

ISO® *Series*

comfort | durability | quality | performance

ISO**Plus**®

ISO**Vent**®

ISO**Vision**®

ISO**Pano**®

ISO**Geo**®



Your light provider

FENPLAST
PVC windows

comfort

Fenplast PVC windows are designed and manufactured by always keeping in mind the comfort they ensure. Comfortable because they are warm, but also because they are designed knowing that you will have to clean them (as few grooves as possible), and open and close them often.

durability

The purchase of windows is a major investment and a wise consumer will want to be sure to make the right choice on a long-term basis.

Fenplast is one of the rare Canadian manufacturers which is totally integrated vertically and which therefore controls its input: from the powder required for the extrusion of PVC sections to the glass and sealants used in the sealed units and light-reflecting paint that may be applied to the windows. Combined with hardware having the best reputation and which is the most ergonomic, these windows will ensure you have peace of mind for many years to come.

quality

Using the latest robotics and automated equipment linked to computer servers, manufacturing quality windows has become an obsession. Whether they are for the do-it-yourselfer, for professional renovators, for homebuilders or ultimately for users, Fenplast windows are sure to please by their precise construction, their ease of installation and their glossy finish. Just like jewels in their case, they are packaged so as to ensure their protection for delivery to your home.

performance

Various Canadian agencies have devised standards for measuring the performance of a window. Here are the basics:

Window efficiency against the elements

CAN/CSA-A440-00 Standard

In Canada, the CAN/CSA-A440-00 Standard applies to any window manufacturer who wants to offer a performance product.

This standard establishes the following parameters:



For thermal performance

Energy Rating – ER

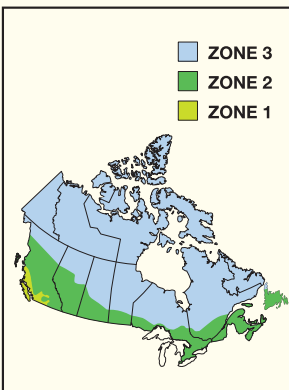
Previously, to measure the thermal performance of a window, the U (or R) factor was used. However, this method, which is used to measure the thermal resistance of a wall, is incomplete for a window. Today, the CAN/CSA-A-440-00 Standard gives a much more reliable and realistic measurement using the concept of energy rating (ER). The ER indicator of a window measures its total thermal performance on the basis of three factors:

- Heat Gains from solar rays;
- Thermal loss from the frame, spacer and glass;
- Loss of heat caused by air leaks.

It's possible to have the complete picture of the energy performance of a window using one single figure. The ER index is a valid indicator of the effect the quality of a window may have on the annual cost of heating a house. **The higher the rating, the better the window performs.**



Energy Star® certification



In February 2015, the Government of Canada, through the Office of Energy Efficiency (OEE) has applied a revision of the Energy Star® certification for the window industry. Just like kitchen appliances and other everyday products, consumers may determine the energy performance of their fenestration products simply by reading the sticker applied on the glass of certified manufacturers.

As is shown in the enclosed map, Canada is divided into 3 distinct zones, each bearing one of the numbers 1-2 or 3. Therefore, depending on its performance, a window may be classified as being appropriate for all of Canada (Zone 3) or only for one or two zones. You will note that the classification is valid for one model of window with one type of glass and one width of grilles, and don't forget: **A product appropriate for a greater number of zones will have better energy performance.**

For each one of the products described in the pamphlet, we included a « Energy rating » chart, which will show you the highest zones a window with a given glass qualified itself, and the results of the various Fenplast windows in the « Performance » strip.

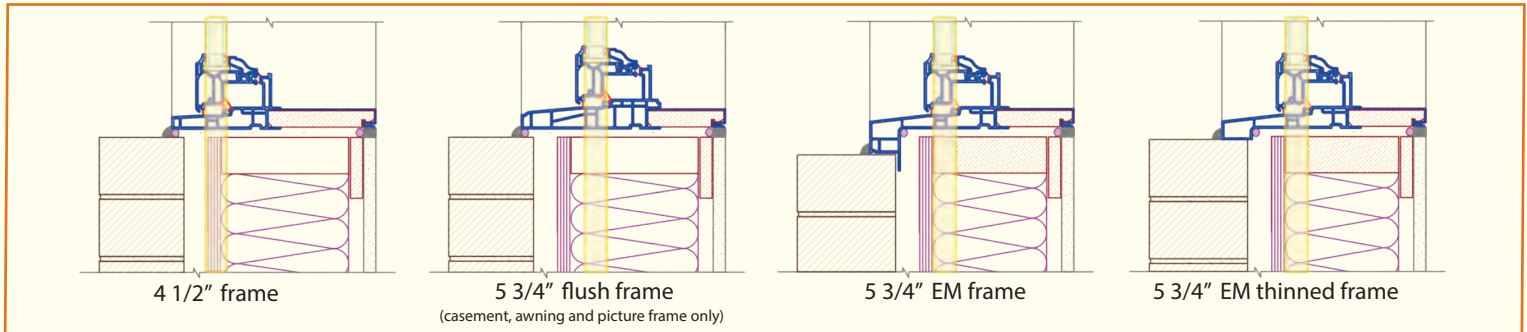
The Iso® series of windows was designed to meet the specific needs of new construction, as well as renovation in which complete window frames must be replaced.

As illustrated, this series of window frames is available in 4 1/2" or 5 3/4" thicknesses. The outside section of the 5 3/4" EM frame has an exterior moulding on which brick may be abutted, or on which siding may be installed in the track designed for this purpose. The 5 3/4" EM thinned frame with a half-inch extension is used for some specific renovation.

The inside part of the Iso® series frame is designed to receive a jamb extension or a sheet of gypsum to fill in the space between the frame of the window and the inside wall.

Iso[®]

"Typical" wall cross section with different Iso® frame



The use of a 5 3/4" frame allows positioning the sash nearer to the warm part of the wall, thereby reducing condensation on the glass surface.

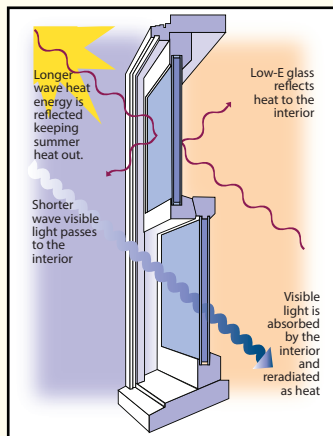
Insulating Glass

When choosing a window, it is important to pay a lot of attention to the choice of sealed unit with which it is equipped. After all, more than 75% of the surface of a window is usually made up of the sealed unit. Because the cost of heating is continuously increasing, a glass with high energy properties will shortly pay for itself in economy and comfort.

There are three ways of increasing the insulation of a sealed unit built with two panes of glass.

1. Applying a transparent metallic coating.

Glass having a metallic oxide coating is called low emissivity glass (also known as Low-E). You will also have the benefit of variable protection against the sun's UV rays which damage carpets and fabrics.



Fenplast offers two types of energy glass. The first type, which is standard, is the **Low-E ES[®]**, designed to maximize the energy potential of a window using an exceptional ER (Energy Rating) indicator.

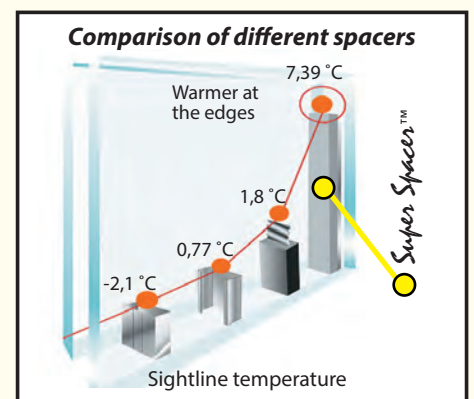
You may also choose the available **Super HP[®]** glass, which is specifically designed to control the heat gain caused by sunlight, while preserving indoor warmth with a high "R" factor.

2. Replacing the air between the two panes of glass with an inert gas.

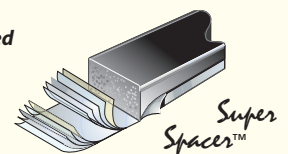
Inert gas between the two glass panes reduces conductivity (when compared to air) and increases the temperature of the internal surface of the sealed unit. Argon is the gas most often used.

3. An insulating glass spacer (a part that separates the two thicknesses of glass along the outside of the sealed unit) that is non-conductive.

The perimeter of the sealed unit constitutes an important condensation factor for all windows for residential use. It is essential to match a high-performance window with an adapted insulating glass spacer. Several types of insulating glass spacers are available and fill this function with varying degrees of success.



Fenplast uses an insulating spacer made of double-sealed structural foam edge called the **Super Spacer™**. This type has all the advantages of a non-metallic insulating glass spacer while maintaining the highest features of durability and gas retention.





CASEMENT



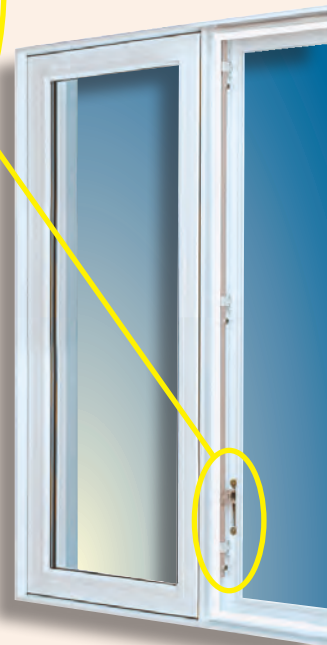
This window, which is an innovation in the market for PVC windows, is noted for a structural-type frame, which gives it a contemporary aspect while reducing the thickness of the centre “post”. This window system was designed to offer you “Plus”: an elegantly profiled sash, which is gracefully rounded, as well as a window frame with integrated mouldings to meet your needs.

Three weather strips (two on the sash and one on the frame) ensure the window is waterproof, thereby guaranteeing optimum performance. It can also accommodate a triple glazed sealed unit for better energy performance.

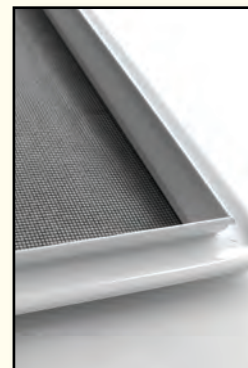


To close a casement window as tightly as possible, the anchoring points must be positioned as close as possible to the ends of the sash.

As illustrated, Fenplast has its lower anchoring point 4” from the bottom of the frame which is the ideal placement.



When choosing a window, screens are not something to be neglected. The screen frame, with rounded shapes, is made out of tensile aluminum and has an overlap that rests against the window, thereby protecting you from the smallest of flies. The screen is made out of black fibre.



PERFORMANCE casement & awning

Airtightness	A-3
Watertightness	B-7
Wind load resistance	C-5*
Resistance to break-in	F-20

* When tested without mullion(s)

ENERGY RATING casement & awning

Without grilles	ER rating	CANADA Clim. zones
Double Clear glass	-	
Double Low-E ES [®] glass	32	

ENERGY RATING casement & awning

Without grilles	ER rating	CANADA Clim. zones
Triple glass - 1 glass Low-E ES [®]	38	
Triple glass - 2 glasses Low-E ES [®]	40	

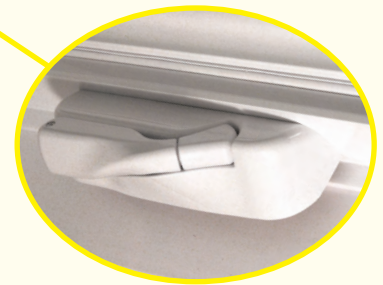


Just at home on a mansion as on a cute bungalow, the casement window is the most popular and flexible of all models. Combined with all the possibilities offered by grilles, mullions and fake mullions, it allows for numerous personalized architectural applications.



When a casement window is wider than 20" (meaning 90% of all windows) the sash opening system is operated by a "DOUBLE ACTION" mechanism. This system uses a 3-point attachment to the sash. This principle allows for very easy opening of the sash to an angle of 90° which ensures an ideal access for cleaning the outside surface of the window from inside the home. And as represented, the folding handle, is nesting in an elegant cover and won't interfere with window treatments.

Every opening sash comes with a multipoint lock. This means that all windows (except for awning windows) are equipped with a locking system having two or three anchor points (depending on the height of the window). The advantage of this is to be able to safely lock your window in only one operation. The lock is installed as low as possible to make handling it easy. This is especially appreciated in a window located above a kitchen sink or for someone who is mobility challenged.



AWNING



One of the most overlooked alternatives for small openings is the awning window. This type of window has the same safety and performance features as the casement window. The "scissors" type mechanism in the lower part of the window allows for indirect ventilation.

This type of window may also be installed over each other to give it the warm aspect of a hung window, while maintaining the advantages of a "compression" closure.



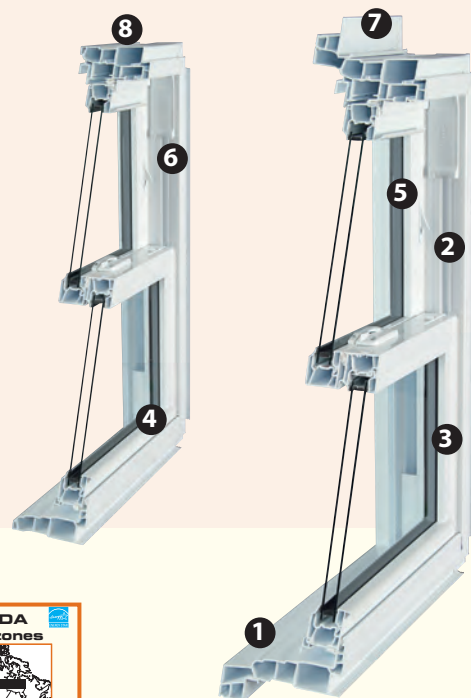
DOUBLE hung



This window, with **two movable sashes**, ensures excellent ventilation. The exceptional results obtained in the various waterproofing tests show this window has a distinct advantage. You may choose from a full size screen or a half-screen (as illustrated).

Common features of IsoVent® windows

- An inclined and welded sill, typical of Fenplast windows, ensuring easy cleaning as well as remarkable waterproof performance. ①
- A stainless steel coil counterweight system to ensure easy sliding of the sashes. A simple and proven system. ②
- Inside glazing stop for increased security and practicality in case of glass replacement. ③
- A handle that is especially designed and punched for easy and safe handling. ④
- Two ventilation locks located on the frame (single hung) or on the upper sash (double hung) ensuring opening of the sash to a maximum of 4" while restraining access from outside. ⑤
- Several parts in moulded PVC to improve efficiency and esthetics. ⑥
- May be ordered with a 5 3/4" frame for a non-assembled window ⑦, or you can simply use the inside and outside mouldings unique to the Iso® series. ⑧



PERFORMANCE double and single

Airtightness	A-3
Watertightness	B-7
Wind load resistance	C-2
Resistance to break-in	F-20

ENERGY RATING double

Without grilles	ER rating	CANADA Clim. zones
Double Clear glass	-	
Double Low-E ES® glass	31	



This traditional English-style window features easy maintenance and a large glass surface. Available with all types of glass, panes, and fake mullions typical of Fenplast windows, this window, which is adapted to modern technology, is sure to please the most discerning buyer.



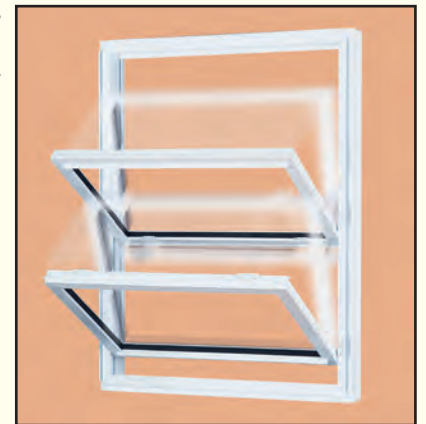
SINGLE hung

Still the same type of window but built so that only the bottom part of the sash is movable. This window, which is more economical without making any compromise in performance, surprises by its integrated aspect. The horizontal mullion, which is simple and straightforward, is mechanically assembled to ensure structural rigidity.

Easy to operate tilt latches allow the sashes to tilt inwards for cleaning that is surprisingly easy.



Profiled and esthetic locks arranged so that it is easy to see if the cam is in an opened or closed position, even from a certain distance from the window. In addition, a symbol clearly shows the position of the cam.



ENERGY RATING single

Without grilles	ER rating	CANADA Clim. zones
Double Clear glass	-	
Double Low-E ES [®] glass	33	

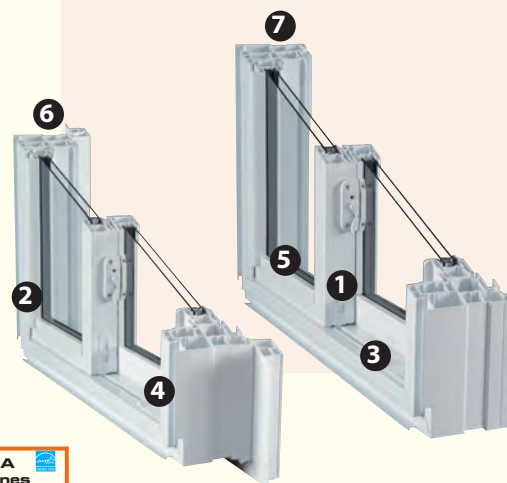
DOUBLE slider



Both sashes are movable to supply ventilation on the right or the left sides. Both sashes tilt inward, which allows handling them easily for cleaning purposes without having to withdraw them from the frame. This system ensures a maximum unobstructed opening for carrying material in and out. This window may be ordered with a full screen, thereby determining which side is to be opened, or with a half screen for greater luminosity.

Common features (sliding windows)

- The moveable sash(es) fold inward by pressing on the tilting latches located on each side of the sash(es). ①
- A handle especially designed and punched for easy and safe operation. ②
- A ventilation lock located at the bottom of the sashes allows opening a sash while restraining access from the outside. ③
- Several plastic moulded parts to improve efficiency and esthetics. ④
- Glazing stops on the inside for maximum security. ⑤
- A system designed to be thoroughly painted in detail.
- May be ordered with a 5 3/4" ⑥ frame for a non-assembled window, or you can simply use the inside and outside mouldings unique to the Iso® series. ⑦



PERFORMANCE double and single

Airtightness	A-3
Watertightness	B-7
Wind load resistance	C-2
Resistance to break-in	F-20

ENERGY RATING double

Without grilles	ER rating	CANADA Clim. zones
Double Clear glass	-	
Double Low-E ES® glass	31	



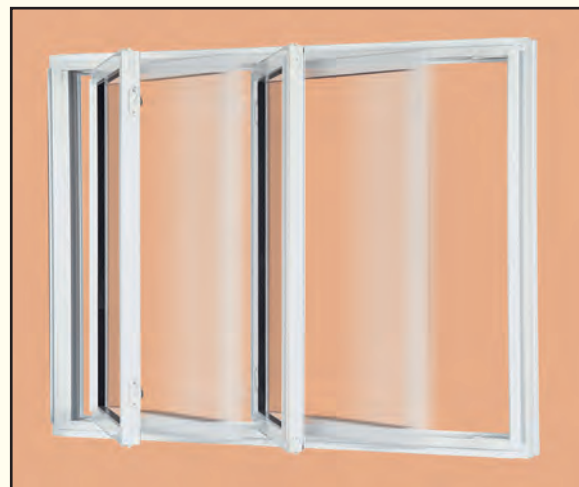
SINGLE slider

With only one movable sash, this economical window is a wonder of simplicity and clean design. The sealed unit is held in place not within a sash but by the frame of the window itself, as well as by the mullion. The mullion is a refined design which gives the whole window the appearance of a casement window. The ease of operation and ruggedness of this window make it a most sought after choice.

Easy to operate tilt latches allow the sashes to tilt inwards for cleaning that is surprisingly easy.



Profiled and esthetic locks arranged so that it is easy to see if the cam is in an opened or closed position, even from a certain distance from the window. In addition, a symbol clearly shows the position of the cam.



This type of well-known window features simple operation. Because of its design, the sashes are narrower, which increases luminosity and they do not stick outwards when opened. It offers excellent ventilation and its maintenance is greatly simplified by tilting the sash(es) toward the inside. This window is an ideal solution for applications on a strict budget or as a basement window.

ENERGY RATING single

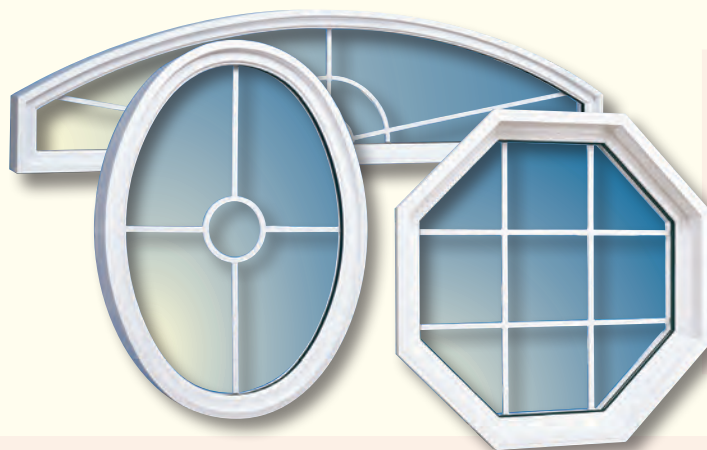
Without grilles	ER rating	CANADA Clim. zones
Double Clear glass	-	
Double Low-E ES [®] glass	33	

IsoPano® IsoGeo®

**Picture
frame
and irregular
shapes**



The IsoPano® window is a picture type frame and is used in applications requiring a fixed window.



Over time, Fenplast has acquired the experience necessary to offer you windows with various geometrical shapes, thereby meeting your architectural needs and allowing you to personalize your home as you wish. The shapes shown on this page are only a few examples of the numerous possibilities offered. These IsoGeo® shapes are manufactured from the IsoPano® frame.

PERFORMANCE picture frame and irregular shapes

Airtightness	A-3
Watertightness	B-7
Wind load resistance	C-5*
Resistance to break-in	-

* When tested without mullion(s)

ENERGY RATING picture frame and irregular shapes

Without grilles	ER rating	CANADA Clim. zones
Double Clear glass	-	
Double Low-E ES° glass	39	

ENERGY RATING picture frame and irregular shapes

Without grilles	ER rating	CANADA Clim. zones
Triple glass - 1 glass Low-E ES°	44	
Triple glass - 2 glasses Low-E ES°	48	

Bay and bow windows

What's better than a bay window (3 sections) or a bow window (4 or more sections) to have your house stand out? This window features various possibilities of inside finishing, either in oak, pine or laminated material, thereby dramatically enhancing the esthetics of this type of opening.

These windows may also be manufactured with angles made to meet your requirements, thereby ensuring a perfect finish, especially for your renovation needs. These bow windows will ensure outstanding luminosity and will be an ideal location for growing your plants and flowers.



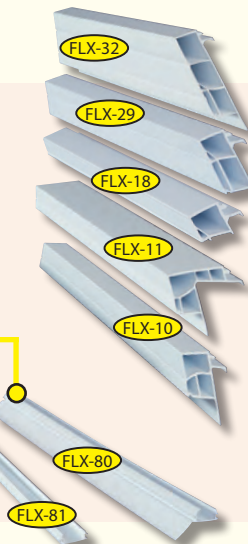
Outdoor mouldings

Various outdoor mouldings allow you to install windows according to your renovation requirements.

Indoor mouldings

The available indoor mouldings may:

- Block the indoor slot while leaving a lip that will rest against the existing frame.
- Block the indoor slot.
- Reduce the indoor slot for a finishing of 1/2".

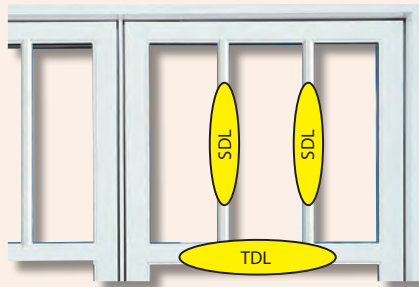


True Divided Lite (TDL) / Fake mullion (SDL)

One of the "esthetic" options that is very popular is the True Divided Lite, a 2" mullion that divides the sash (vertically or horizontally) into two or three sections. This mechanical division, with which each one of the sections is built with an independent sealed unit, allows for the easy replacement of the sealed units, if ever needed. (Available only in the IsoPlus® and IsoPano® series).

Another way of giving a distinctive look to a window is to add fake mullions (SDL) on the glass surface. These fake mullions measuring 13/16", 1 1/8", 1 5/8" or 2 1/16" in width are affixed directly on the sealed unit with tape especially developed for this application.

These fake mullions may be applied only on the outside glass surface or on both sides of the unit. The addition of an integrated muntin bar that is aligned with the mullion greatly improves the esthetic aspect of the window.

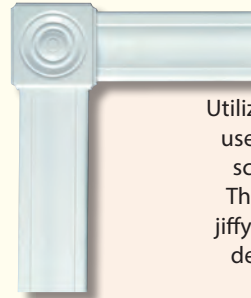


Jamb extensions

Three finishes are available: PVC-cladded pine, select pine or oak appliqué. These jamb extensions may be inserted in the slot [insertion option] or directly screwed on the window frame [screw option] for greater structural strength.



Options



Casings and rosettes

Utilization of a PVC cladded jamb extension allows the use of a full PVC casing. Rosettes held in place with a screw hidden in its center complete the installation. This esthetic addition completes any installation in a jiffy and eliminates painting. Even more, the system is designed to be removable if you decide to paint the wall in a few years.

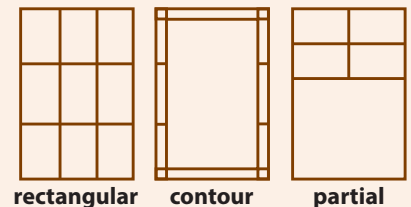
Grilles

An economical but nevertheless very esthetic way of personalizing a home is to add window grilles. The muntin bars are inserted between two sheets of glass, thereby avoiding tedious maintenance without voiding the warranty of the sealed units.



Three types of muntin bars are offered: pencil bar type, flat, or Georgian (colonial), the most popular, which is available in width of 1 1/16" and 1".

They may be assembled in a traditional "rectangular" manner, a "contour" or "prairie" manner, or even "partially". You can even combine them with a true divided lite (TDL) or a simulated divided lite (SDL) to enhance this custom feature.



Painting

The PVC extrusions used in the manufacturing of Fenplast windows are made out of white resin. However, because this does not necessarily meet all tastes or styles, Fenplast offers the possibility of having the outside or/and inside of the windows (only casement, awning and fixed windows for inside), painted in its shops with a choice of more than 20 standard colours or with the specific colour you would like to have.

The paint used for this application is especially formulated to prevent the heat absorbed by it from being transferred to the PVC sections of the window. In doing so, the PVC maintains its dilation/contraction properties almost intact, thereby allowing it to be painted from pale to dark colours. Therefore, you may let your imagination soar and choose your favourite colours to harmonize with the colours of your home.



The company



Fenplast has been manufacturing high quality fenestration product since 1989. Located in Candiac on the South Shore of Montreal, **Fenplast** has gradually become vertically integrated. It started off assembling PVC windows, it then designed and extruded all the profiles used in its products. Integration continued when Fenplast decided to produce its own sealed units using *Super Spacer*®. This means high performance products manufactured with components controlled at all steps of the production process to ensure enhanced uniformity and durability.

Fenplast defines itself as "Your light provider". It designs all its windows and doors with jambs that obstruct as little as possible. This feature allows light to stream in without hindrance. A choice of hi-performance glass allows you to decide on whether you want maximum performance from your windows and/or doors or a restriction in the heat gain due to the type of glass used.

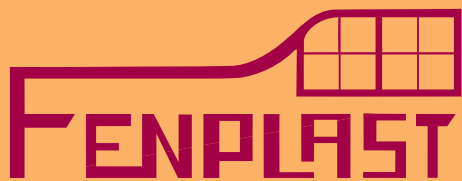
Fenplast windows and doors are known to be at the forefront of your needs, as much as by their refined design as by their sound and thermal insulating features.

Warranty

FENPLAST offers a limited lifetime warranty on the PVC jamb and profile extrusions, the break in the sealed joint of sealed units and the hardware integrated with its doors and windows. This warranty is completely transferable as long as the owner of the building can provide the contract or original purchase invoice. We strongly suggest that you read the "WARRANTY" brochure to find out about the details of application, including restrictions and exceptions.



Your light provider



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