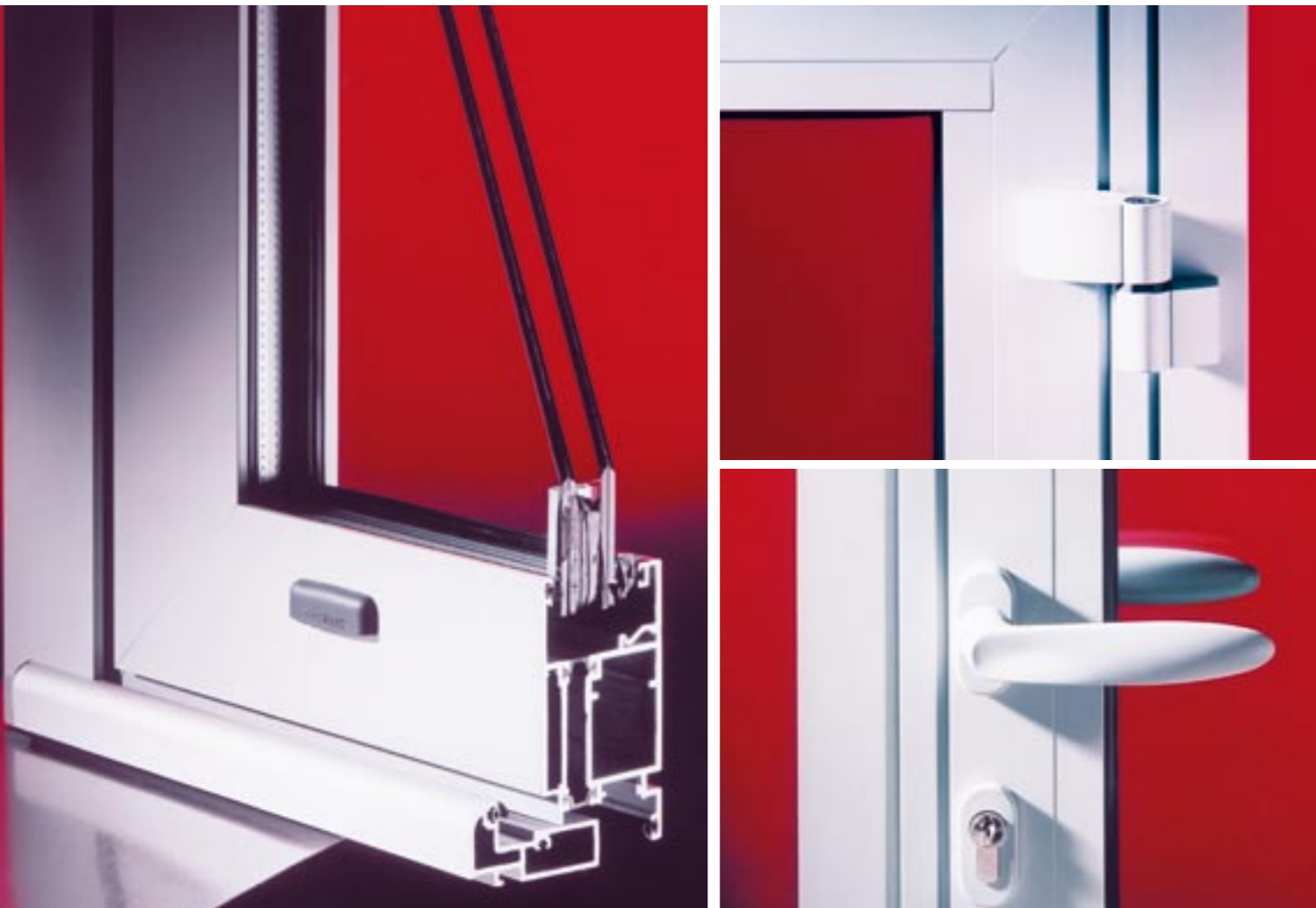


Doors



PXi COMMERCIAL DOOR



Above: Clockwise from left: PXi Door showing section through frame; PXi Door hinge; PXi Door handle and lock.
 Front Cover: Project: Whitehall Square, Belfast Architect: Todd Architects Fabricator: Saint-Gobain Solaglas

■ PXi Commercial Door

The PXi aluminium thermally broken commercial door is Technal's most advanced door system to date. It has been specifically designed to deliver enhanced thermal performance, and to give specifiers even more choice to meet the revised Building Regulations.

PXi offers excellent thermal efficiency, ease of operation, improved aesthetics, and maximum resistance to wear. It is fully compatible with Technal's FXi52 casement window, can be inserted into both curtain walling and low-rise framing, and benefits from a wide range of options for safety, security and design.

Applications for PXi are diverse and it can be found in offices, shopping centres, supermarkets, hospitals, schools, airports and apartments.

■ Features

- Slim sight lines for maximum light penetration and a visually attractive, contemporary finish.
- A 9mm thermal break formed from a 15mm double flush polyamide strip for enhanced thermal performance in line with the revised Building Regulations.
- A technically advanced framing system, which is fully drained and pressure equalised, to minimise the build up of water.
- Strong frames and innovative design details for low maintenance, superior reliability and ease of opening, even with the largest leaf sizes and in the most demanding situations.
- A choice of rebated or flush door thresholds to suit individual project requirements.
- A floor spring for the pivot door with a hold facility at 90° and 105°, and a back release at 110°.
- The option of an overhead concealed closer for the pivot door.
- A 52mm module which is fully compatible with Technal's FXi52 casement window, allowing the creation of composite configurations.
- Optional side or fan lights manufactured using the FXi52 fixed light casement window and a concealed aluminium coupler.
- The facility to insert the PXi door into curtain walling, making it ideal for commercial and penthouse apartment schemes.
- A choice of anodised or colour-matched lever, pad or pull handles for each locking system.
- A universal range of profiles, hardware, accessories and tooling to simplify specification and fabrication.

- The option of single or dual colours for further design flexibility.
- Leaf sizes of up to 2.3m high and a single leaf width of up to 1.2m can be accommodated.

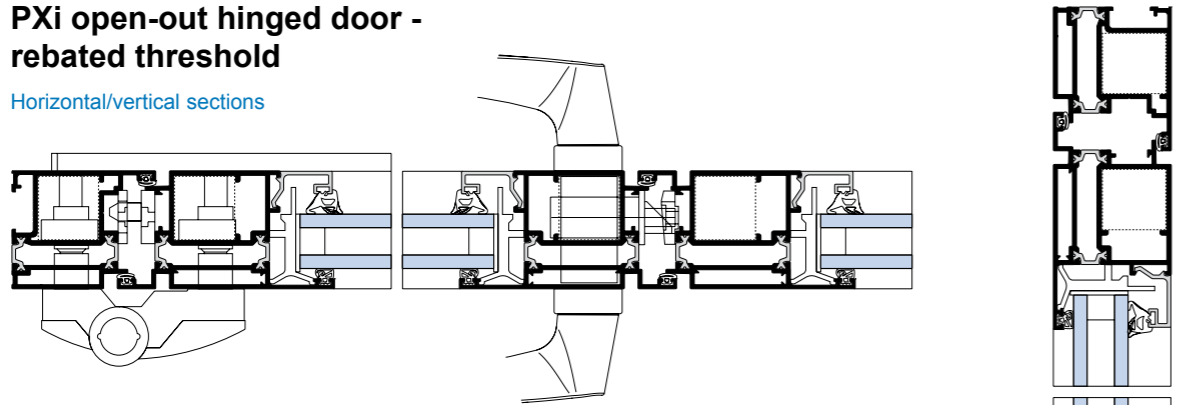
■ Options

PXi is available in a comprehensive range of configurations to suit most architectural situations:

- Open-out or open-in hinged rebated threshold door.
- Open-out or open-in hinged flush threshold door.
- Double action door on floor springs, with or without an anti-finger trap device.
- Double action door with concealed overhead closer, with or without an anti-finger trap device.
- Inserts for MC curtain walling.
- Inserts for Series 7000 ground floor framing.

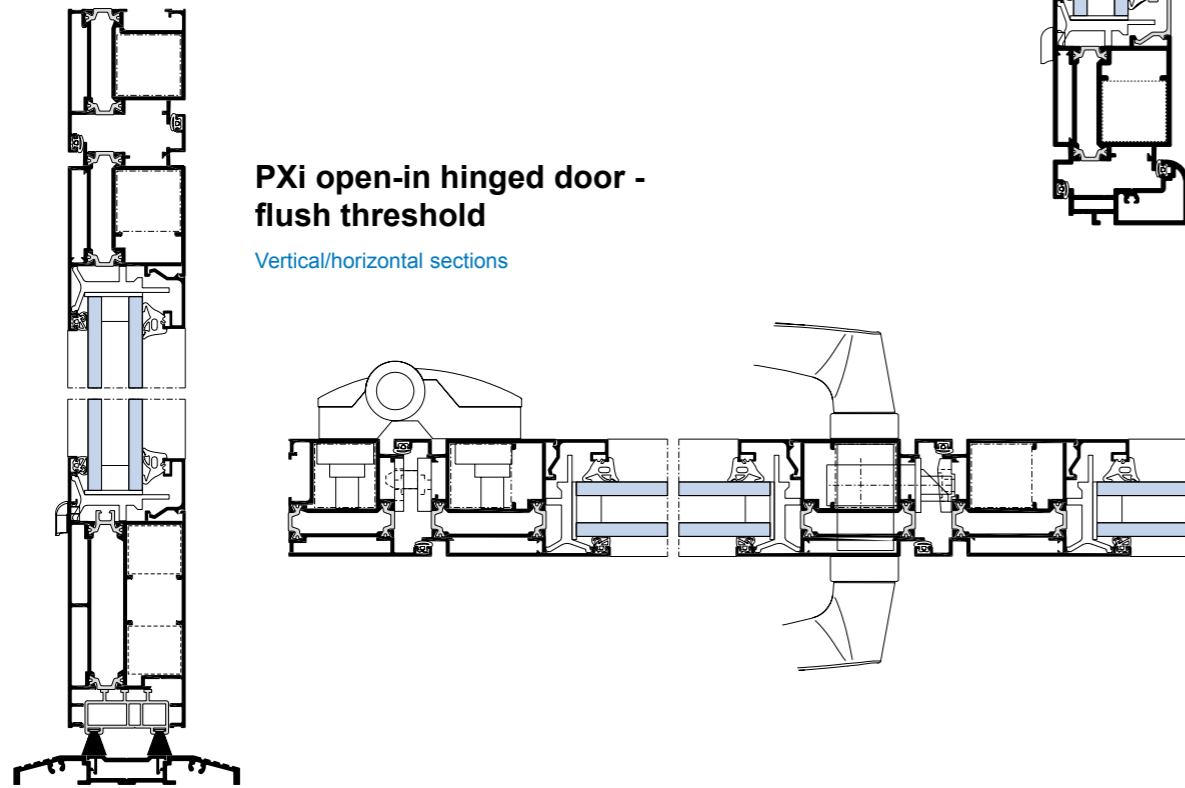
PXi open-out hinged door - rebated threshold

Horizontal/vertical sections



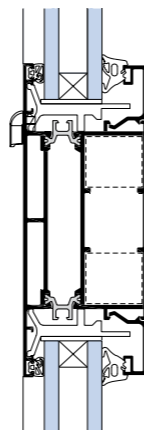
PXi open-in hinged door - flush threshold

Vertical/horizontal sections



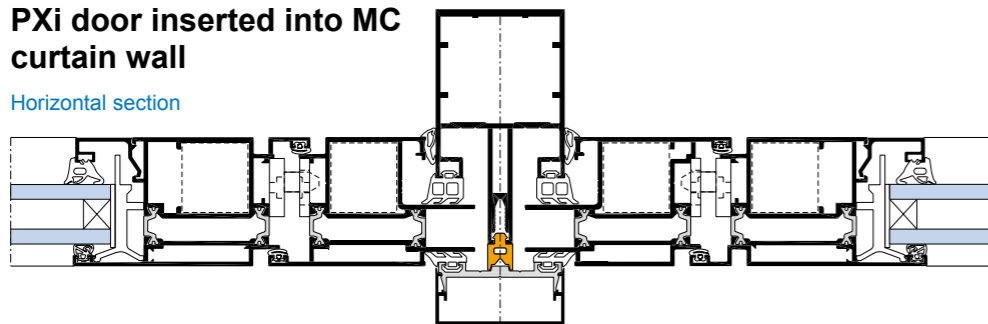
PXi door mid rail

Vertical section



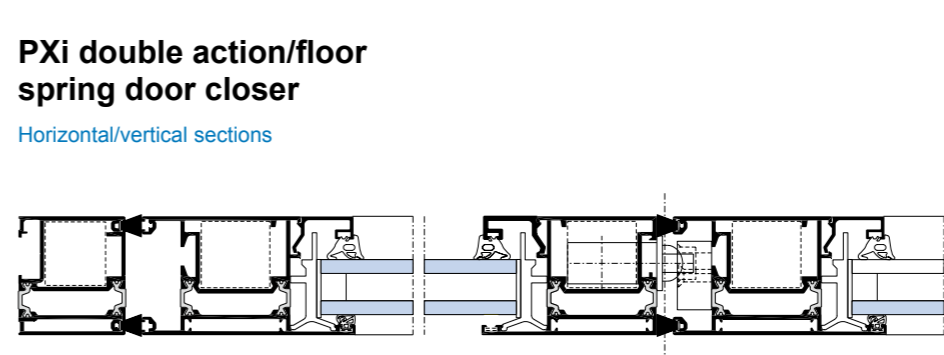
PXi door inserted into MC curtain wall

Horizontal section



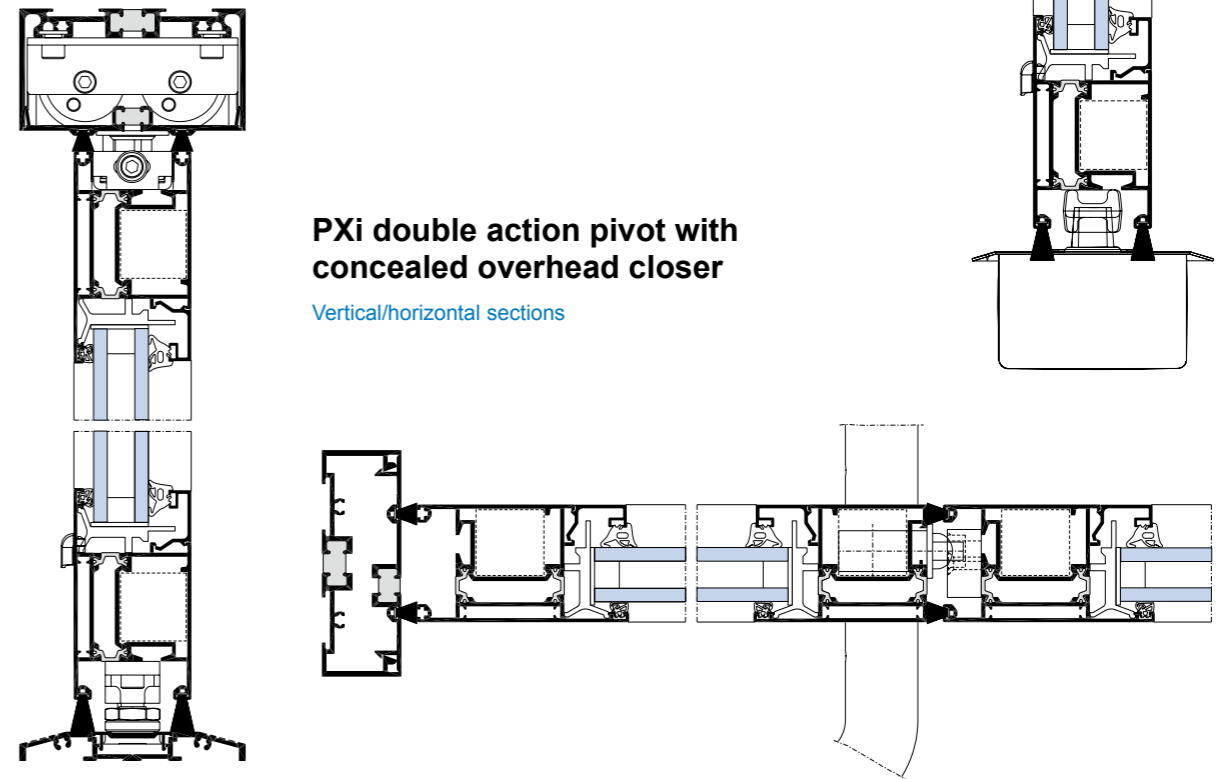
PXi double action/floor spring door closer

Horizontal/vertical sections



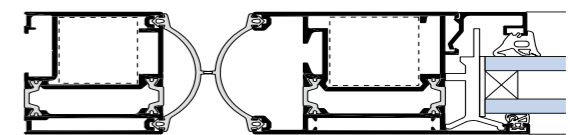
PXi double action pivot with concealed overhead closer

Vertical/horizontal sections



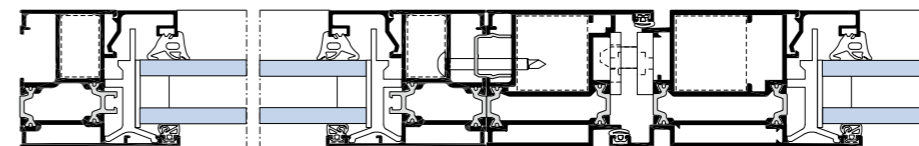
Anti-finger trap

Horizontal section



PXi composite door - fixed light

Horizontal section



Note: All sections not shown at the same scale.

Note: All sections not shown at the same scale.

Weather Performance

The Technal PXi commercial door has been tested in accordance with BS EN standards achieving the following results:

	Test Size	Air Permeability	Water Tightness	Wind Resistance
Open-in Rebated Door	1200 x 2300	A*4	E*8A	V*C3
Open-out Rebated Door	1100 x 2100	A*3	E*9A	V*C4
Flush Threshold	1100 x 2100	A*4	E*3A	V*C4
Double Action	2400 x 2300	A*1	E*1A	V*B4

Thermal Performance

	U-value Glass (centre pane)			
	1.9	1.7	1.5	1.2
Open-in	2.5	2.4	2.3	2.1
Open-out	2.5	2.4	2.3	2.1
Double Action	2.5	2.4	2.3	2.1

Based on door size 1.25 x 2.18m Note: U values vary with door size.

■ PXi

Construction

The doors are mitre jointed using a stainless steel chevron and mechanically adjustable spring pin cleat which is designed to expand to the exact dimensions of the hollow, ensuring a strong, flush and accurate finish, and lasting performance.

For additional strength, bottom and mid rails can be profile-cut and butt-jointed with spigots in each door leaf and an anti-rotation device ensures correct alignment.

Fabrication

Common tooling, quality components and accessories, and advanced manufacturing techniques help to ensure fabrication quality, precise installation and continued performance to specification.

Materials

- Aluminium profiles are extruded from aluminium alloy to BS EN standards.
- The face plates and casings are manufactured from 304 L stainless steel and the locking mechanism is treated for corrosion resistance.
- The polyamide thermal bridge is extruded from PA6-6 (0.25 FV).
- Screws and components shall be either stainless steel, cadmium-plated steel or other corrosion resistant materials.
- Glazing gaskets are EPDM SH 60-75.

Finishes

- Polyester powder coated finishes in accordance with BS 6496 1984, single and dual colour options.
- Anodised to natural self-colour or in a wide variety of Anolok colours to BS 1615 1987 or BS 3987 1974.
- PXi is also available in Technal's exclusive flecked gloss Cendré polyester powder coated colours.

Safety and Security

The PXi suite has a number of reassuring safety and security features, including:

- Internal glazing for all leaves to prevent removal of the glass from the outside.
- Hinged doors supplied with a stainless steel anti-lift device and a face-fitted friction adjustable door closer for additional security.
- A keyed-alike euro profile cylinder lock for all configurations, available as single or three-point nickel plated double locking dead bolts.
- The option of an anti-finger trap safety device.

Glazing

- Glazed in accordance with BS 6262 Part 4 and Section N of the Building Regulations, PXi can accommodate 5mm to 35mm units.
- The leaves are dry glazed with clip-in beads and flush EPDM gaskets designed to absorb the varying tolerances of paint and glass thickness, and provide a high quality finish.

Installation

Technal has a national network of approved fabricators and offers full training for both products and installation.

Technical Support

Technal's technical team is fully equipped with the latest CAD systems and has the resources and capabilities to provide specialist advice and information on the use of its architectural aluminium systems. We also welcome the opportunity to discuss the development of new or modified products to meet specific project requirements.

Standards

Technal and the PXi door system meet the following standards and codes of practice:

BS EN ISO 9001:

Technal is listed on the Lloyds' register of quality service, certificate number 900377.

BS EN 515:

Aluminium and aluminium alloys. Wrought products. Temper designations.

BS EN 573-3:

Aluminium and aluminium alloys. Chemical composition and form of wrought products. Chemical composition.

BS EN 755-2:

Aluminium and aluminium alloys. Extruded profiles. Mechanical properties.

BS EN 755-9:

Aluminium and aluminium alloys. Extruded profiles. Profiles, tolerances on dimensions and form.

BS EN 1026:

Windows and doors. Air permeability. Test method.

BS EN 1027:

Windows and doors. Watertightness. Test method.

BS EN 12020-1:

Aluminium and aluminium alloys. Extruded precision profiles. Technical conditions for inspection and delivery.

BS EN 12020-2:

Aluminium and aluminium alloys. Extruded precision profiles. Tolerances on dimensions and form.

BS EN 12207:

Windows and doors. Air permeability. Classification.

BS EN 12208:

Windows and doors. Watertightness. Classification.

BS EN 12210:

Windows and doors. Resistance to wind load. Classification.

BS EN 12211:

Windows and doors. Resistance to wind load. Test method.

BS 3987:

Specification for anodic oxidation coatings on wrought aluminium for external architectural applications.

BS 4873:

Aluminium alloy windows.

BS 6262:

Code of practice for glazing for buildings.

BS 6496:

Specification for powder organic coatings to aluminium alloys for external architectural purposes.



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