufacturer.

Threshold	A 140 x 10mm thick extruded aluminium plate with 30° chamfered edges is fixed directly to the floor with M6 x 75 Thunderbolts. The plate forms a water bar, presents a level surface for the door to seal against, minimises bottom seal wear as the door folds, and provides a solid location point for floor bolts. Threshold plates are profiled between rail tracks as required.
Surround frame	A flush steel goalpost surround frame should be provided in order to install a Swift door. The minimum thickness of material to be 6mm, and the width of the internal surface to be minimum 150mm. In addition a 300mm x 300mm motor mounting plate is required above the door at the centre of the opening. (6)
Drive system	An SEW S Series helical-worm gear motor with lockable manual brake release operates both door halves simultaneously. Motor power is 0.55kW or 0.75kW generating an output torque of up to 2400Nm. The drive unit is mounted above the top track at the centre of the opening. Minimum Ø40mm drive arms connected between the drive 'propeller' and the jamb hinges control the movement of the door. Manual operation is via a low-level aluminium lever handle operating a cable to release the clutch and allow instant manual movement of the door. Re-engaging the lever handle re-engages the drive. The manual release is interlocked to prevent electric operation of the door whilst disengaged.
Operational controls	A CSL control board with variable speed inverter drive and programmable logic control (PLC) with 42 I/O's programmed via an HMI touch screen. The steel cabinet is sized 400 mm W x 600 mm H, is IP66 rated and is lockable. Open, Close and Emergency stop buttons and the HMI screen are mounted on the lid. The board provides variable speed opening and closing, slow-down on opening and closing, door-status displays, inputs for safety edges, photocells, storm bolts, wicket door and the manual release handle, and outputs for traffic lights or an AV alarm. Several spare 24V DC input and output are also provided as standard for integration with external HVAC, Fire, Vehicle Wash Plant, Building Management or Depot Protection systems. Doors will be set to Deadman (continuous push) to open and close unless additional safety features are installed.
Panel construction	Panels are constructed from 2mm thick cold rolled galvanised dovetail channel frames with mitred and spot-welded joints and 5mm thick local reinforcement for hardware. The frame is covered on both sides with minimum 0.65mm thick steel sheets and pressure injected with 50kg/m^3 CFC-free polyurethane foam to form an extremely strong, rigid, flat panel without mechanical fixings. Panel thickness is 62mm.
Seals	Flexible rubber seals are fitted to all edges of the door, and between door leaves. All seals are purpose-designed EPDM extrusions, which press into, and blend seamlessly with the door panels. Each seal provides full finger trap safeguarding, and excellent protection against weather, dust and sand.
Top track and gear	Top tracks are 4 mm thick pressed galvanised steel supported with purpose designed hot-dipped galvanised steel track brackets for fixing back to the head steel. 4-wheel pendant trollies with Ø50 mm sealed bearing wheels and Ø16 mm shafts guide the doors at the head. Pendants are mounted in 80 mm x 120 mm machined and bushed extruded aluminium brackets. Pendants are vertically adjustable.
Jamb hinges	Each door half is hung on three pairs of jamb hinges. Each pair of hinges is manufactured to a low tolerance from laser cut, fabricated, and machined bright steel. Hinges are fitted with min Ø16mm to Ø30mm hinge pins (subject to door size) and Igus bushes. Bottom hinges are fitted with vertical adjustment screws, providing simple and accurate setting during installation. Hinges are finished in black polyester powder coat to RAL 9005(M).
Intermediate hinges	Apex hinge pairs are 120 mm x 120 mm and machined from solid aluminium extrusions, fitted with sealed for life Igus bushes and Ø16mm stainless steel hinge pins. A concealed pin ensures that the hinge pins cannot be removed from the outside. Hinges are finished in black polyester powder coat to RAL 9005(M).

Note (6) – The door frame and drive mounting bracket must be structurally designed to withstand the torque produced by the drive unit during door movement. The output torque of the drive unit will be up to 2400Nm and the torque generated in each top hinge will be up to 1,500Nm, hence the steels need to be designed to accommodate this torque.

	Optional architectural / mechanical items
Finish	Option 1 Outside faces of panels are polyester powder coated in a choice of 13 RAL colours; 1001, 1002, 1013, 1016, 1018, 6018, 6019, 7032, 7035, 9001, 9002, 9006 or 9010. Inside face in LG Plastisol in White. All hinges and drop bolt sleeves are black polyester powder coated in RAL 9005(M). Option 2 Inside and outside faces of panels are polyester powder coated in a choice of 13 stock RAL colours listed in Option 1 above. All hinges and drop bolt sleeves are black polyester powder coated in RAL 9005(M).
Vision panels	Aluminium window frame with one-piece inner liner tray. Window units are double glazed (4~20~4), argon filled, low E toughened glass. Frames are polyester powder coated in matt black to RAL 9005(M), fully sealed, and available in a choice of frame sizes as follows: 400mm x 600mm 600mm x 600mm 400mm x 1200mm 600mm x 1200mm
Wicket door	Option 1 Standard lever furniture. Wicket door opens outwards. Hardware comprises a Briton 5520 mortise sashlock, 25mm low-profile anodised aluminium lever handles, external Europrofile cylinder with internal thumbturn, 1½ pairs of stainless steel butt hinges and a hidden door limiting stay. 85mm high step with 40mm wide aluminium threshold strip. Option 2 Emergency escape furniture. Wicket door opens outwards. Hardware comprises a Briton 379 panic bar, external override cylinder and finger latch, 1½ pairs stainless steel butt-hinges and a hidden overhead door limiting stay. 85mm high step with 40mm wide aluminium threshold strip.
Locking	Option 1 A lever operated floor bolt is fitted internally between pairs of leaves and is electrically interlocked to prevent electric operation with the bolts engaged. The bolt comprises a 240 mm x 70 mm steel case with cast aluminium lever handle which throws a 30 mm x 10 mm steel bar into a stainless steel socket on the threshold. Floor bolt is finished in BZP. Option 2 An automatic solenoid floor bolt is fitted internally between pairs of leaves. The bolt size is Ø20mm with a 50mm stroke and engages automatically into a floor socket as the door closes. The bolt comprises a 335 mm x 60 mm x 55mm black powder coated steel case. Optional cylinder for manual operation.

	Optional control & safety equipment
Safety equipment	Safety Edges A pair of full-height Category 3 opto-electronic safety edges are fitted to the leading edges the door. Each edge comprises a send and receive transmitter mounted within the top and bottom of the leading edge seal. An impact on either edge during closing will automatically stop and re-open the door. Safety edges are continuously monitored so the door cannot close automatically in the event of damage to, or failure of the edge. Photocells Photocells comprise a transmitter and a receiver, which sends a beam between the two. Photocells can be fitted for closing safety, opening safety, or a combination of opening and closing. If a closing safety beam is broken during the closing cycle, the door will automatically stop and re-open. If an opening safety beam is broken during the opening cycle, the door will automatically stop. Traffic Lights Red and green 230VAC LED traffic lights each sized 150mm diameter mounted in a black casing and supplied with a fixing bracket. Sequence of operation is Red light on when door closed or part closed, Green light on when door fully open. Photocell / Traffic Light Posts A pair of 100x100 RHS right angle steel posts are fitted on the inside of the bunched door leaves to mount an internal photocell and / or traffic lights. Posts are painted yellow for maximum visibility.
Operational controls	Control Option 1 Semi-automatic - Single push to open, Single push to close. Stop button stops doors. Control Option 2 Fully-automatic – Single push to open, automatic closing after pre-set pause time (default 60 seconds). Stop button stops, and holds doors. Push Button Additional Open / Close / Stop push button unit. Keyswitch A sprung return keyswitch in a separate enclosure for operation of the door by keyholders only. For internal or external use. Digi-key – Bewator K42 stainless steel codelock for operation of the door by authorised persons only. For internal or external use. Alternative control systems, ie, photocells, light curtains or motion sensors are available subject to design.
Other items (for Rail doors)	OLE cut-out A cut-out is factory prepared at high level within the centre door panels to allow an OLE cable to pass though the closed door. Typically the cut-out is sized between 300 mm x 300 mm to 700 mm x 7600 mm, and can be either be central or offset by maximum 300mm from centre. Rubber in-fill matting The OLE cut-out to be lined with 9mm thick electrical safety matting tested to 30kVA. The rubber to be mounted in a black plastic frame. Earth bonding cables Braided wire earth cables are mounted between door panels and back to the door frame. Cable rating is designed for 25kVA.