



BLUE DIAMONDTM

CONSERVATORIES

• P o o l E n c l o s u r e s o f D i s t i n c t i o n •

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Blue Diamond pool enclosure portal frames are TIG fusion welded aluminum sections that are powder coated. All vertical and sloped glazing are manufactured from only the highest performance, low maintenance components. Glazing options include clear or tinted (R 9.26) Enviroglaze™ or light diffusing HeatGuard™. Both have excellent insulating values compared with traditional insulated glazing material.



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Enclosed, in-ground swimming pools are becoming a desirable feature in more of today's exclusive homes.

A unique answer to some of the maintenance and safety issues of pool ownership is a Portal Style Pool Enclosure from Blue Diamond Conservatories.



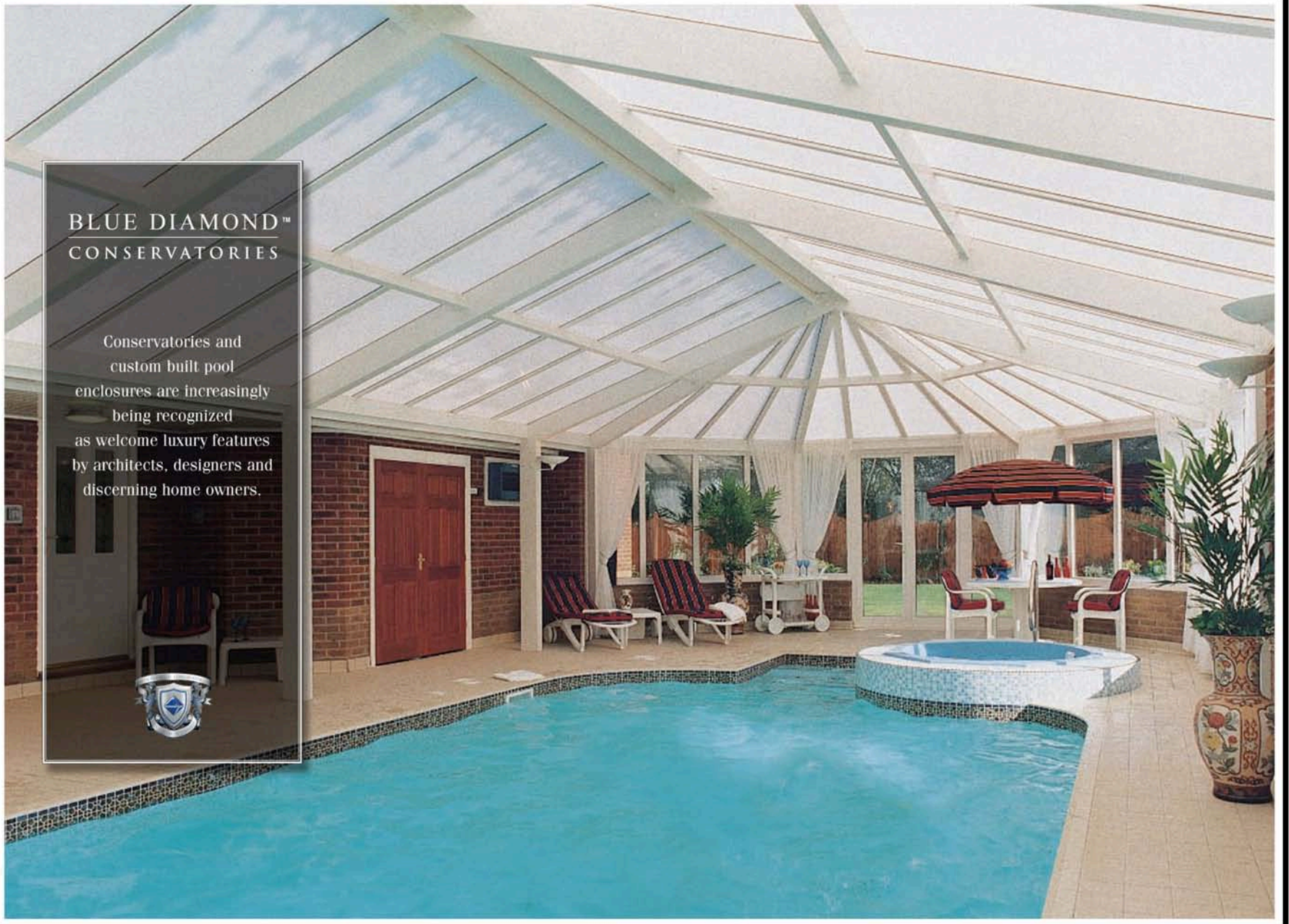
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A pool enclosure from Blue Diamond Conservatories is the perfect way to enhance your active lifestyle. Besides swimming laps on your own schedule, a pool enclosure is ideal for your fitness activities as well as entertaining or relaxation.



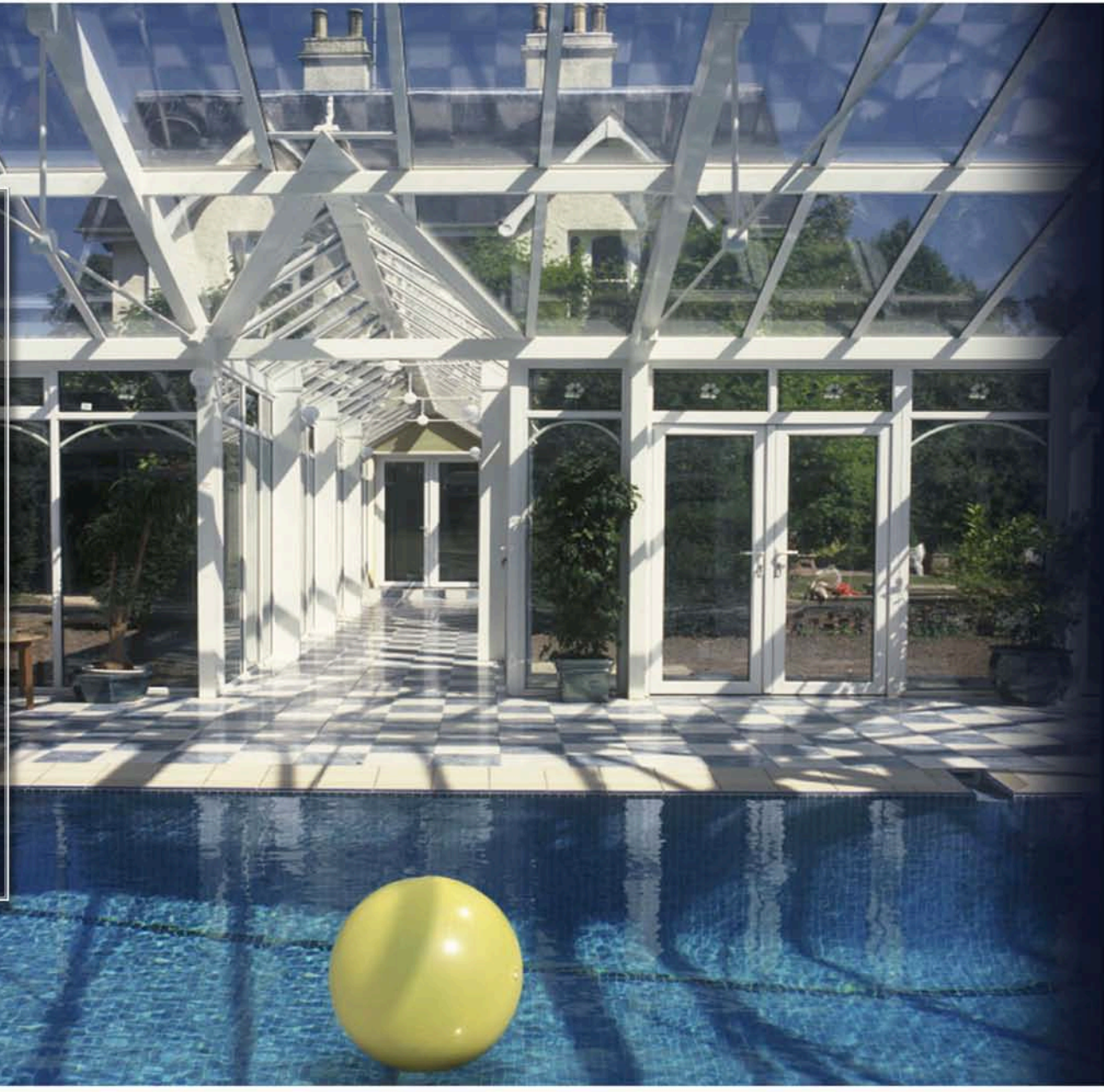
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Conservatories and custom built pool enclosures are increasingly being recognized as welcome luxury features by architects, designers and discerning home owners.



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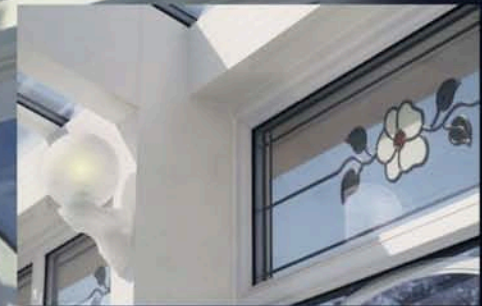
This example, is a custom pool enclosure with integrated portal structural supporting system. A connecting corridor was designed for easy access to the home in all seasons.



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Thermostatically controlled
roof vents with
auto rain sensors operate in
synchronization with dedicated
HVAC systems to provide a
controlled internal
environment.

Consider true stained
art glass to complement
the architecture
of your custom design.
The possibilities are endless.



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A portal pool enclosure from Blue Diamond Conservatories adds lasting value.

These high quality pool enclosures are an excellent way to add real living space to your home and real value to your property.





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Our EnviroGlaze II™ premium glass package combines an oversized triple glazed unit with two LowE coated glass panes and has Krypton and Argon gas infill. This powerful combination of materials produces a vertical glazing R value of 9.26 affording premium insulating performance.





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Decorative Georgian
awning vents have integrated
retractable, collapsible screens.
High tensile, corrosion
resistant austenitic stainless
steel hinges combine with
solid brass key-locking handles
on every opening vent.



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Prior assembly of the
Portal at our UK facility
ensures efficient progress
on site for
each custom design.



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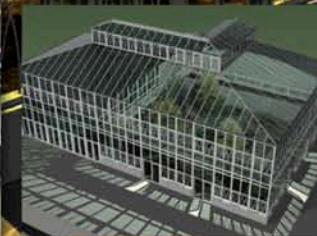
Every project is accompanied by an independent US Professional Structural Engineer's (PE) Stamp.

This certifies each design for suitability at its geographic site, location and situation. Static and dynamic loads are calculated based on snow load and wind zone code requirements.



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This virtual depiction of a two story conservatory project contains a swimming pool area as well as an indoor natural forest environment that is overlooked by a balcony. This structure was designed to be integrated into a private residence and is approximately 80' by 50'.

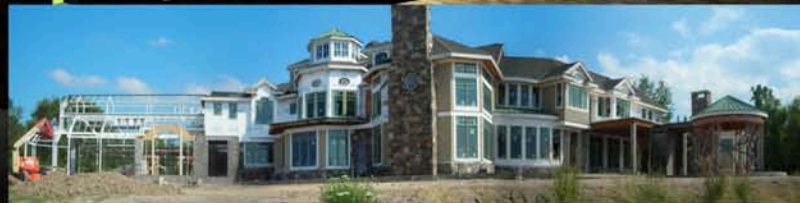


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**Virtual Image
for client project:**

Pool and conservatory project
with matching lantern systems.
This new 12,000 sq ft home
integrated a swimming and lap
pool design that connected to a
hot tub and spa in the
Victorian Conservatory.

New York State



**BLUE DIAMOND™
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**Under
Construction:**

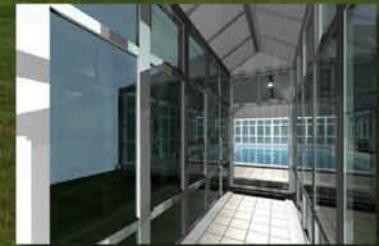
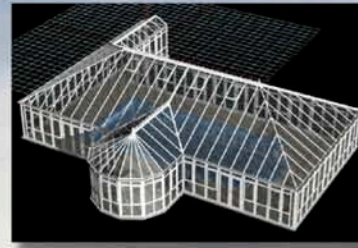
Conservatory with
relaxation area, lap pool,
and Victorian Spa.

New York State



BLUE DIAMOND™ CONSERVATORIES

Blue Diamond Conservatories
can place a custom digital
rendering of your
pool enclosure into a
photograph of the actual site
giving you a photorealistic
visualization of the
finished project.





Glass is the largest surface area in any conservatory and damaging UV light can penetrate it to destroy fine furniture and art while a poorly insulated unit can

cause energy loss. Blue Diamond Conservatories offers the finest high performance glazing products available in the market. Known as EnviroGlaze II™ it is the ultimate solution for year-round protection, comfort and cost savings.

EnviroGlaze II™ North - Frames

Krypton Gas Filled - 5/32"(4mm) Tempered/ 5/32"(4mm) Tempered
For climates that have varying degrees of temperature and humidity, experience snowfall and rainfall at least a quarter of the year.

EnviroGlaze II™ South - Frames

Argon Gas Filled - 5/32"(4mm) Tempered/ 5/32"(4mm) Tempered
For climates that have high heat indexes and experience high temperatures, humidity, and are exposed to intense UV light most of the year.

EnviroGlaze II™ Roof

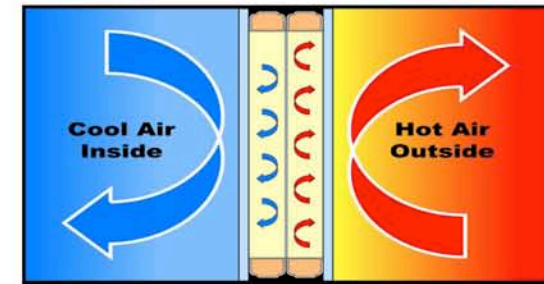
Argon Gas Filled - 5/32"(4mm) Tempered/ 1/4"(6mm) Laminate
The perfect balance for all climatic environments specifically designed for horizontal and sloped surfaces which are exposed to the sun all hours of the day.

Features of EnviroGlaze II™

- 1) Double LowE Coating provides optimal year-round energy saving benefits by selectively filtering the sun's energy in summer and reducing heat loss in the winter.
- 2) Absorbent and reflective insulating coatings helps deflect UV light as well as warm air in the summer and cold air in the winter.
- 3) Dual Stainless Steel Spacers improve thermal performance while maintaining the structural integrity and gas/moisture retention properties required of a spacer bar. Enhances performance of LowE² coatings and gas filled units.
- 4) Desiccant filling for increased protection against moisture absorption.
- 5) Overall 1-1/8" (28mm) Insulated glass unit is optimal for sound insulation and thermal performance.
- 6) Dual PIB seals prevent air leaks. EnviroGlaze II™ sealants that offer the best possible performance.



EnviroGlaze II™ features two LowE coated layers combined with a triple glazed unit, producing a greatly superior double insulation barrier. In the spring and summer the hot outside air cannot easily heat the inside pane, so warming of the internal air conditioned cool air is minimized. EnviroGlaze II™ acts as a barrier on both sides of the glass. The cool air on the inside of your home is



Balance is Key

A well balanced glazing package is critical to energy efficiency. All LowE glass packages provide for a high R-value, but results can vary on SHGC (Solar Heat Gain Coefficient). In climates where energy consumption is dominated by air conditioning, a low SHGC is preferred to help block the heat transference from the sun. In climates, where energy consumption is dominated by heating, a high SHGC is preferred to let the warmth of the sun help heat a structure. Although LowE packages which provide high R-values may seem the best choice, it may actually be worse if it has a very low SHGC.

Therefore, it is extremely

Blue Diamond Conservatories Glazing Comparisons	Transmittance %		Reflectivity %		Interior Glass Surface Temp.	Shading Coefficient	Solar Heat Gain Coefficient	WHAT'S Important!		
	Visible	Solar	Ultraviolet	Visible Outside				Visible Inside	U Value	R Value
BDC EnviroGlaze™ North - Frames	55	24	<0.5	17	20	63	0.34	0.30	0.11	9.26
BDC EnviroGlaze™ South - Frames	55	24	<0.5	17	20	61	0.35	0.30	0.15	6.67
Best of the Rest - Frames	56	29	13	10	17	57	0.38	0.33	0.25	4.0
BDC EnviroGlaze™ Roof 20° Slope	54	23	<0.5	17	19	61	0.35	0.30	0.16	6.10
BDC HeatGuard™ Polycarbonate	XX	XX	XX	XX	XX	XX	XX	XX	XX	4.5
Best of the Rest - Roof 20° Slope	16	10	7	11	25	57	0.18	0.15	0.25	4.00

important that the best glass package for the region is chosen and EnviroGlaze II™ is one of the most energy efficient glass packages available in any Conservatory today. This critical balance between R-Value and SHGC needs to be achieved without lowering the visible light significantly. EnviroGlaze II™ offers the best visible light to R-Value ratio on the market today.

EnviroGlaze™ data obtained using (Laurence Berkeley Laboratories) • Window 5.2 analysis program American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) • National Fenestration Rating Council (NFRC)

NOTE - Color change or fading is caused by a number of factors of which UV exposure is one of them. See other Blue Diamond Conservatories information sheets on the factors behind color change and fading.

