



## 1. WINDOW PURE SERIE- FIXED WINDOW

### 1.1 Description

The puRE fixed (Picture) aluminum window, which offers exceptional insulation and structural performances, is designed according to the rain screen principle.

### 1.3 Materials

#### 1. Extrusions

##### 1. The frame

The frame is made of 6063-T5 tubular aluminum alloy. This increases the rigidity of walls whose thickness is 1.4 mm.

The aluminum extrusions of the frame will be joined by two strut bars made of 25% polyamide nylon fiberglass (37 mm width and 1.8 mm length). The strut bars will be crimped mechanically with aluminum extrusions in order to obtain a solid assembly resisting to a minimal charge in shearing of 400 Kg for 100 mm length.

The cavity of the thermal insulation will be filled with solid polystyrene to reduce the convection of the air between the hot part and the cold part of the frame, thus decreasing the total conductance ( $U_g$ ) of the window frame.

The puRE series used the same frame for the fabrication of their tilt & turn windows, interior casement, hopper window and doors. This makes the fitting easier with our various types of openings in the same fenestration system.

The sill part of the window will be provided with drain holes to evacuate water.

The frame assembly will have a 51 mm height and a 152 mm depth.

##### 2. The glass stopping

The interior glass stopping height of 24 mm will be made of 6063-T5 tubular aluminum alloy whose walls thickness is 1.4 mm.

They will be designed for an installation with pressure by interlocking and without screw, allowing the change of the sealed unit form the inside.

## 2. Weatherstrips

The sealed unit will be pressed on the outside frame and on interior glazing stop against a thermoplastic elastomer (TPE) extrusion, pressed into an adjusted groove, to obtain a contact by compression to the inside and outside perimeter of each sealed unit.

## 3. Interior and exterior finishes

All the visible outside aluminum of the frames and glass stopping will be painted with a painting of type:

**Enamel finish Duracron® of color :**

Black K90421

White K1285

Commercial brown K7390

Anthracite RAL7016

**Available painting acrylic polyurethane bicomponent.**

**Anodized finish available.**

Possibility of different interior and exterior colors.

Customise colors (optional).

## 1.4 Products

1. The frame joints will be machined with precision assembled and sealed in factory so that they are watertight and represent clean lines.
2. The window sills slope of 6 degrees will assure the release of accumulated water towards the outside of the window frame.
3. The frame is designed to receive double glass sealed units with a total thickness of 22.2 mm. Also available to receive triple glass sealed units with a total thickness of 41 mm or sealed unit with integrated blinds: 35.12 mm thick.
4. The sealed unit will be pressed on the outside frame and on interior glazing stop against a thermoplastic elastomer (TPE) pressure extrusion to

obtain a contact by compression to the inside and outside perimeter of each sealed unit.

5. Interior extrusions of the frame will be pre-bored in factory in prevision to be fixed to the building structure.
6. The windows will be built with precision and squareness respecting a maximum tolerance of (+/-) 1.5mm for windows measuring 1.8 m or less diagonally, and (+/-) 3 mm for windows measuring over 1.8 m.
7. Each window will be packed in a transparent protective film and the corners will be secure with polystyrene thermoforming parts attached to the frame.
8. If there are several sections to the window, all the sections will be lined to the same frame using an aluminum mullion mechanically fixed at the frame (structural mode).
9. To answer the various needs, 3 mullions will be available to make the composition of the window: 73 mm (outside flat appearance), 102mm or 152 mm.
10. Glazing replacement will be made from the inside.

## **1.5 Glazing**

1. The sealed unit will be built with two (2) transparent simple glasses of 3 mm thickness or more, separated by a space filled with argon obtained by a non-conductor divider with integrated desiccators.
2. The interior glass foil of the sealed unit (face 3) will be made of glass with low emissivity. A crackling process is used in combination with the argon gas to improve energy rate of the window.
3. The air gap will be approximately of 16.6 mm (according to the thickness of the glass sheets) providing a thickness of 22.2 mm to the sealed units.
4. An ethafoam bead of 12.7 mm diameter will be inserted at the perimeter of the sealed unit to reduce air convection between the hot part and cold part of the frame, thus reducing the overall conductance ( $U_g$ ) of the door frame and also the risk of condensation inside the glazed sealed unit.
5. The sealed units will be installed on support blocks (EPDM hardness 90) of appropriate dimensions. These shims will be divided up around  $\frac{1}{4}$  -  $\frac{1}{2}$  -  $\frac{1}{4}$  width in a ratio of two (2) or three (3) per glazed unit according to the dimension of the window.

6. A free space of 10 or 13 mm will be left on the perimeter of the sealed unit allowing the necessary tolerance.
7. The thickness of the glazing will meet with requirements of the applicable National Building Code.

### Options

#### 1.5.1 Glass

Glass with double seal made up of two (2) transparent glass sheets of 3 mm, 4 mm, 5 mm or 6 mm of thickness (double glazing).

Glass with double seal made up of three (3) transparent glass sheets of 3 mm, 4 mm, 5 mm or 6 mm of thickness (triple glazing)

Tinted glass color: bronze, gray, frosted or sand glass.

Tempered glass of 3 mm, 4 mm, 5 mm or 6 mm of thickness.

Laminated or wired safety glass of 6 mm of thickness.

Thermoformed surface glass of 6 mm of thickness.

Any other glass available on request.

#### 1.5.2 The frame

The interior frame moulding extension will be built in “J” shape and made of aluminum extrusions of 14 mm. They will be mechanically fixed on the interior window frame to receive the gypse or a wooden frame to paint or cover with PVC.

The 38 mm and / or 63 mm interior frame moulding extension and the 38 mm moulding outside frame extension made of aluminum extrusions will be mechanically fixed on the surface of the interior frame and / or outside of the window, to ensure better adhesion and sealing with the membrane installation.

#### 1.5.3 Grids

The grids, made of rolled aluminum, will be sealed between the two (2) glass sheets of the sealed unit of the window.

Variety of grids: Georgian, tubular, square, flat. Various widths and finishes are available too.

The grids, made of aluminum, will be covered with enamel baking finish of the same color on the two (2) faces or of different color on the outside and inside face.

#### 1.5.4 Crossbar

The crossbar will be settled on the outside and on the inside of the sealed unit, one opposite the other. The interior of the glazing will be filled by an aluminum part similar to a divider.

The crossbar section is made of A6063-T5 aluminum alloy whose wall measures 1.5 mm of thickness, will be assembled on the outside and inside face of the glass by a ribbon with reserve double and sealed over its width. Widths available: 44.45 mm and 22 mm.

#### 1.6 Cards of maintenance

A card indicating the necessary instructions for cleaning and the maintenance of the windows will be provided upon delivery of your order.

#### 1.7 Guarantee

A certificate of the manufacturer's warranty will be provided upon delivery of your order.

The manufacturer reserves the right to modify the characteristics of his products without notice.