

Specification

Scope

This specification details materials, construction, finish, hardware and size limitations for the Stormframe STII Door Ground Floor Treatments. The system described in this specification and illustrated on the following pages are suitable for installation into new building work or as replacement in existing buildings, being designed for fitting into curtain wall or direct into masonry.

Materials

Aluminium profiles are extruded from aluminium alloy 6063 or 6060 T6 complying with the recommendations of BS EN 755-9:2008. Polyester powder coated finishes are available to BS 3987:1991 Grade AA25, etch silver as standard, with a range of special anodised finishes on application.

Weatherstripping is polypropylene backed woven pile held in undercut grooves extruded into the aluminium profiles.

The thermal barrier section is achieved using two separated aluminium extrusions and two polyamide extrusions mechanically jointed to form a single compound profile.

Construction

Framing profiles are square cut for jointing with self-tapping screws fixing into screw splines extruded into the aluminium profiles.

Door leaf profiles are square cut and assembled with extruded aluminium brackets and steel clamp plates then fixed with M6 socket cap head machine screws.

All metal to metal joints are sealed with small joint sealant.

Assembly & Installation

Detailed instructions are provided in this publication, which must be strictly conformed to.

Thermal Performance

The Stormframe STII Door can achieve an area weighted U value of 1.8 W/m²K for doors without midrails and 1.9 W/m²K for doors with midrails depending on size and glazing specification. Please refer to graphs on pages 1.5 to 1.8.

Hardware

The standard fittings provided for these doors are:-

Centre pivot doors opening on Equality Act compliant, Sapa **or** standard concealed overhead door closers which have the usual adjustments for closing and latching speeds but in addition the Sapa closers are power adjustable for strengths EN1 to EN4 (BS EN 1154) allowing the fine adjustment of the closing force on site and also removing the need to stock differing strength closers.

Rebated doors opening on two or three pivot hinges and fitted with a choice of surface mounted door closers with optional hold open arm.

Master leaf - Security bolt deadlock and stainless steel keep with Kitemarked bump resistant Europrofile double cylinder or Eurogroove multi-point lock comprising of 3 hook bolts with or without latch bolt, and stainless steel keeps operated by lever / lever security handle set and Kitemarked bump resistant Europrofile double cylinder.

Slave leaf - Lever action flush bolts fitted top and bottom **or** shootbolt gear box with steel rods locating top and bottom.

Choice of aluminium pad handles, pull handles, full height tubular handles and stainless steel pull handles.

Panic exit devices - Concealed vertical rod mechanism (special drive pin for external access devices).

Variations by way of special handles, pivot hinges, latch locks, master key systems, emergency exit devices (as shown in this manual), automatic door operation, electronic security, etc. can be incorporated into the system as required.

Glazing

Glass must conform to the requirements of the Building Regulations and BS 6262 for thickness and type. Glass is set against synthetic rubber gaskets and is supported on adjustable setting blocks.

Door leaves - Glazing beads and gaskets can accommodate insulating glass units and / or panels of 28mm, 32mm or 44mm nominal thickness.

Pocket Framing - Gaskets can accommodate insulating glass units and / or panels of 32mm nominal thickness.

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Size Limitations

Door leaf maximum sizes will be determined by a combination of site exposure conditions and hardware specification / capability.

Centre pivot doors :-

Suitable strength concealed overhead closer must be fitted according to the width and weight of the door leaf.

Maximum door leaf weight = 100 Kg.

Maximum door leaf width = 1150mm (202/188 & 189).

Maximum door leaf width = 1100mm (202/198, 199, 200, 201, 205, 206, DCT751 & DCT759).

Maximum door leaf size = 1150mm x 3000mm (depending on weight).

Minimum door leaf size = 400mm (480mm wide stile) x 1950mm.

Minimum door leaf width for free swinging doors (i.e. no door closer)
= 300mm (standard stiles) = 380mm (wide stile)

Rebated doors :-

Maximum weight door leaf = 120 Kg. (two-hinge application).
= 140 Kg. (three-hinge application).

For Hinge Limitation Tables refer to Page 1-4

General

For doors subject to Approved Document M of the Building Regulations and/or BS8300:2009, consideration should be given to the requirements within those documents regarding Low Thresholds, Handle Height & Design, Visual Contrast of Hardware and Door Leading Edges, Minimum Effective Clear Opening Widths, Vision panels (Glazed Areas) and Door Operating Forces.

Special consideration should be given to the exposure of doors dependent upon their location. High wind pressures can cause inadvertent opening of centre pivot doors and consequent draughts and water penetration. It may be advisable under such circumstances to provide protection by means of a lobby and / or automatic operation. The use of internal drained mat wells should also be considered.

CE Marking of Doors :-

At the time of publication of this document in February 2016 the following applies:-

Standard Doors – System 3 – See Webshop CE marking information and use data for STII doors.

Doors On Escape Routes – System 1 – As above for Standard Doors with the addition of the requirement for the manufacturer to have certified Factory Production Control and use the following Sapa ironmongery :-
STP316 - Pivot hinges
STP325 to STP329 - Panic exit device (dependant on door width)

Please note that pivot doors are not currently covered within the scope of EN 14351-1-2010 and as such cannot be CE Marked for System 1. However good practice would be to follow all the requirements for hinged doors and use Sapa 202/188 or 202/189 EA compliant concealed overhead doors closers.

Compliance with the requirements of all current Regulations and Standards is the responsibility of the manufacturer, along with the selection of the product suitable for the application.

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CE Marking of External Pedestrian Doorsets Intended for Escape Routes

External Pedestrian Doorsets on Escape Routes must comply with BS EN 14351-1:2006 + A1:2010 CE Marked Under System 1 AVCP and manufactured by a fabricator with notified body audited FPC covering this requirement.

The relevant ironmongery must comply with Table ZA.1 'Ability to Release' requirements of Clause 4.10 as follows:-

- 1) Emergency exit devices - manually operated CE Marked to comply with EN179:2008, electrically controlled CE marked to comply with prEN 13633:2009
- 2) Hinges CE Marked to comply with EN 1935:2002
- 3) Panic devices - manually operated CE Marked to comply with EN 1125:2008, electrically controlled CE Marked to comply with prEN 13637:2009

Sapa offer a range of door ironmongery to comply with these requirements and must be specified / used for doorsets on escape routes.

Hinges (CE Marked to EN 1935:2002)
STII Doors - STP316

Panic Devices (CE Marked to EN 1125:2008)
Horizontal push bar surface mounted type:-
STII - Single Doors - Single Point (Horizontal Latch Bolt) - SPB100NL
Single Doors - Three Point (Horizontal Latch Bolts) - SPB300NL
Double Doors - 2 x Two Point (Vertical Latch Bolts) - SPB200NL

Horizontal push bar concealed vertical rod type:-
STII Doors - Single & Double Doors - STP325 to STP329

Currently the scope of this Standard does not cover centre pivot door closers and as such this type of door cannot be CE Marked under System 1.

Current good practice is to fit door closers tested to BS EN 1154 or CE Marked, Sapa offer a range of concealed transom closers that comply.

Concealed Transom Closers
STII Doors - DCT751 & DCT759 (Tested to BS EN 1154)
202/188, 189, 198 to 201, 205 & 206 (CE Marked & tested to BS EN 1154)

Please note that any substitution of parts can invalidate Initial Type Testing