

Light

UNI Series

comfort | durability | quality | performance



Uni**Flex**®
Uni**Vent**®
Uni**Vision**®
Uni**Pano**®
Uni**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

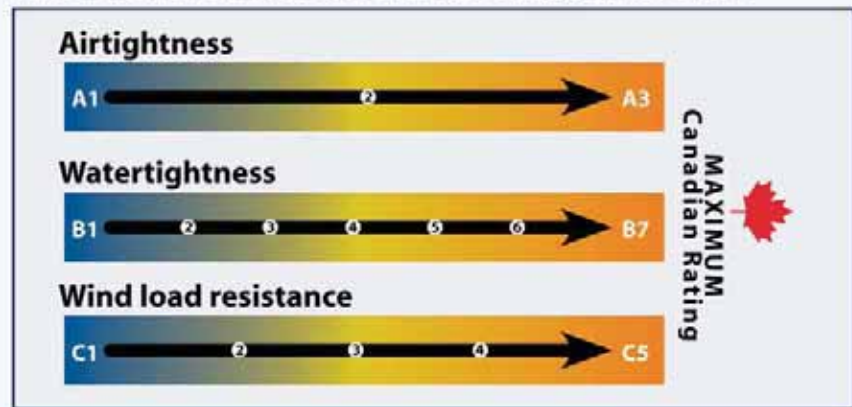
Various Canadian agencies have devised standards for measuring the performance of a window. Here are the basics:

Window efficiency against the elements:

CSA-440 Standard

In Canada, the CSA-440 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 A-440.2 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.**

For each one of the products described in the pamphlet, you'll see impressive results of the various Fenplast windows in the "Performance" strip at the bottom of the pages, according to available series of glass configurations.

Energy Star® certification



Recently, the government of Canada, through the Office of Energy Efficiency (OEE) has approved a new certification for the window industry, called Energy Star®. In fact, just like kitchen appliances and other everyday products, consumers may determine the energy performance of their window products simply by reading the sticker.

As is shown in the enclosed figure, Canada is divided into 4 distinct zones, each bearing one of the letters A-B-C or D. Therefore, depending on its performance, a window may be classified as being appropriate for all of Canada (Zone D) or only for one, two or three zones. You will note that the classification is valid for one model of window with one type of glass, **and don't forget: a product appropriate for a greater number of zones will have better energy performance.**

In each "Performance" strip, we included an icon that will show you in what maximum number of zones a window with a given glass may be used.

The Uni[®] series of windows was designed to meet the needs of renovators who wish to keep the frames of existing windows.

As illustrated, it has a frame 3 1/4" in thickness. It has a groove on the outside and another on the inside (in which an FLX-33 finishing moulding, which is included, is inserted).

Although it is possible to add exterior and interior mouldings, as well as a jamb extension, this series of windows is essentially designed to be installed with a minimum amount of mouldings. Usually installation on a construction site is completed with an interior and/or exterior aluminum flashing strip.

■ The advantage of such a renovation is the fact that it allows the positioning of the window adapted to the specifics of each opening and may be adapted to traditional old homes as well as to recent ones.

■ For the occupier, this type of renovation is done with as little inconvenience as possible, as the installation involves less demolition and allows using the existing frames.

Uni[®]



3 1/4" frame

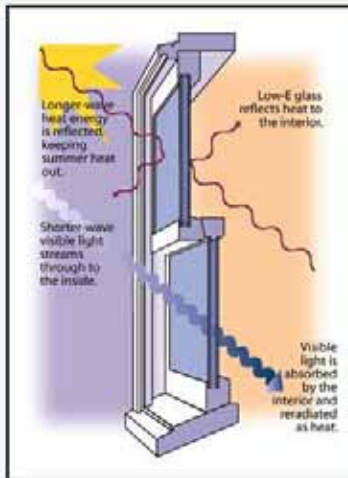
GLASS

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. This glass is the one mentioned in the "Performance" strips at the bottom of the following pages.

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. This type of glass is to be considered in a solarium-type of room or in a room facing south / south-west which undergoes considerable undesired overheating.

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

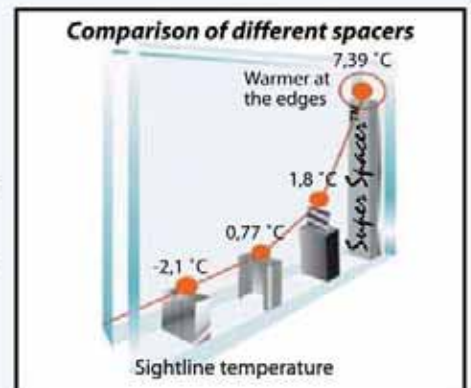
Inert gas between the two glass panes reduces conductivity (when compared to air) and increases the temperature of the internal surface of the sealed unit. Argon is the gas most often used.

All sealed units manufactured by Fenplast are injected with Argon gas to a minimal and certified rate of fill of 95%, thereby maintaining the warmth of your home without any additional expense.

3. An insulating glass spacer (a part that separates the two thicknesses of glass along the outside of the sealed unit) that is not a conductor.

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, which is approved by NASA and 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 features of durability and gas retention which meet the highest international standards.



EdgeTech[™]



CASEMENT



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.



This window, which is a classic as far as PVC windows are concerned, features a modular type of assembly. Each section is independent and assembly by a joint moulding allows making up the whole window. This strong window system features a fixed single part section. Three weather strips ensure the window is air tight (two on the sash and one on the frame), thereby guaranteeing impeccable performance. It may also be equipped with triple glass for even greater energy performance.

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

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

ENERGY RATING casement

	ER rating	CANADA Clim. zones
Clear glass	18	
Double Low-E ES® glass	29	

ENERGY RATING casement

	ER rating	CANADA Clim. zones
Triple glass - 1 glass Low-E ES®	34	
Triple glass - 2 glasses Low-E ES®	35	

* When tested without mullion



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.



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.

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 (as illustrated) or a half-screen.

Common features of Univent® 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. A handle that is especially designed and punched for easy and safe handling. ③
- Two ventilation locks located on the frame (single hung) or on the upper sash (double hung), ensuring ventilation of the window while restraining access from outside. ④
- Several parts in moulded PVC to improve efficiency and esthetics. ⑤
- A whole series of mouldings that may be combined to this system of windows to meet various special needs, whether in a new construction or in renovation. ⑥
- A system designed to be painted in detail.

Is compatible with the Uni® series of windows.

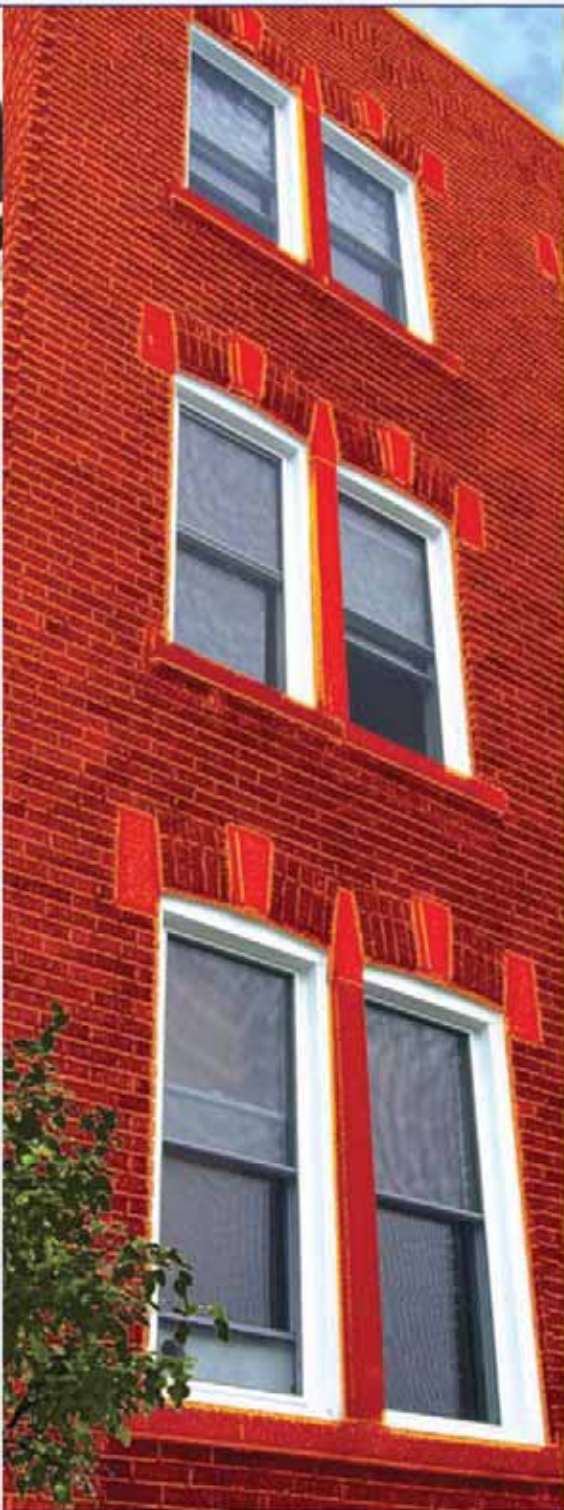


PERFORMANCE double and single

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

ENERGY RATING double

	ER rating	CANADA Clim. zones
Clear glass	16	
Double Low-E ES® glass	29	



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 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. 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

	ER rating	CANADA Clim. zones
Clear glass	17	A
Double Low-E ES [®] glass	30	D



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.

Is compatible with the Uni® series of windows.

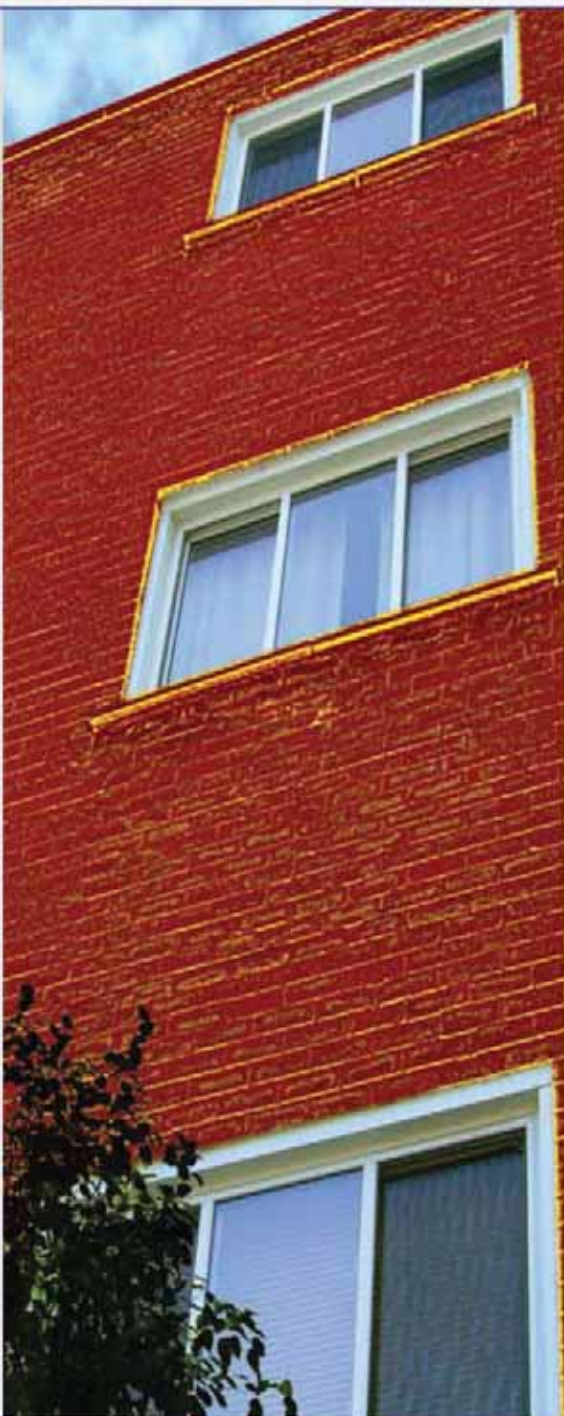


PERFORMANCE single and double

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

ENERGY RATING double

	ER rating	CANADA Clim. zones
Clear glass	16	
Double Low-E ES® glass	29	



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 has 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

	ER rating	CANADA Clim. zones
Clear glass	17	A
Double Low-E ES [®] glass	31	D

UniPano[®] UniGeo[®]

**Panoramic
frame
and irregular
shapes**



The UniPano[®] window is a panoramic type of frame measuring 3 1/4" in thickness and is used for applications requiring a fixed window.



Over time Fenplast has acquired know-how to offer you windows with various geometric shapes that meet your architectural needs and allow you to personalize your home. The shapes illustrated on the opposite page are only some examples of the numerous possibilities offered. The UniGeo[®] shapes are manufactured with the UniPano[®] frame.

PERFORMANCE

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

* When tested without mullion

ENERGY RATING fix

	ER rating	CANADA Clim. zones
Clear glass	21	
Double Low-E ES [®] glass	36	

ENERGY RATING fix

	ER rating	CANADA Clim. zones
Triple glass - 1 glass Low-E ES [®]	43	
Triple glass - 2 glass Low-E ES [®]	43	

Bay and bow windows

Is there anything better than a bow window (3 sections) or a bay window (4 or 5 sections) to make your home stand out? The Uni[®] series even offers the possibility of having a box bay (right-angled) window. These windows feature various possibilities of inside finishing in oak, pine or stratified, thereby dramatically increasing the esthetic aspect 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.



Options

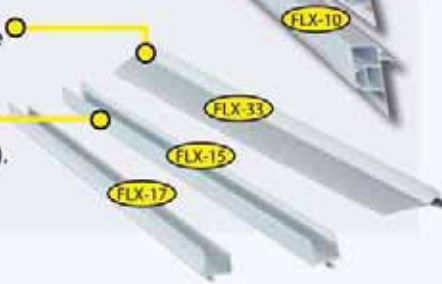
Outdoor mouldings

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



Indoor mouldings

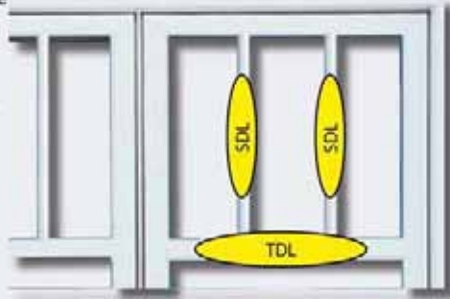
- Allow for a smooth transition between window and the frame of the opening.
- Allowing the insertion of a drywall sheet (1/2") or a wood jamb extension (3/4").



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 UniFlex® and UniPano® series).

Another way of giving a distinctive look to a window is to add fake mullions on the glass surface. These fake mullions measuring 13/16" (34), 1 1/8" (118) or 1 5/8" (158) in width are glued 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.



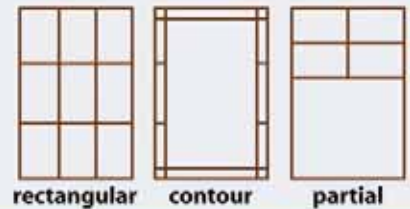
Grilles

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 11/16" 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 sections of the windows 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, PVC windows since 1989. Still located in Delson, QC, **Fenplast** has gradually become vertically integrated. It started off assembling PVC windows. It then produced all the extruded profiles used in its products. Integration continued when **Fenplast** decided to build sealed units using the Super Spacer®. This means high performance windows 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 with jambs that obstruct as little as possible. This feature allows light to stream in without hindrance. A choice of high-performance glass allows you to decide on whether you want maximum performance from your window or a restriction in the heat gain due to the type of glass used.

Fenplast windows 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 (as long as you own your home) on the PVC extrusions used in the windows. The sealed units installed in Fenplast windows are also covered by a limited lifetime warranty against seal failure. The window hardware is covered by a 10-year warranty. We strongly suggest that you read the WARRANTY brochure to find out about the details of window applications, including restrictions and exceptions.



Your light provider



Delson, Quebec | 1-888-FENPLAST

For more information:
www.fenplast.com



Printed in Canada.

UNI_A_06