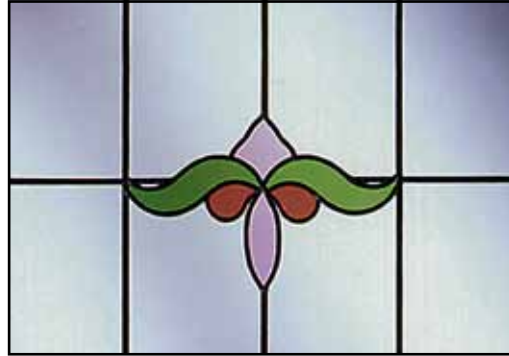
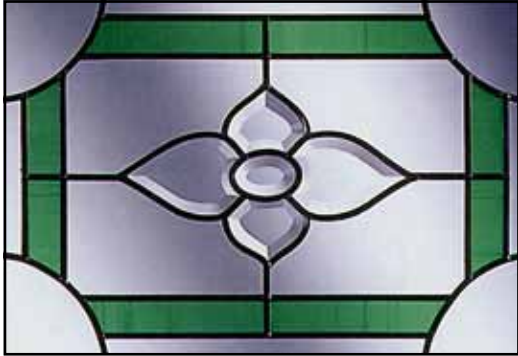




# NORTHERN EXPRESS GLASS Limited



“GLASS WITH CLASS”  
SEVENTH EDITION

DECORATIVE GLASS  
DESIGN BROCHURE

£10.00



BS EN 1279  
CMS 3044



BS EN 12150  
CMS 3032 T

Company Registered In England No. 2796677  
World Wide Web: [www.n-e-g.co.uk](http://www.n-e-g.co.uk)  
E-Mail: [orders@n-e-g.co.uk](mailto:orders@n-e-g.co.uk)



BS EN 1279  
CMS 3044



# NORTHERN EXPRESS GLASS Limited



BS EN 12150  
CMS 3032 T

At Northern Express Glass Ltd., it is our aim to provide customers with the highest levels of service, quality and value.

Formed in 1993, and based in Fleetwood, Lancashire, Northern Express Glass Ltd, a joint family owned and run business, has established itself as the market leader in the Lancashire area for the supply of Insulated Glass Units, Toughened Glass and Decorative Glass Panels.

The company achieved BSI recognition in 1998, being awarded the Prestigious kitemark BS5713 on it's IGU's and BS ISO 9000 for it's quality systems. The company has maintained these awards ever since, until in August 2004, superseding it with the even more stringent European award EN 1279-2 & 3:2002 and EN 12150.

Northern Express Glass Ltd work to the stringent visual quality requirements laid down by the independent Glass and Glazing Federation (GGF), a copy of which can be found on the inside back page of this brochure. Being the industry authority, the GGF promotes best practice and sets the highest technical and health & safety standards.

By combining the highest quality materials, the most up to date manufacturing techniques and the flair, skill and expertise of our designers, we have created exciting, exclusive designs that bring windows, doors and conservatories to life. Glass panels that combine elegant bevelled glass clusters and shapes, striking colours, including marbled, textured and frosted effects.

As you will see from the designs in this brochure, there is something to suit every style of window and door, with both modern and traditional designs. The only problem you will have is deciding which one!

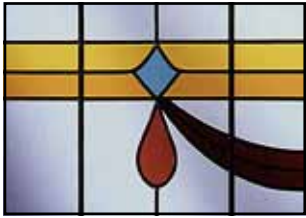
Northern Express Glass Ltd - "FOR GLASS WITH CLASS"



# NORTHERN EXPRESS GLASS Limited

## Bays

*Combined Lead, Film & Bevels*



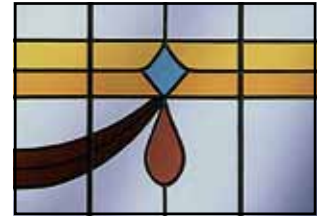
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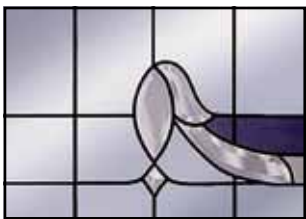
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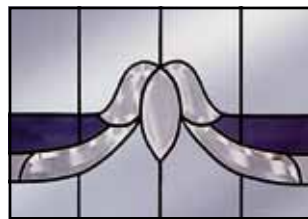
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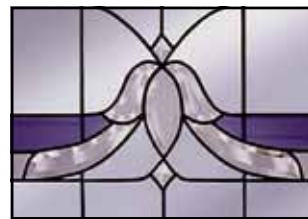
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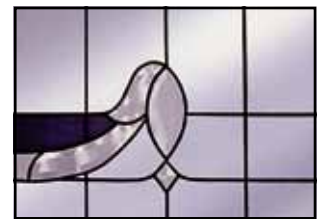
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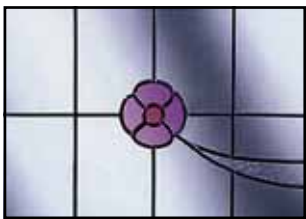
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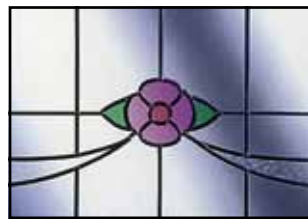
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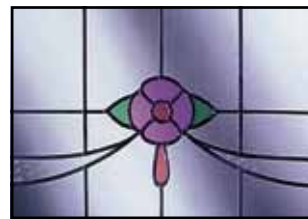
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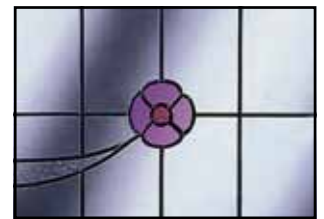
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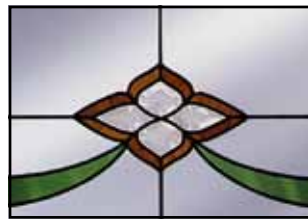
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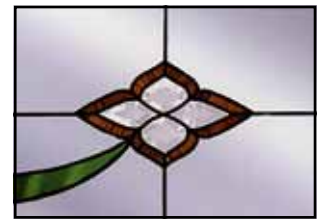
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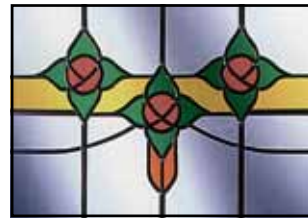
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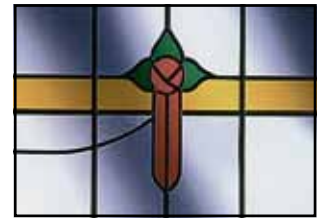
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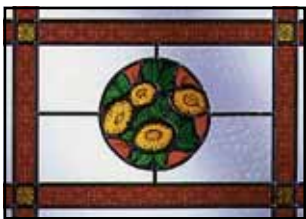
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BF19B



BF20B



BF21B



BF22B



BF23B



BF24B





# NORTHERN EXPRESS GLASS Limited

## Fanlights

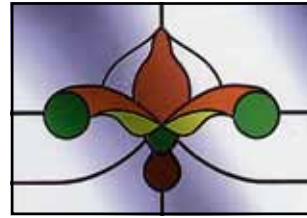
## Combined Lead & Film



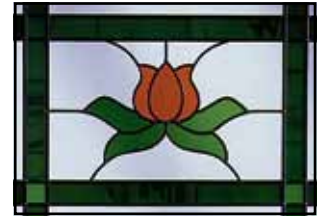
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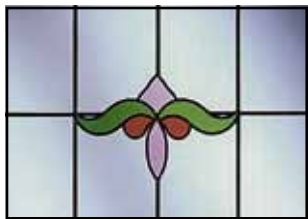
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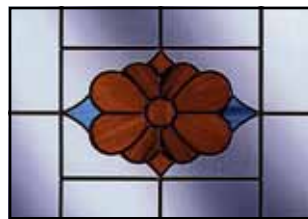
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CF04B



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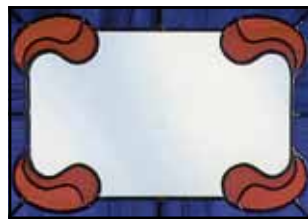
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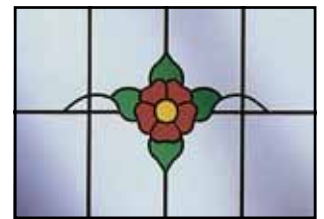
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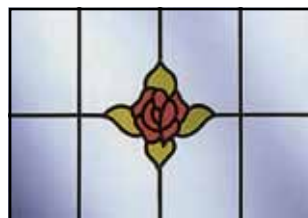
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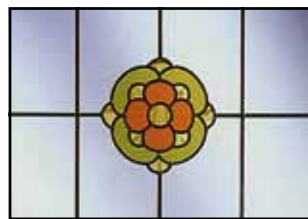
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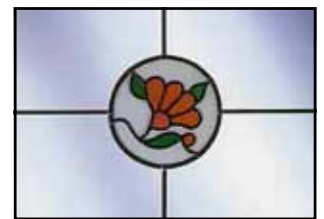
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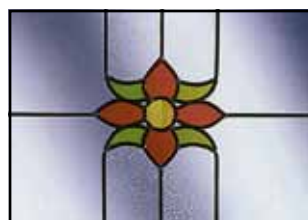
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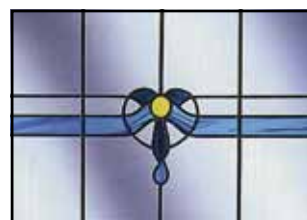
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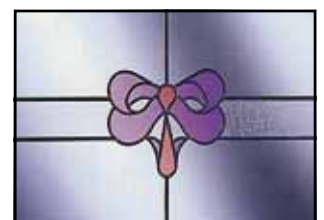
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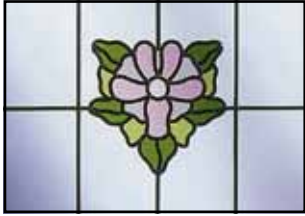




# NORTHERN EXPRESS GLASS Limited

## Fanlights

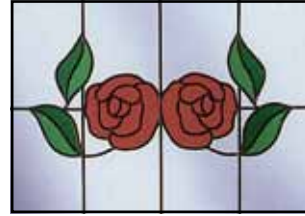
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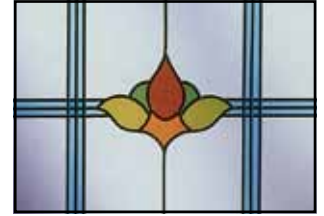
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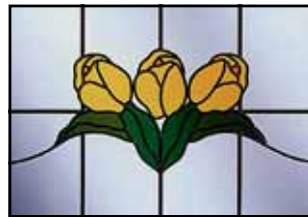
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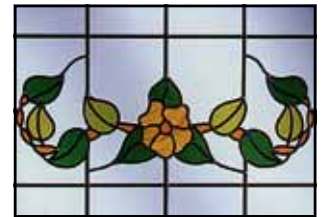
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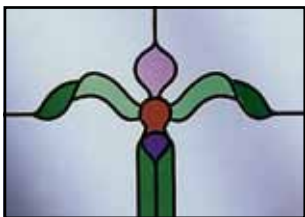
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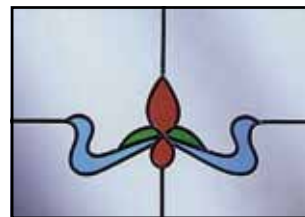
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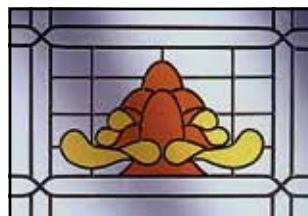
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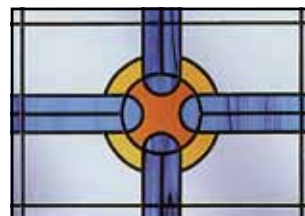
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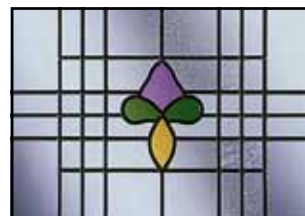
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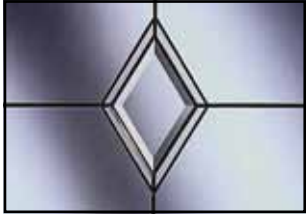
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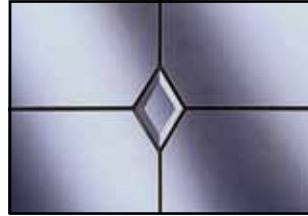
# NORTHERN EXPRESS GLASS Limited

## Fanlights

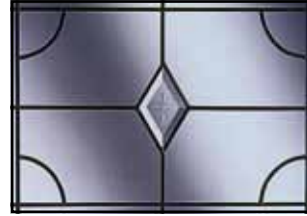
## Combined Lead & Bevels



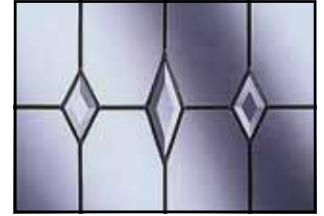
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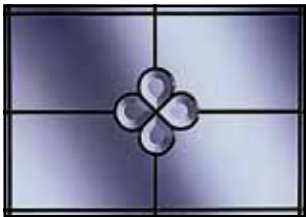
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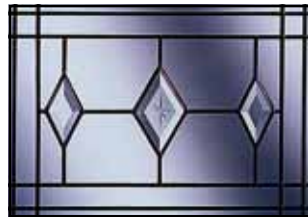
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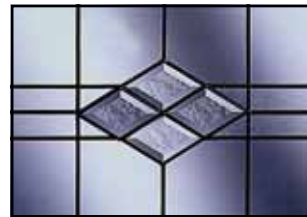
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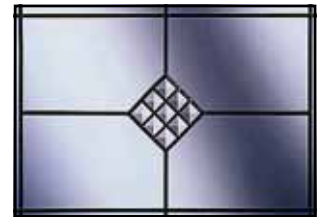
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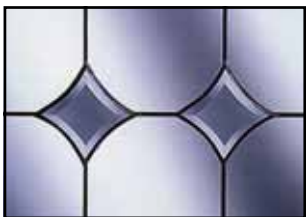
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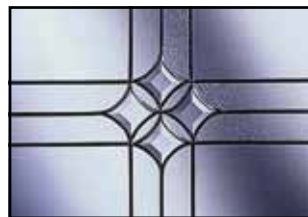
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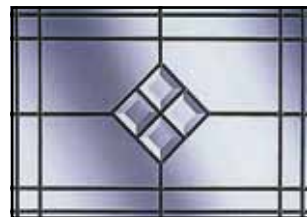
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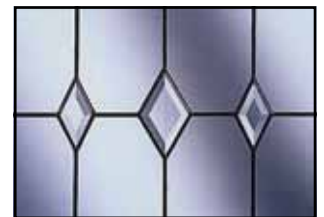
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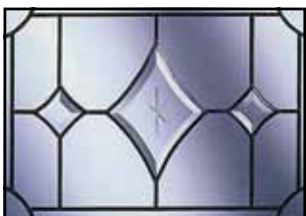
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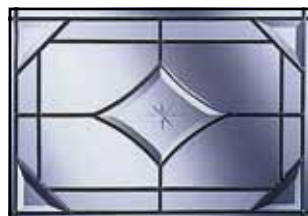
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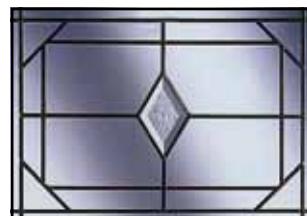
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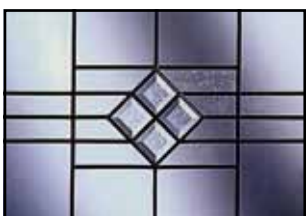
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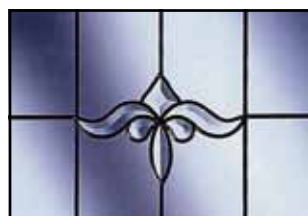
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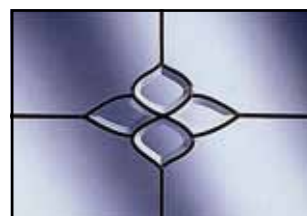
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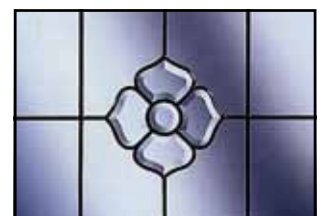
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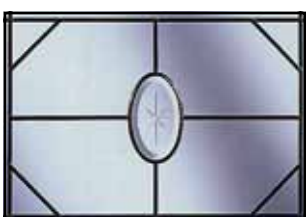
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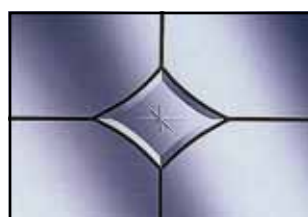
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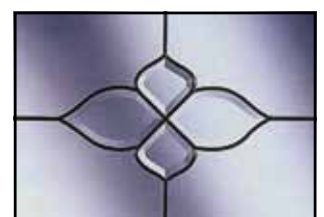
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BV23



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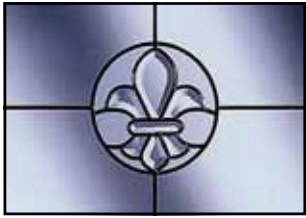




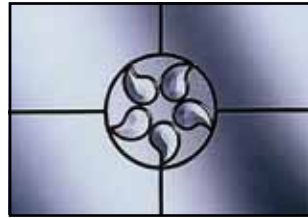
# NORTHERN EXPRESS GLASS Limited

## Fanlights

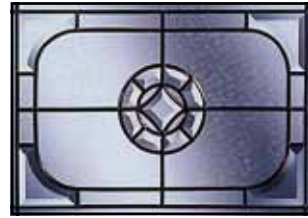
## Combined Lead & Bevels



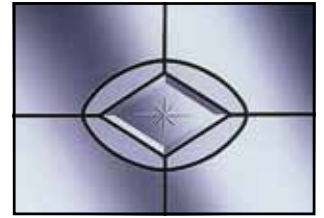
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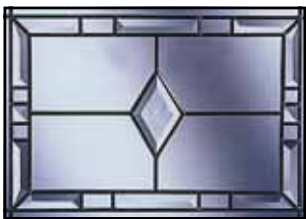
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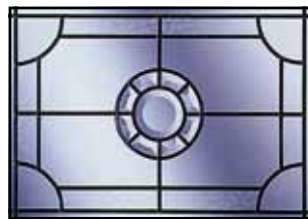
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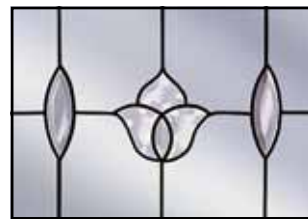
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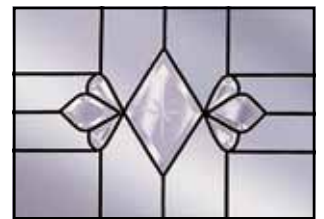
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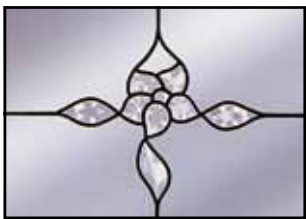
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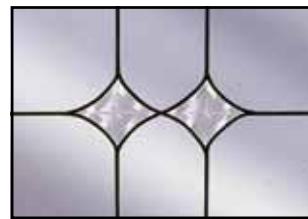
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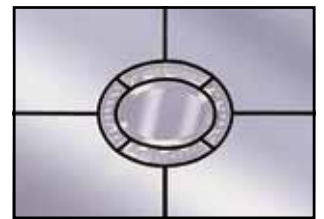
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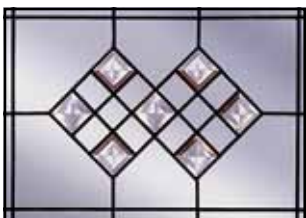
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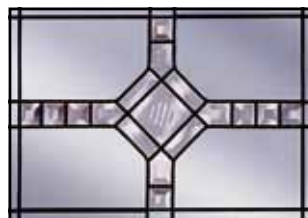
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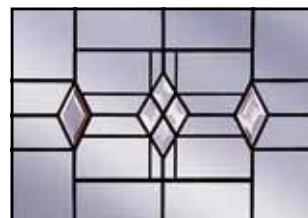
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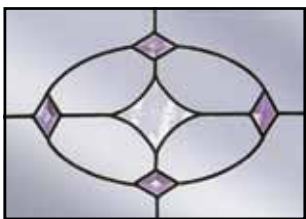
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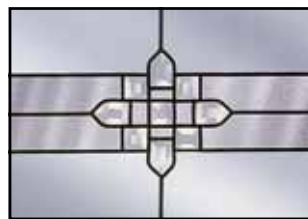
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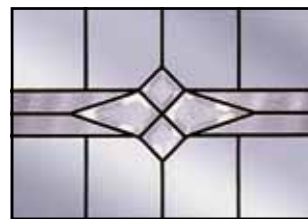
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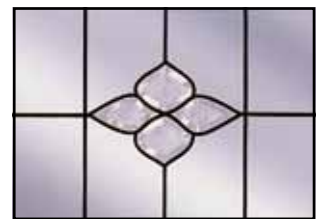
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BV66



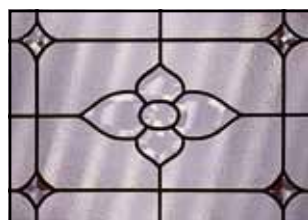
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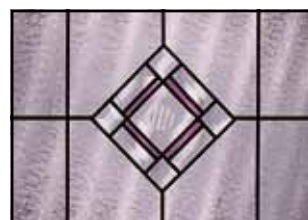
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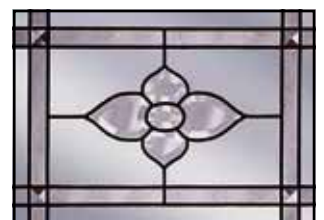
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BV70



BV71



BV72

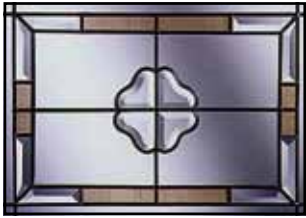




# NORTHERN EXPRESS GLASS Limited

## Fanlights

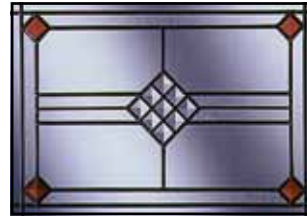
*Combined Lead, Film & Bevels*



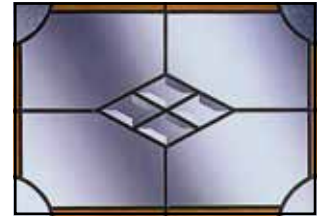
BV25



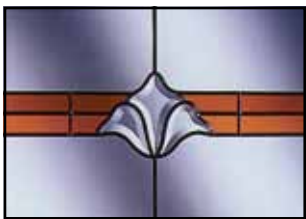
BV26



BV27



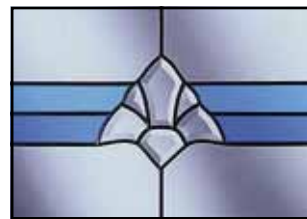
BV28



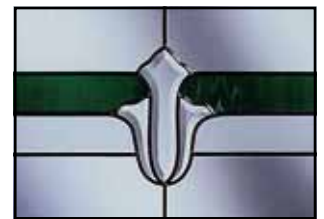
BV29



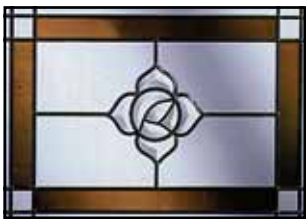
BV30



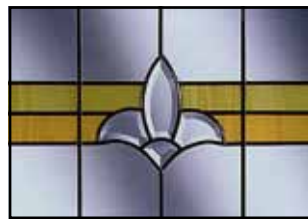
BV31



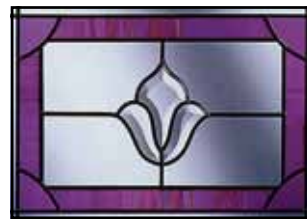
BV32



BV33



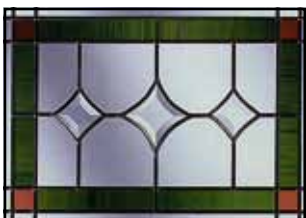
BV34



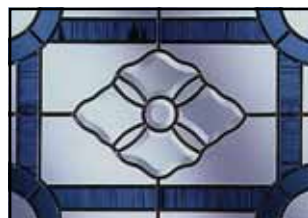
BV35



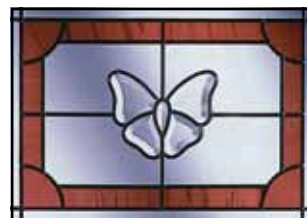
BV36



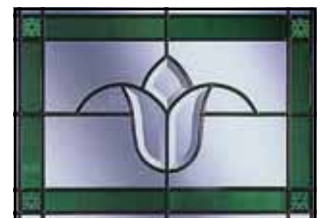
BV37



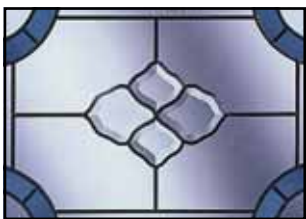
BV38



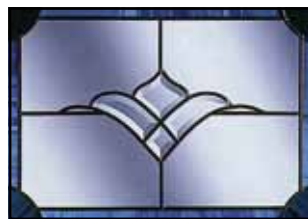
BV39



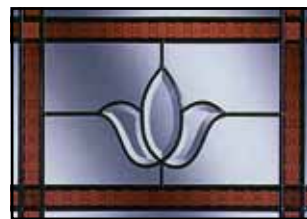
BV40



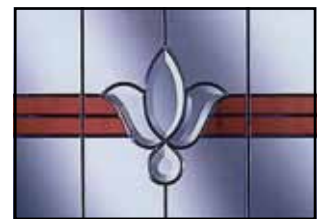
BV41



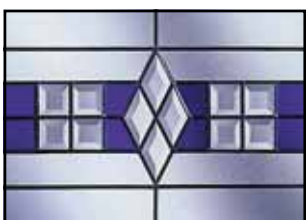
BV42



BV43



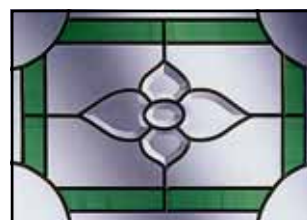
BV44



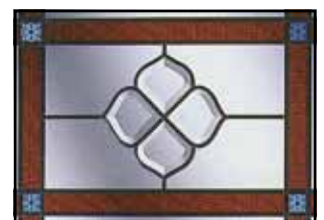
BV45



BV46



BV47



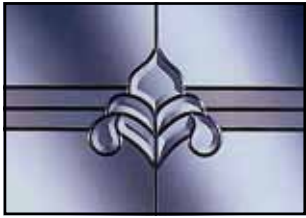
BV48



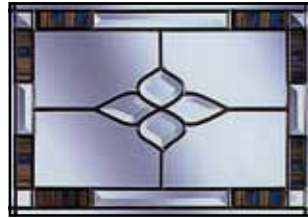
# NORTHERN EXPRESS GLASS Limited

## Fanlights

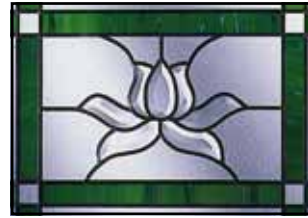
### *Combined Lead, Film & Bevels*



BV73



BV74



BV75



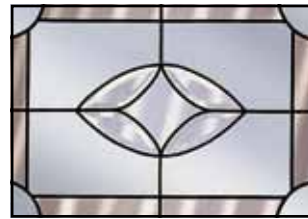
BV76



BV77



BV78



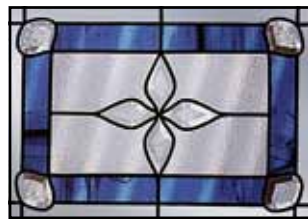
BV79



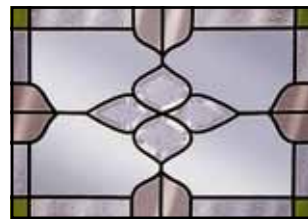
BV80



BV81



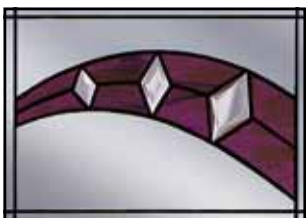
BV82



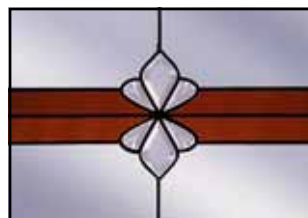
BV83



BV84



BV85



BV86



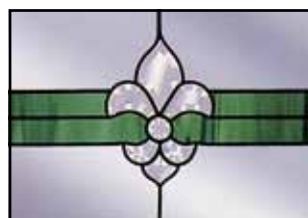
BV87



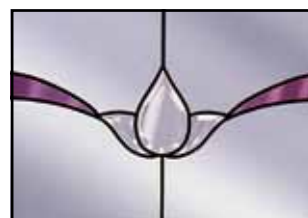
BV88



BV89



BV90



BV91



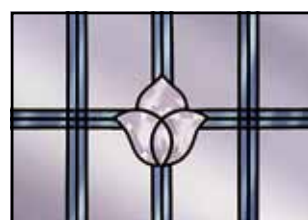
BV92



BV93



BV94



BV95



BV96

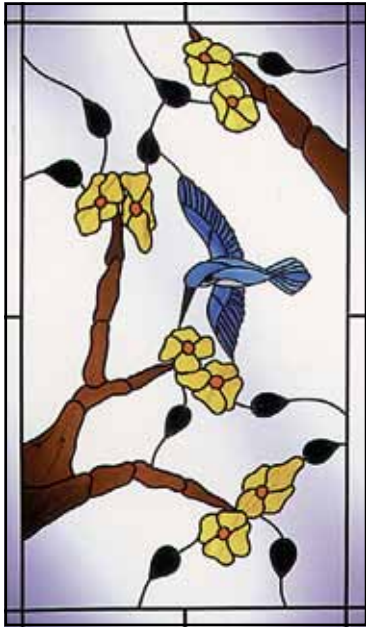




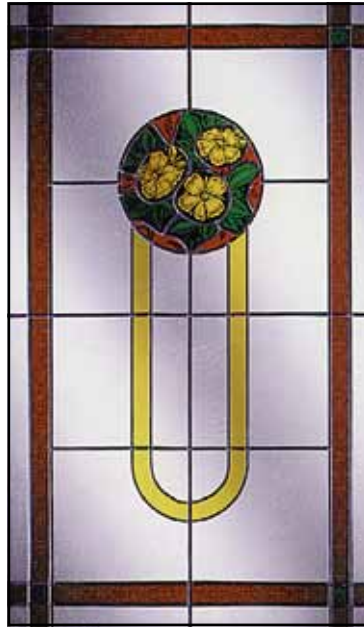
# NORTHERN EXPRESS GLASS Limited

## Doors

### *Combined Lead & Film*



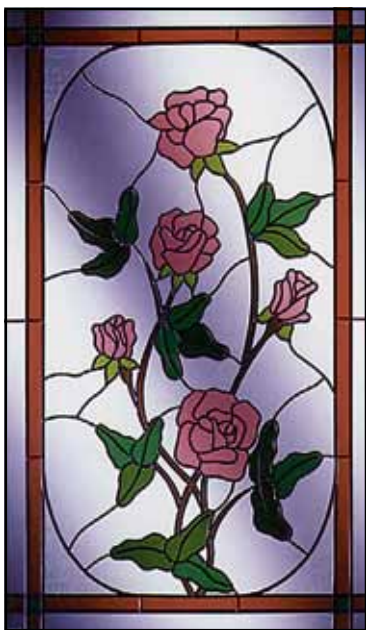
CD01C



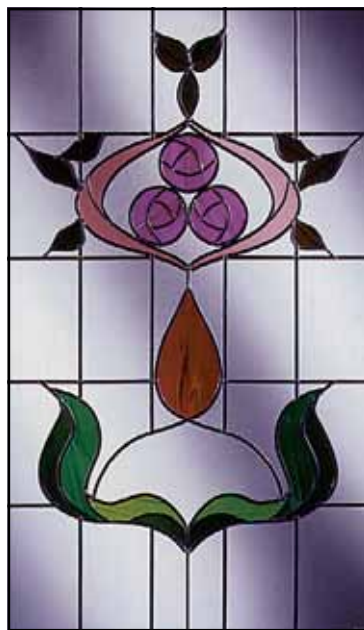
CD02A



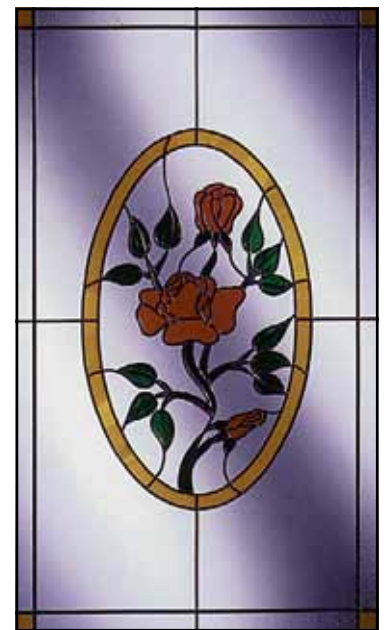
CD03B



CD04C



CD05B



CD06C

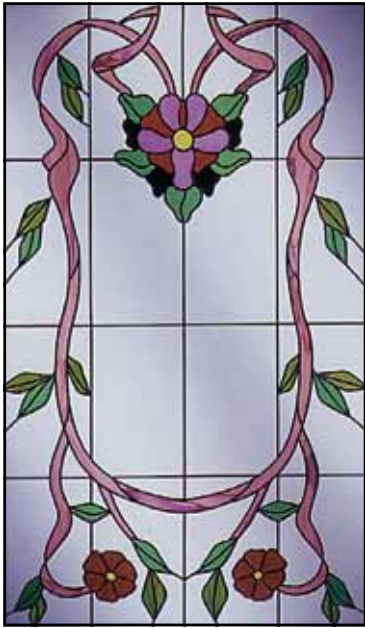




# NORTHERN EXPRESS GLASS Limited

## Doors

### *Combined Lead & Film*



CD07D



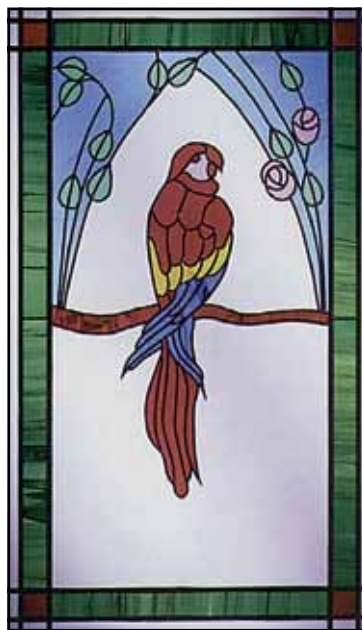
CD08B



CD09D



CD10C



CD11C



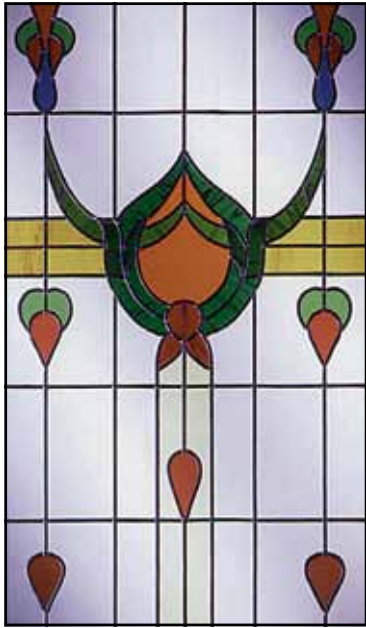
CD12C



# NORTHERN EXPRESS GLASS Limited

## Doors

### *Combined Lead & Film*



CD13B



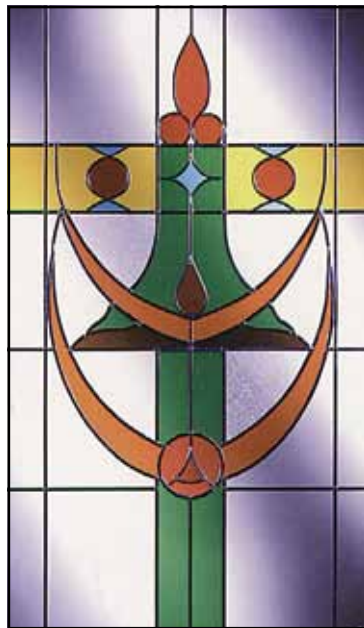
CD14D



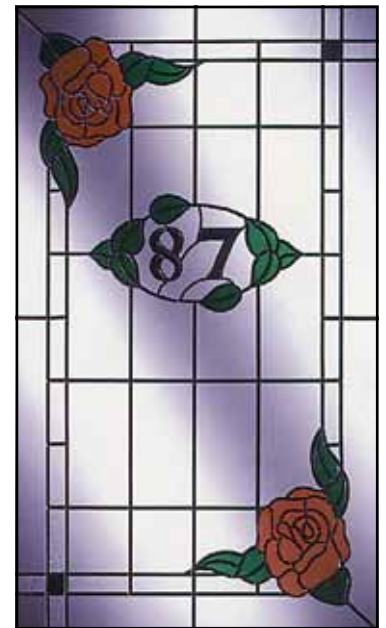
CD15D



CD16B



CD17B



CD18C

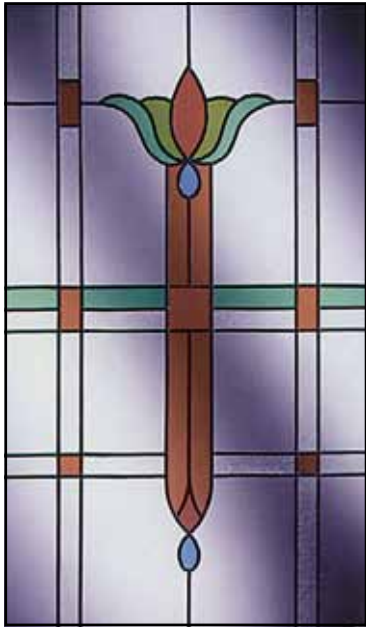




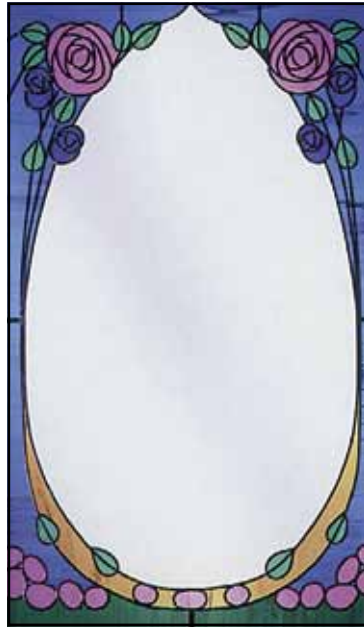
# NORTHERN EXPRESS GLASS Limited

## Doors

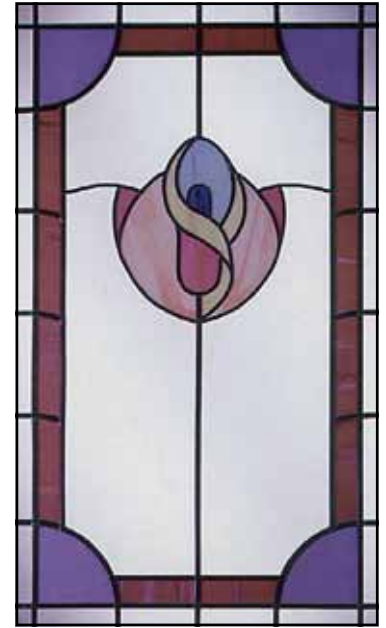
### *Combined Lead & Film*



CD19B



CD20C



CD21A



CD22D



CD23C



CD24C





# NORTHERN EXPRESS GLASS Limited

## Doors

### *Combined Lead & Film*



CD25C



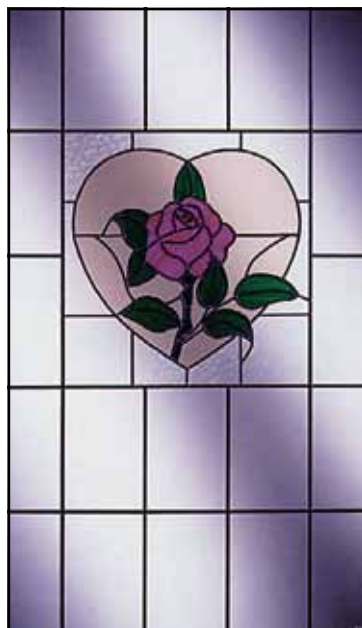
CD26B



CD27B



CD28C



CD29A



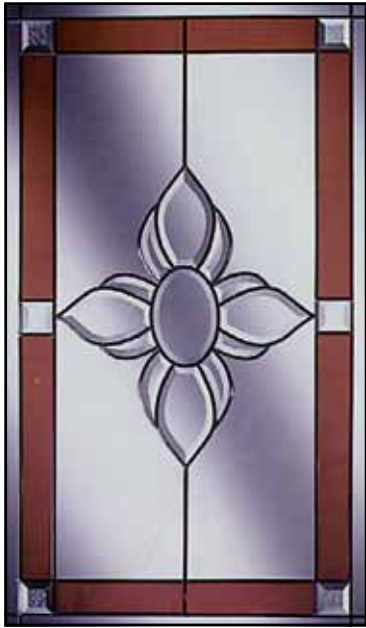
CD30B



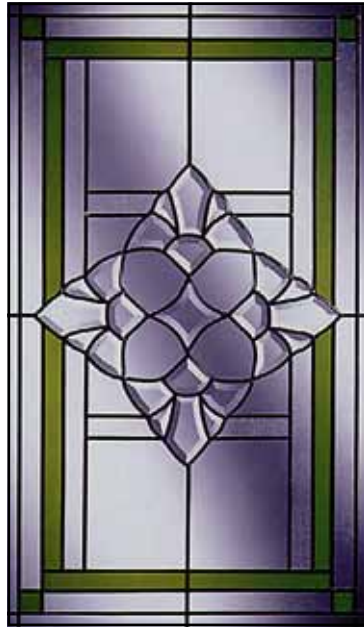
# NORTHERN EXPRESS GLASS Limited

## Doors

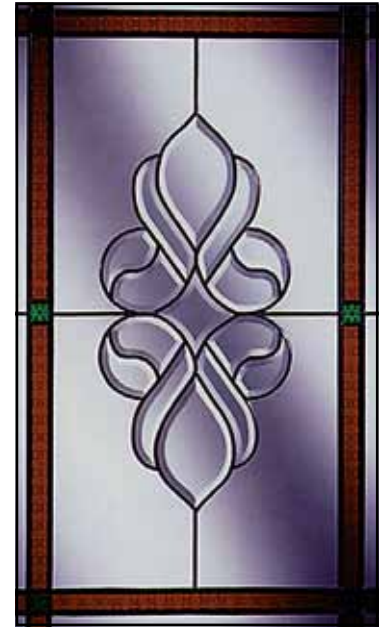
*Combined Lead, Film & Bevels*



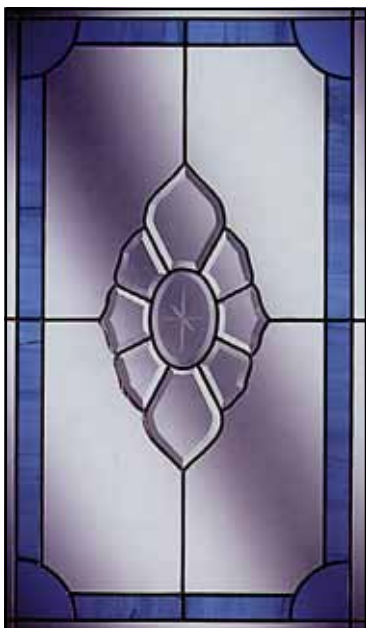
BD01C



BD02D



BD03C



BD04B



BD05C



BD06C





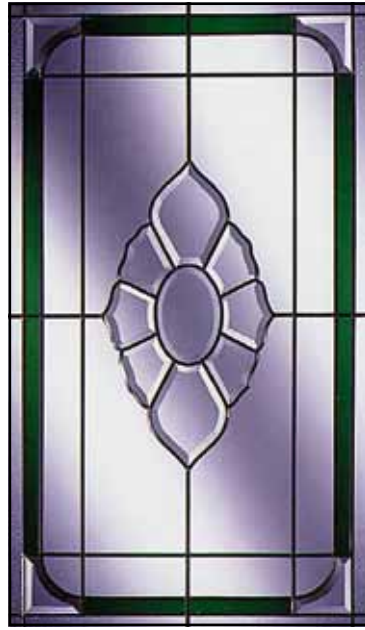
# NORTHERN EXPRESS GLASS Limited

## Doors

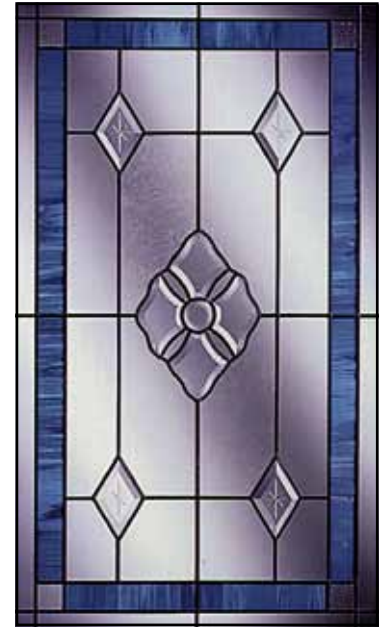
*Combined Lead, Film & Bevels*



BD07C



BD08B



BD09B



BD10C



BD11C



BD12C





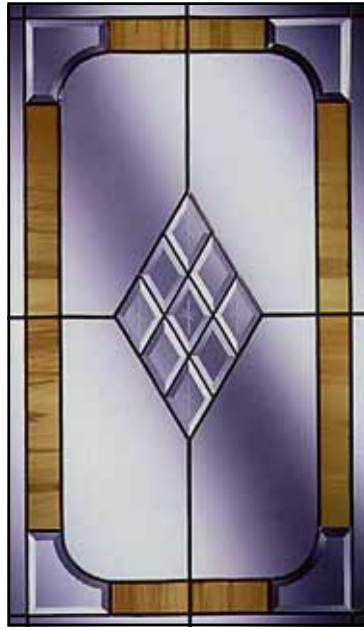
# NORTHERN EXPRESS GLASS Limited

## Doors

*Combined Lead, Film & Bevels*



BD13C



BD14B



BD15B



BD16C



BD17C



BD18C



# NORTHERN EXPRESS GLASS Limited

## Doors

*Combined Lead, Film & Bevels*



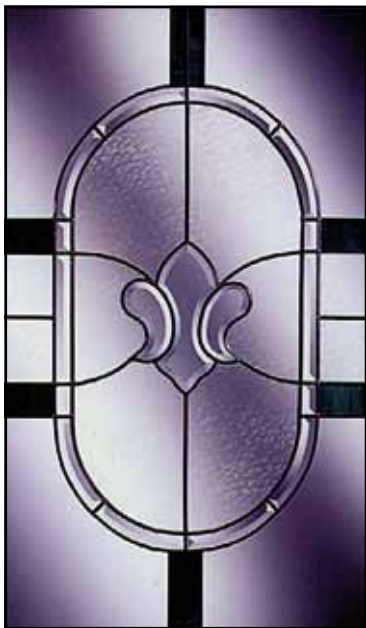
BD19D



BD20B



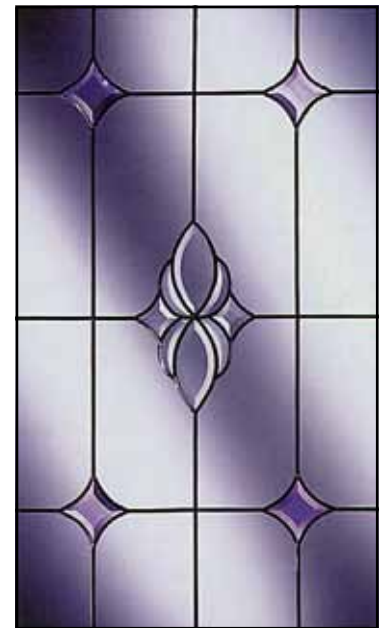
BD21C



BD22C



BD23C



BD24B





# NORTHERN EXPRESS GLASS Limited

## Doors

*Combined Lead, Film & Bevels*



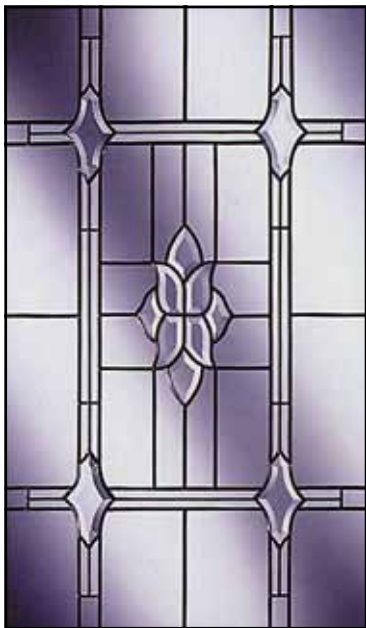
BD25C



BD26C



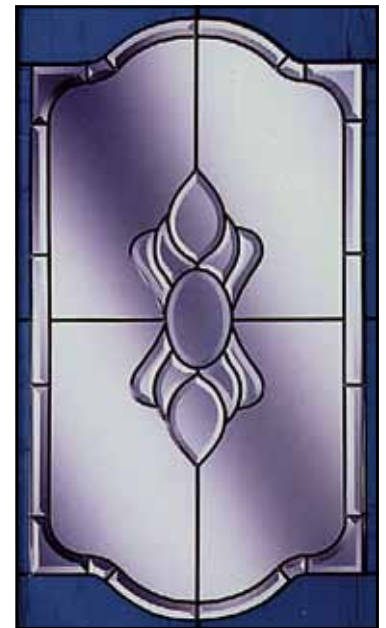
BD27D



BD28C



BD29C



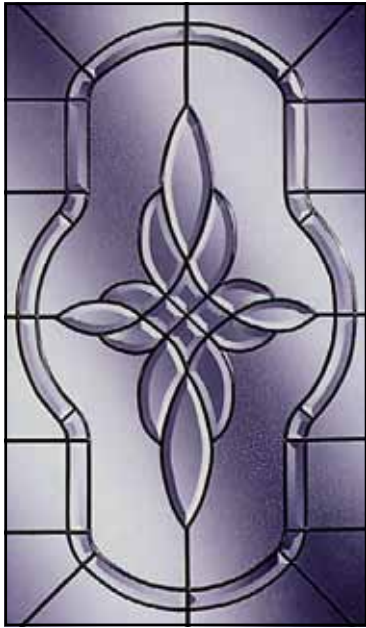
BD30D



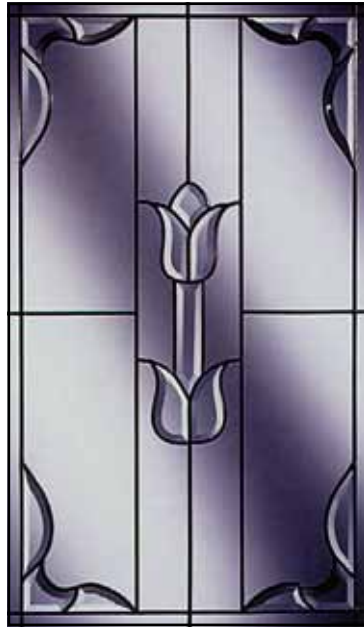
# NORTHERN EXPRESS GLASS Limited

**Doors**

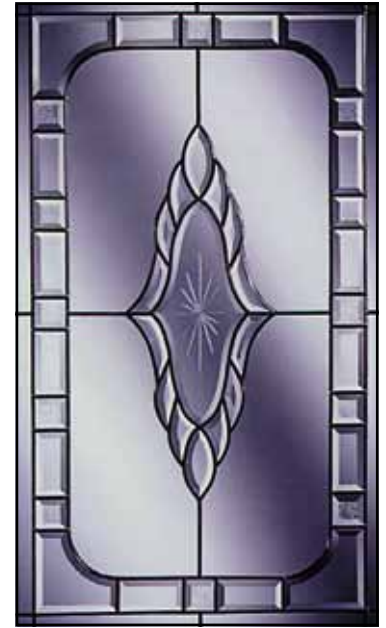
*Combined, Film Lead & Bevels*



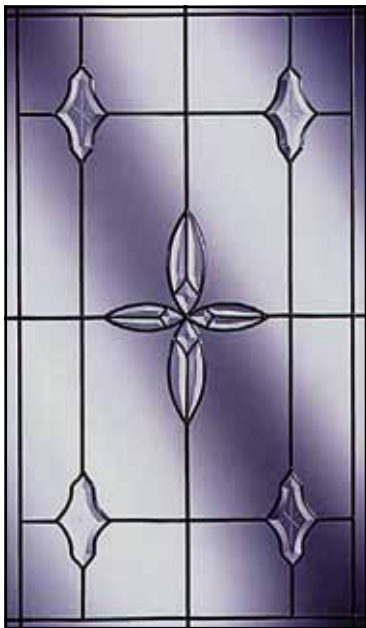
BD31D



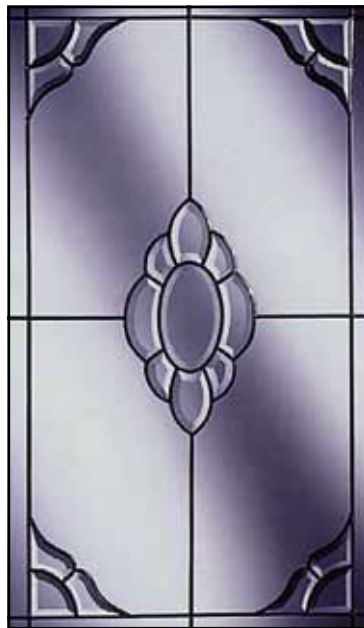
BD32C



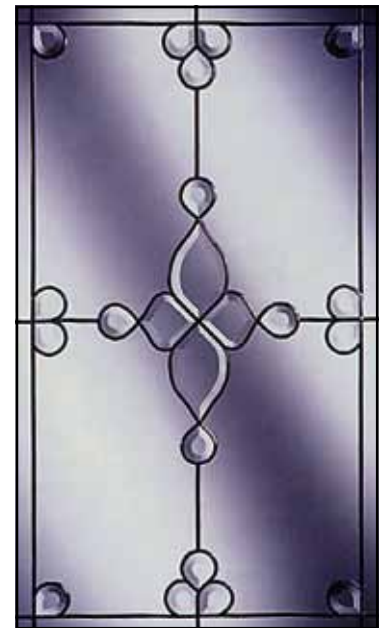
BD33D



BD34B



BD35C



BD36C

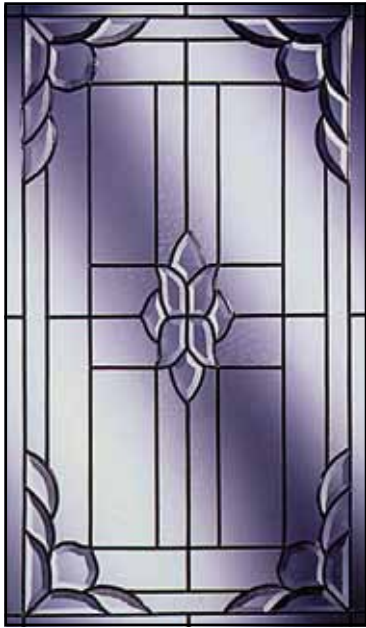




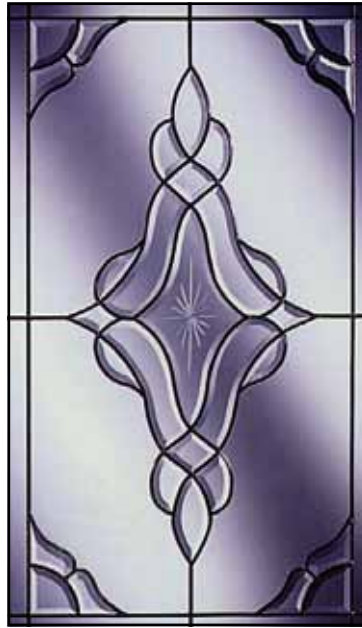
# NORTHERN EXPRESS GLASS Limited

## Doors

*Combined Lead, Film & Bevels*



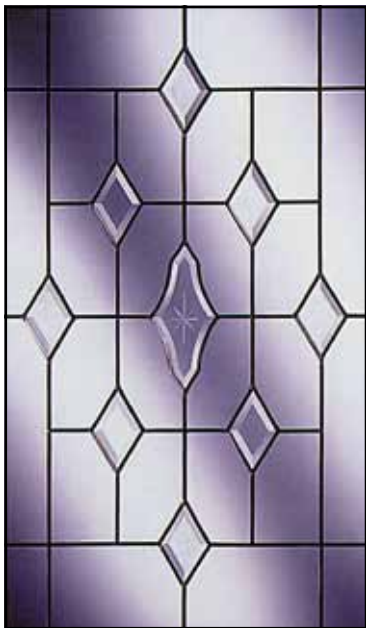
BD37C



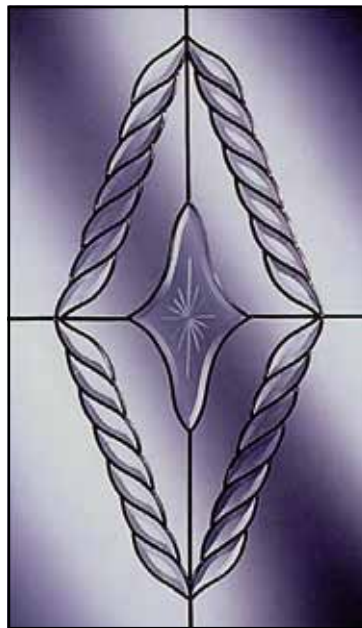
BD38D



BD39D



BD40A



BD41D



BD42B



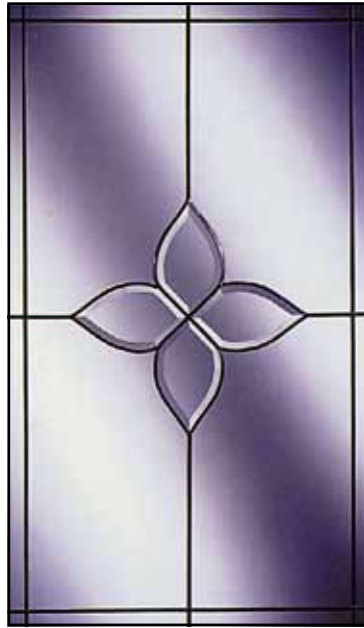
# NORTHERN EXPRESS GLASS Limited

## Doors

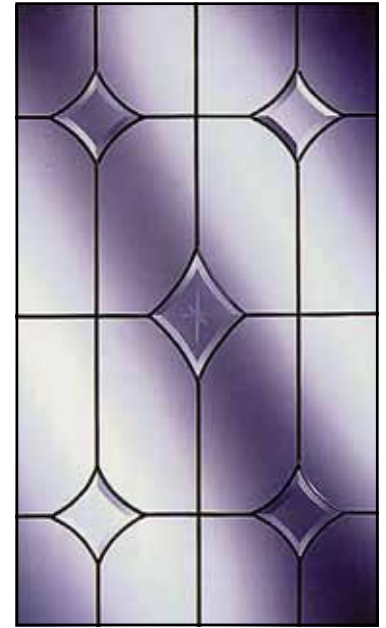
### *Combined Lead, Film & Bevels*



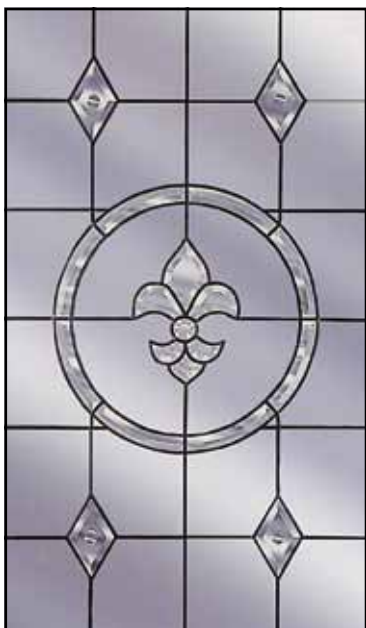
BD43C



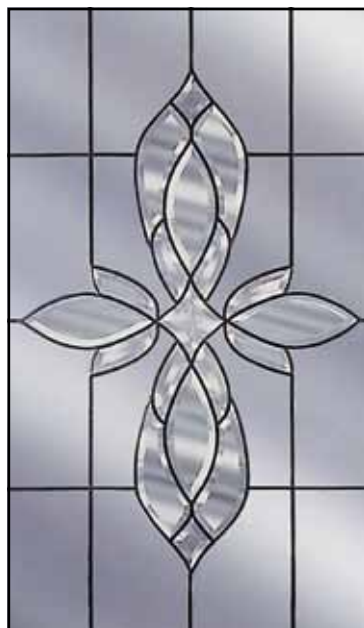
BD44A



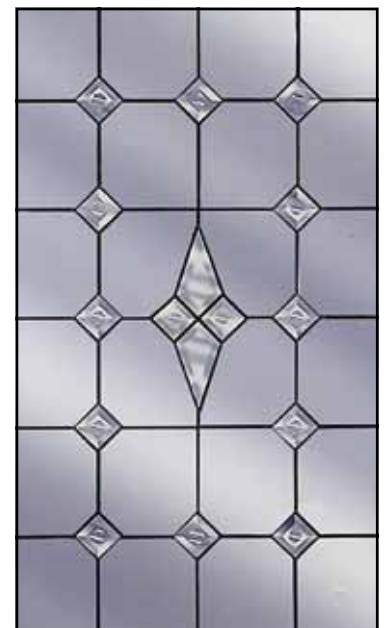
BD45A



BD46B



BD47C



BD48B

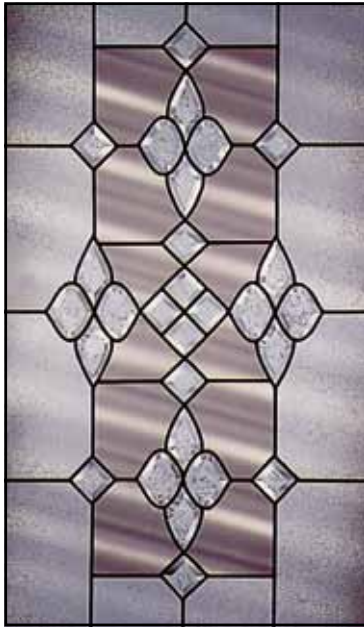




# NORTHERN EXPRESS GLASS Limited

## Doors

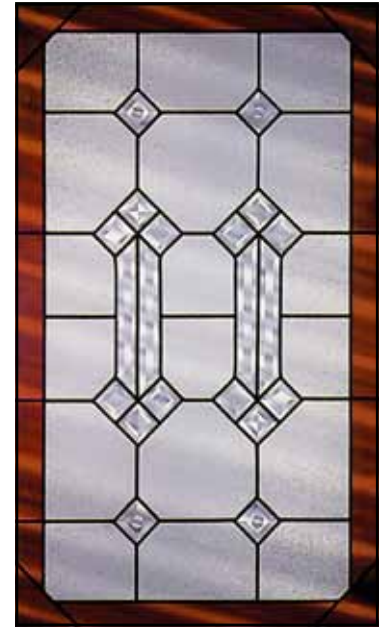
*Combined Lead, Film & Bevels*



BD49C



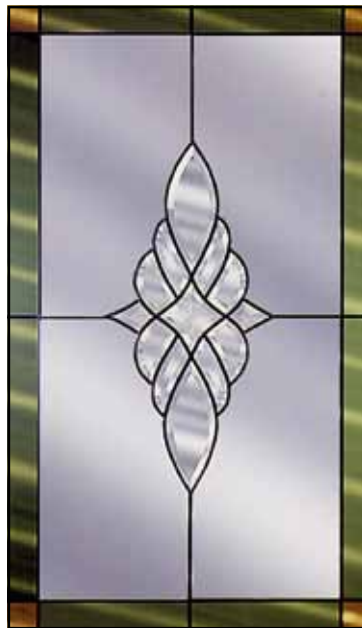
BD50C



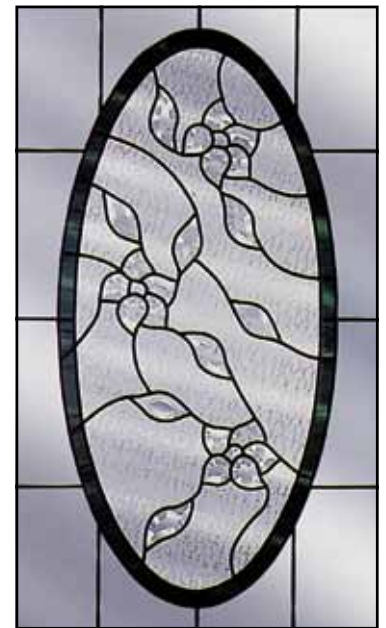
BD51B



BD52B



BD53C



BD54C



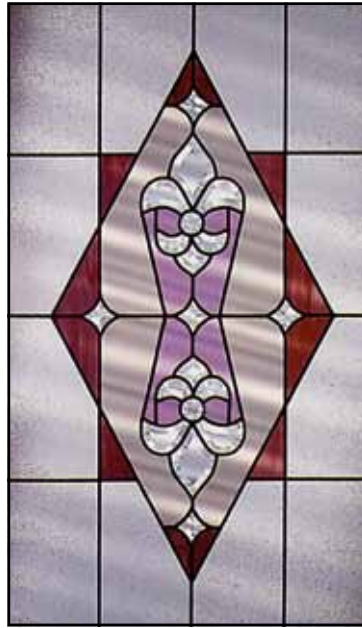
# NORTHERN EXPRESS GLASS Limited

## Doors

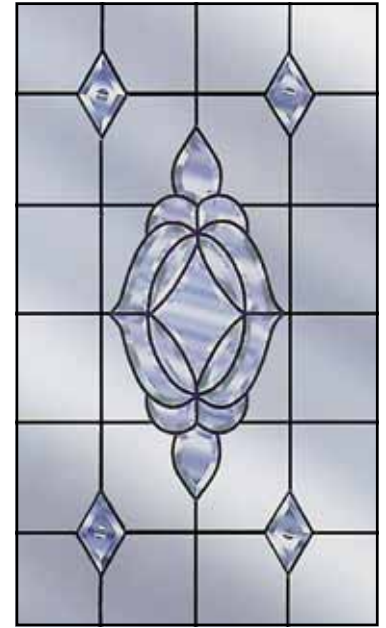
*Combined Lead, Film & Bevels*



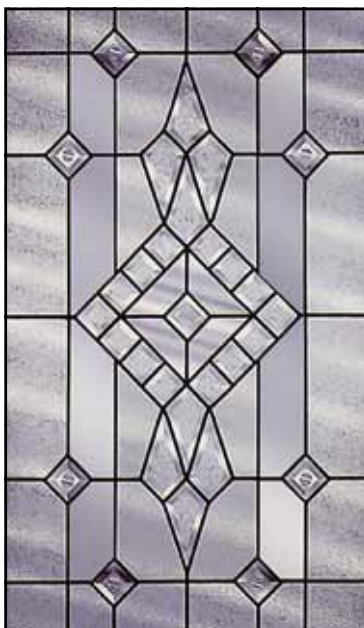
BD55C



BD56C



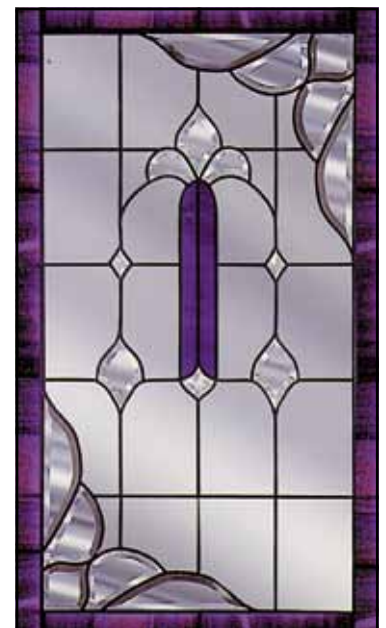
BD57C



BD58C



BD59C



BD60C

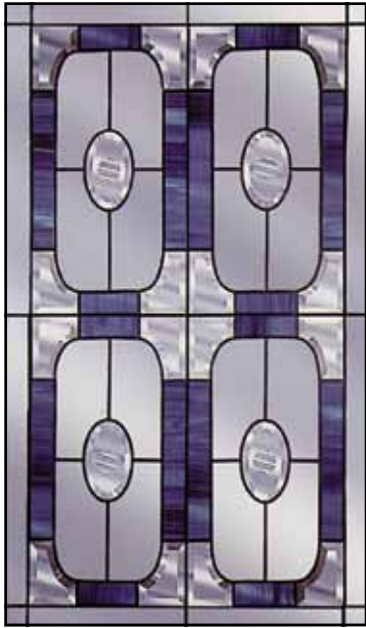




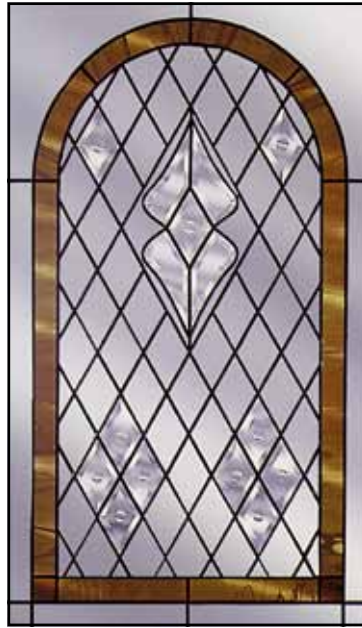
# NORTHERN EXPRESS GLASS Limited

## Doors

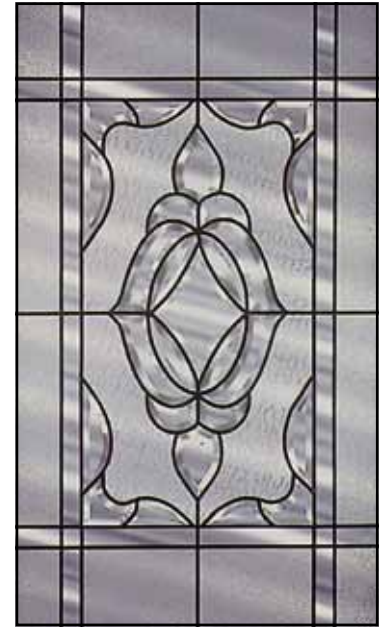
*Combined Lead, Film & Bevels*



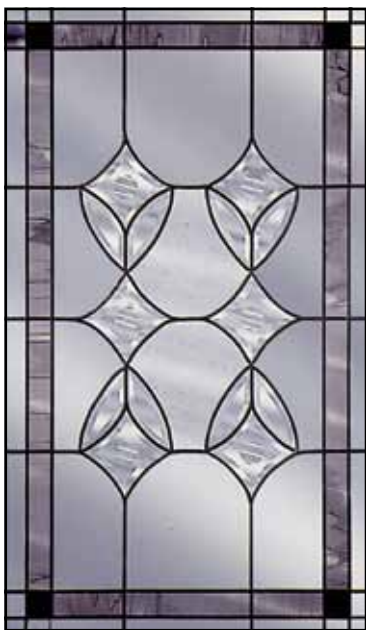
BD61C



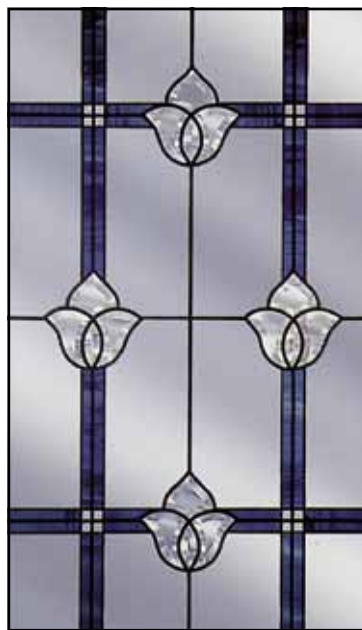
BD62C



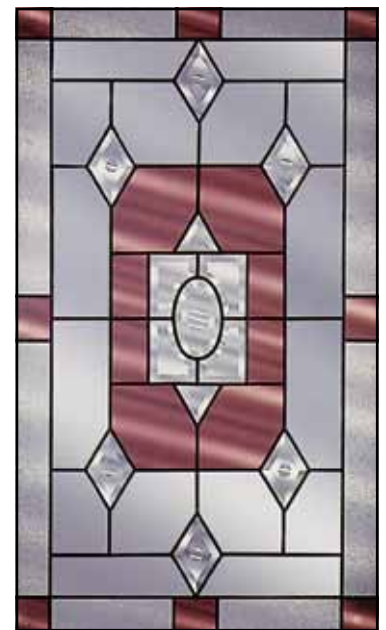
BD63D



BD64B



BD65B



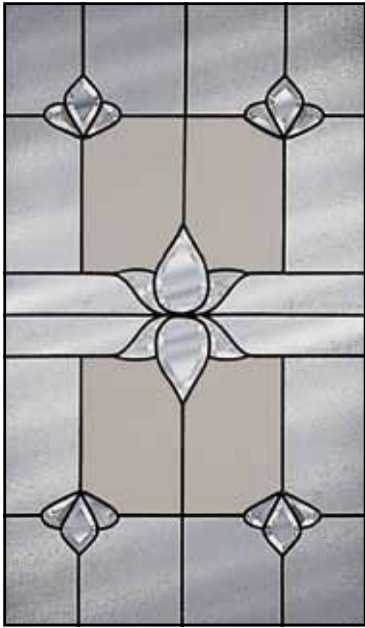
BD66C



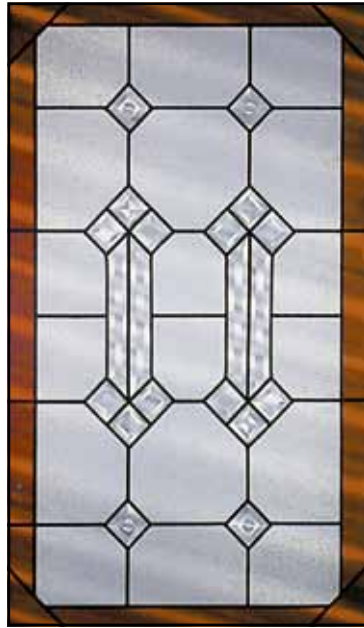
# NORTHERN EXPRESS GLASS Limited

## Doors

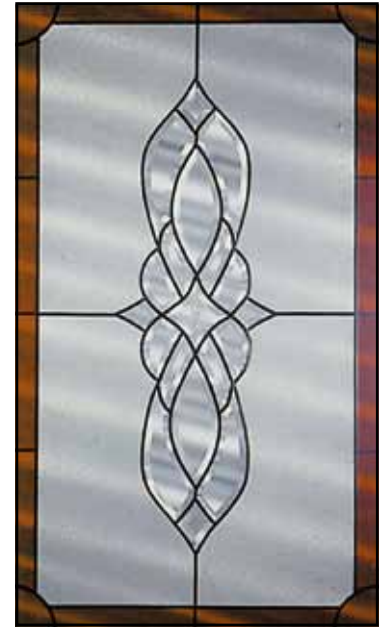
*Combined Lead, Film & Bevels*



BD67B



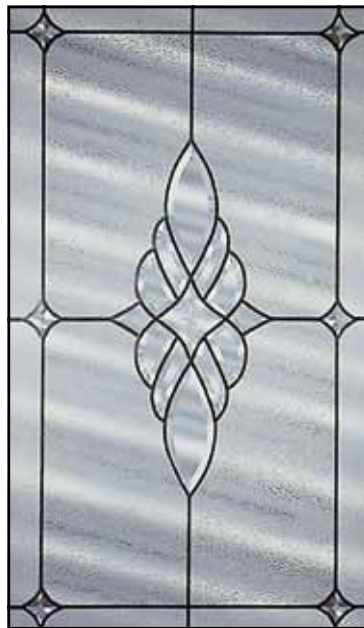
BD68B



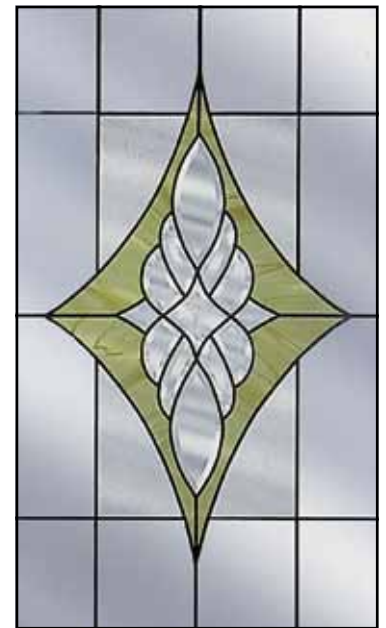
BD69B



BD70D



BD71C



BD72C

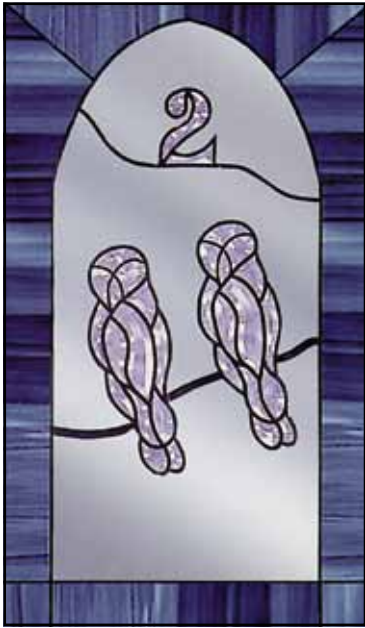




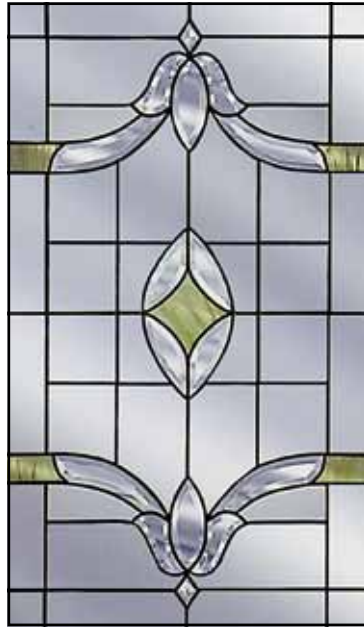
# NORTHERN EXPRESS GLASS Limited

## Doors

*Combined Lead, Film & Bevels*



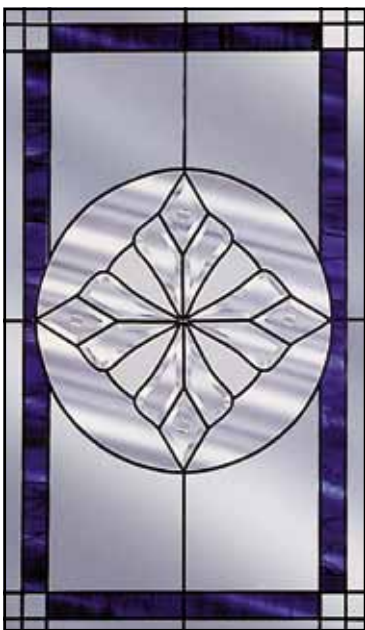
BD73C



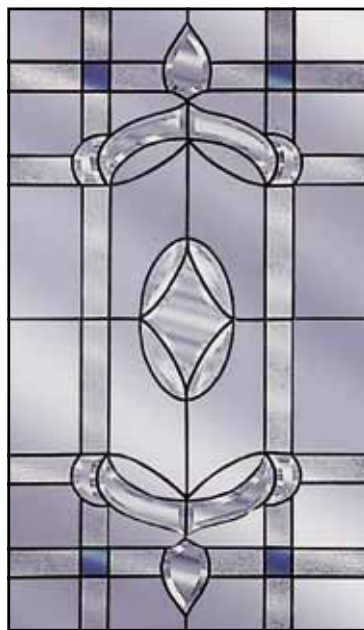
BD74C



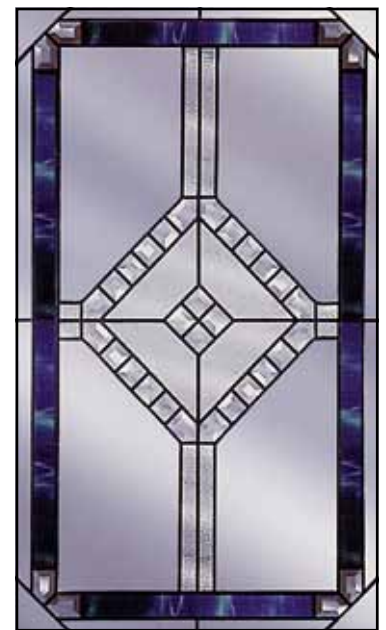
BD75B



BD76C



BD77C



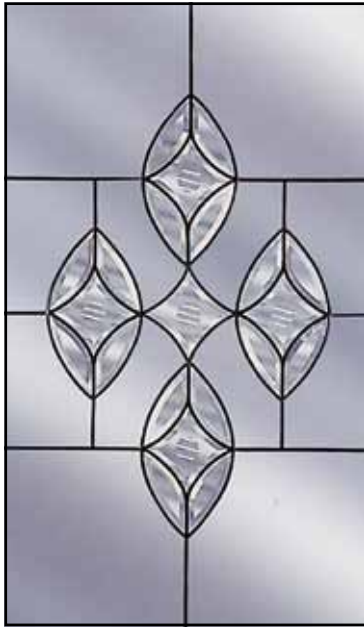
BD78C



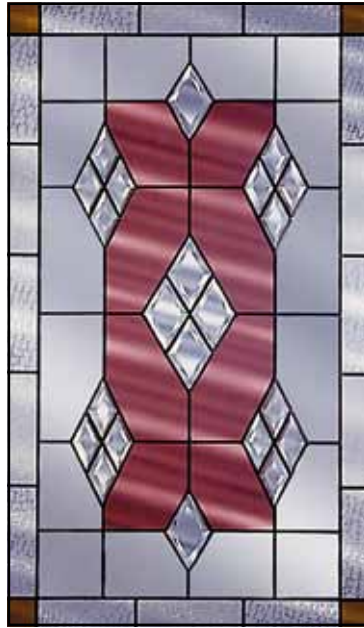
# NORTHERN EXPRESS GLASS Limited

## Doors

*Combined Lead, Film & Bevels*



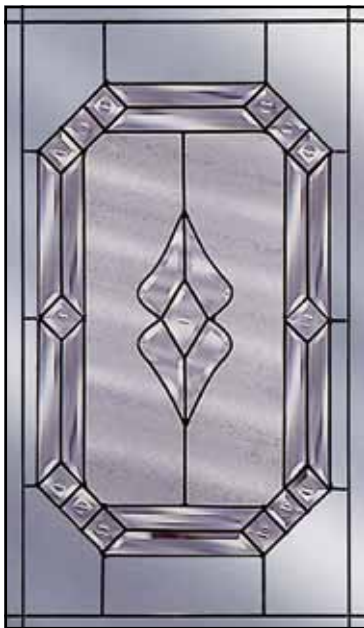
BD79B



BD80B



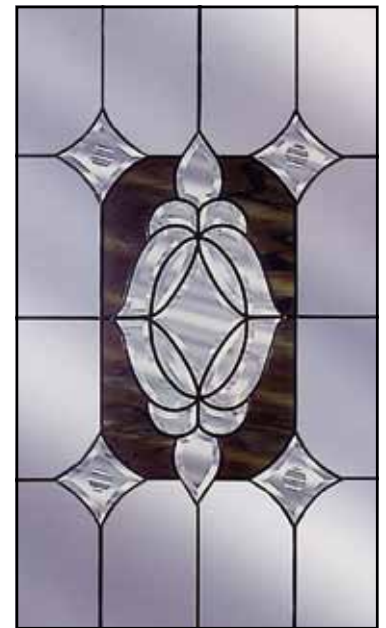
BD81C



BD82C



BD83C



BD84C





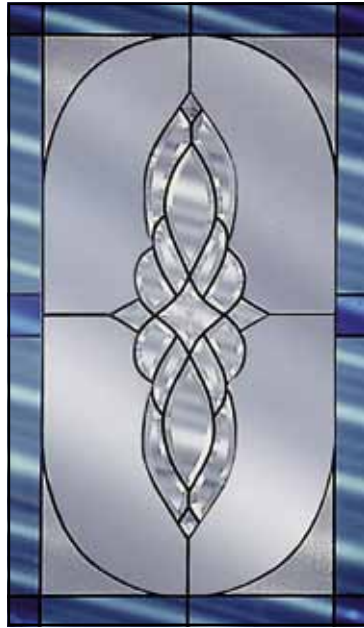
# NORTHERN EXPRESS GLASS Limited

## Doors

*Combined Lead, Film & Bevels*



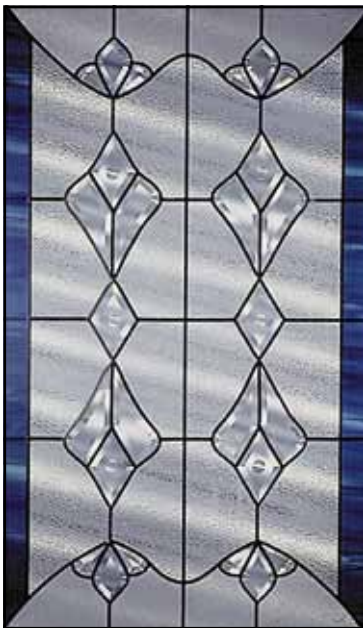
BD85A



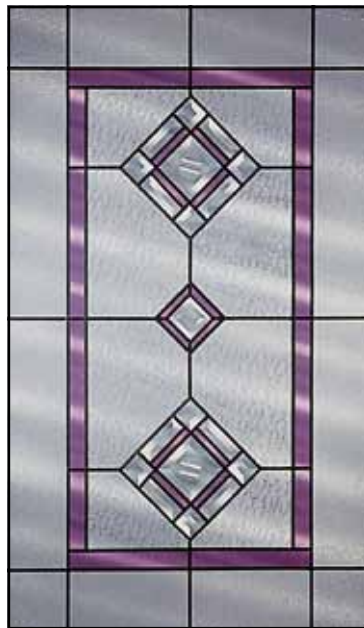
BD86C



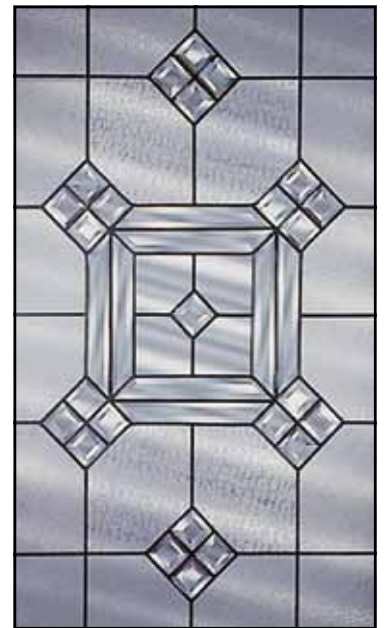
BD87C



BD88C



BD89B



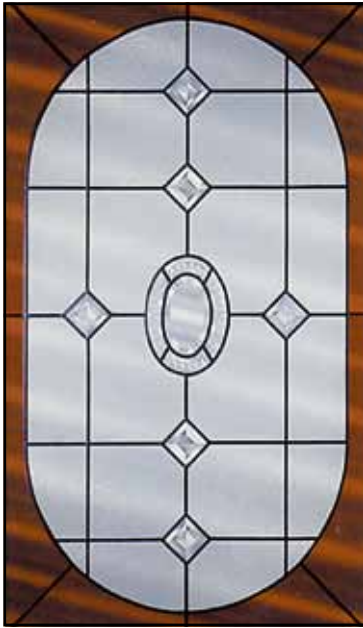
BD90C



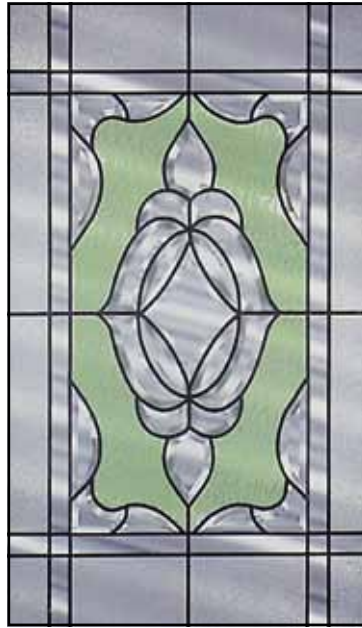
# NORTHERN EXPRESS GLASS Limited

## Doors

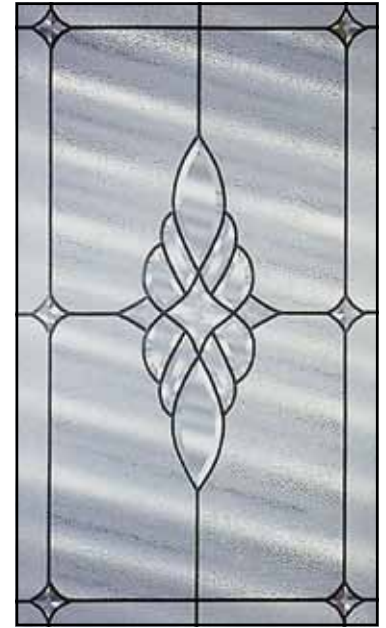
*Combined Lead, Film & Bevels*



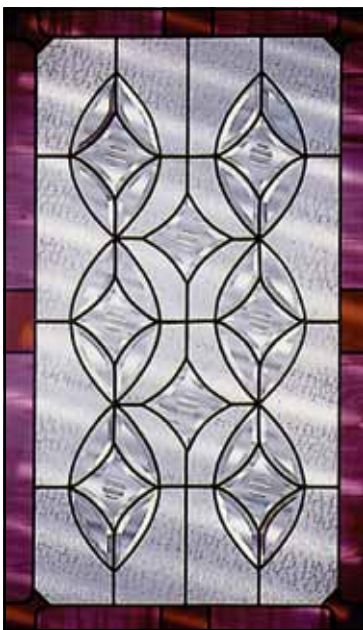
BD91B



BD92D



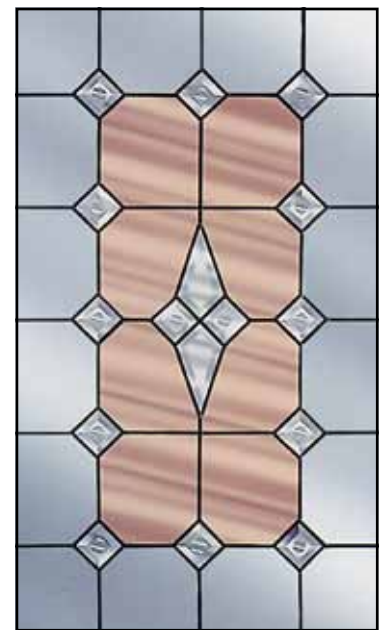
BD93C



BD94C



BD95D



BD96C

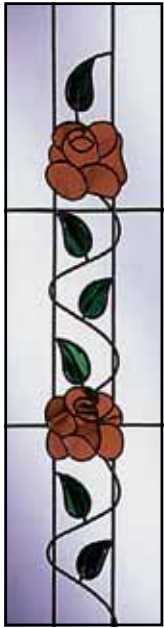




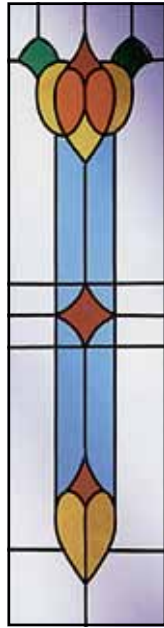
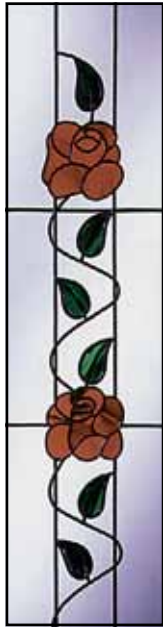
# NORTHERN EXPRESS GLASS Limited

## Panels

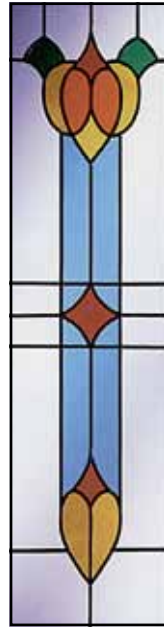
*Combined Lead, Film & Bevels*



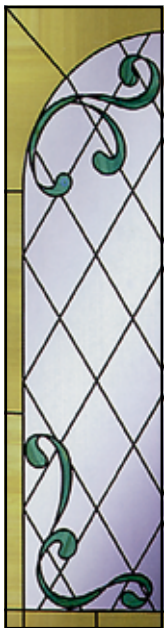
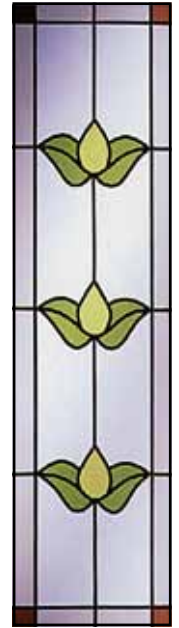
FD01B



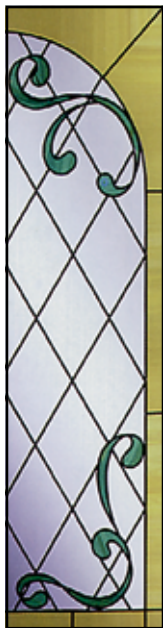
FD02B



FD03A



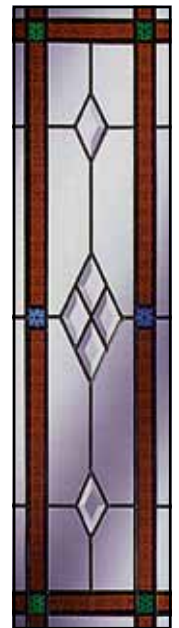
FD04C



FD05A



FD06A

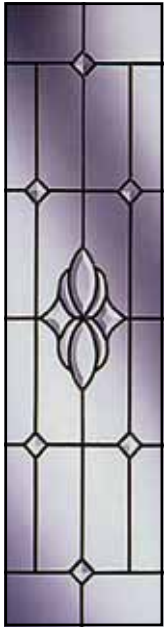




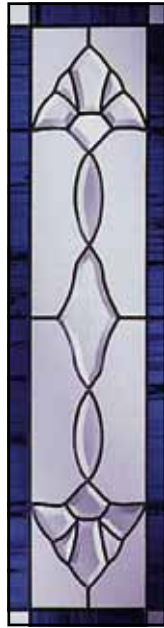
# NORTHERN EXPRESS GLASS Limited

## Panels

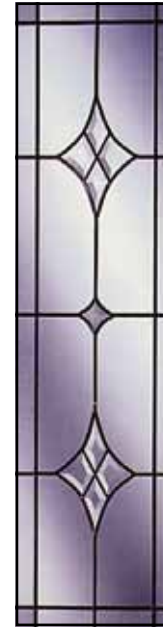
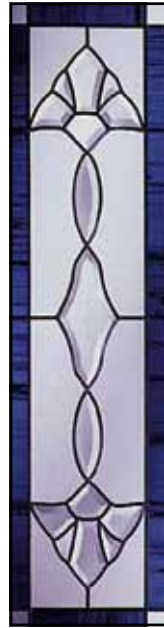
*Combined Lead, Film & Bevels*



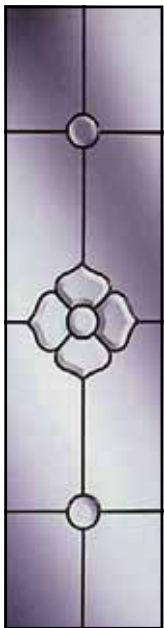
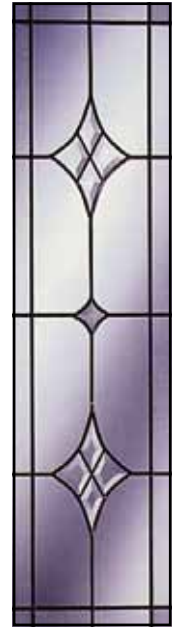
FD07B



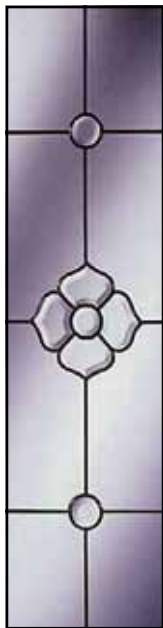
FD08B



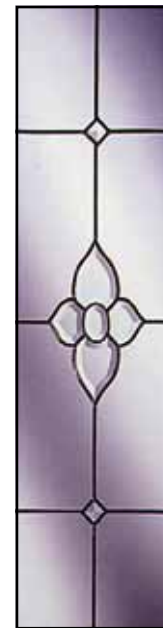
FD09A



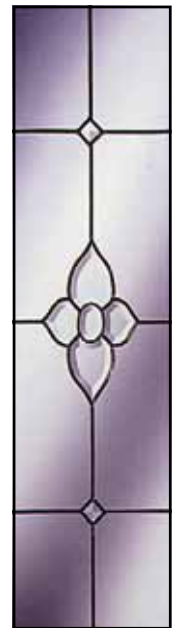
FD10A



FD11B



FD12A







# NORTHERN EXPRESS GLASS Limited

## Panels

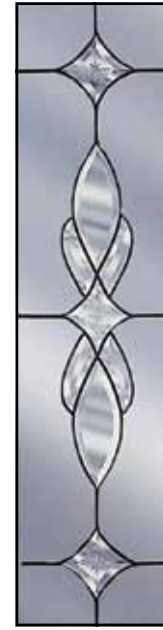
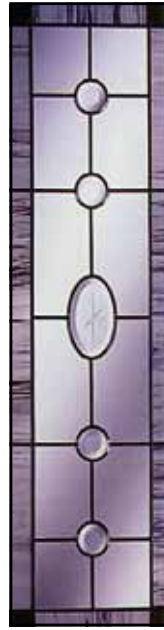
*Combined Lead, Film & Bevels*



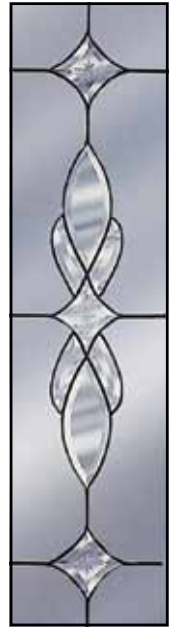
FD13B



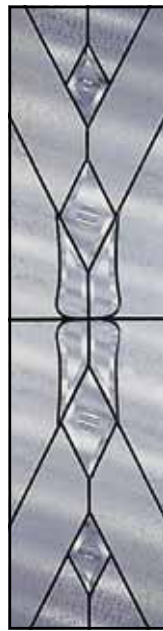
FD14A



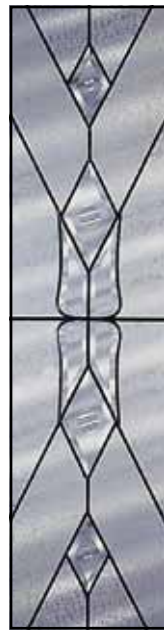
FD15C



FD16B



FD17C



FD18C





# NORTHERN EXPRESS GLASS Limited

## Panels

*Combined Lead, Film & Bevels*



FD19C



FD20C



FD21B



FD22C



FD23C



FD24C



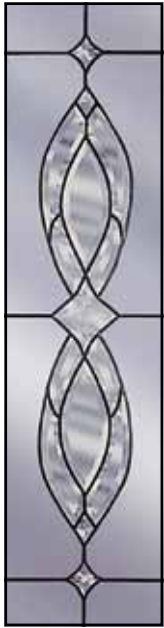




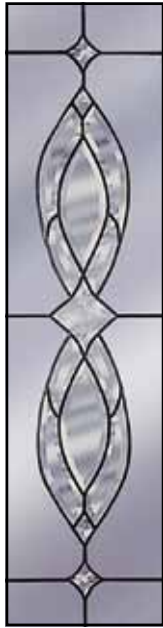
# NORTHERN EXPRESS GLASS Limited

## Panels

*Combined Lead, Film & Bevels*



FD25C



FD26C



FD27A



FD28A



FD29B



FD30B

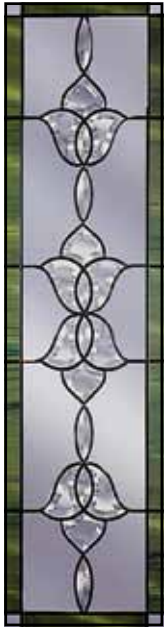




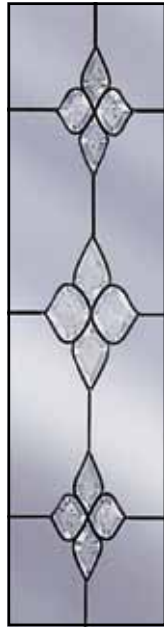
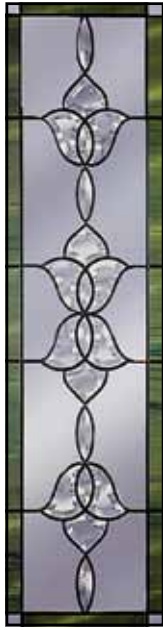
# NORTHERN EXPRESS GLASS Limited

## Panels

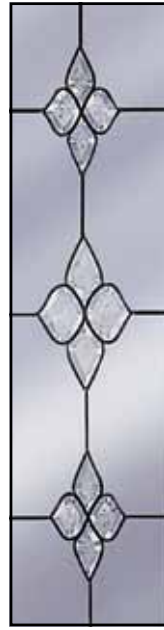
*Combined Lead, Film & Bevels*



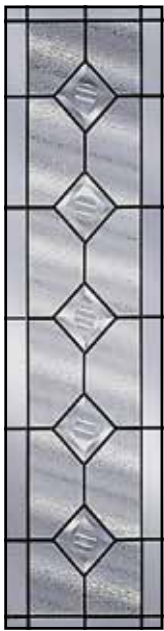
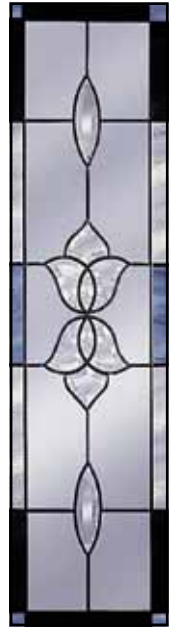
FD31C



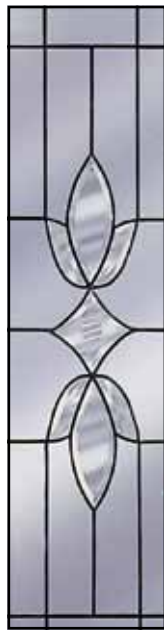
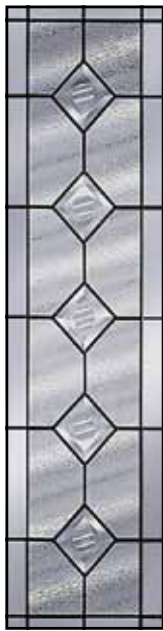
FD32B



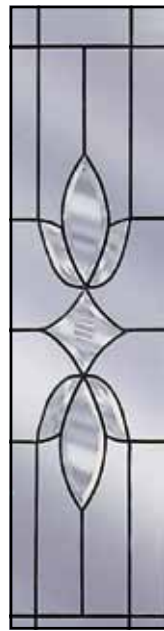
FD33B



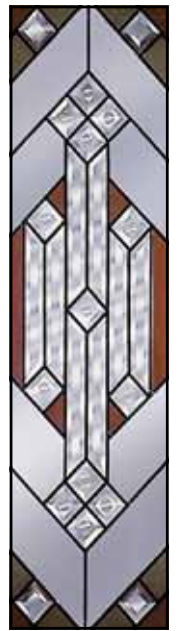
FD34B



FD35A



FD36D



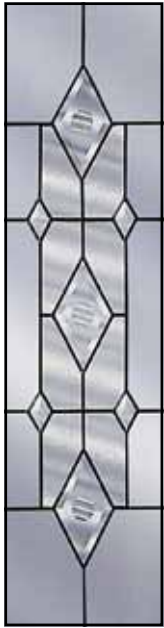




# NORTHERN EXPRESS GLASS Limited

## Panels

*Combined Lead, Film & Bevels*



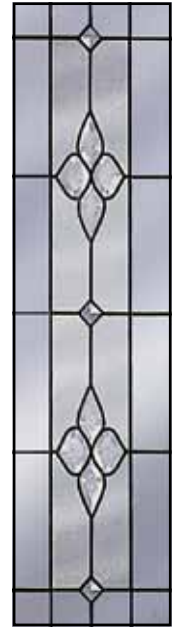
FD37B



FD38C



FD39B



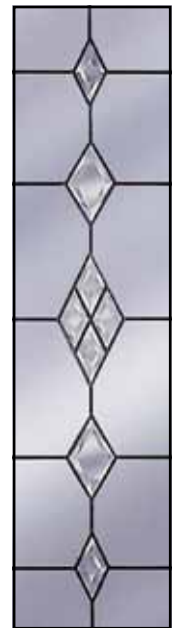
FD40C



FD41A



FD42A





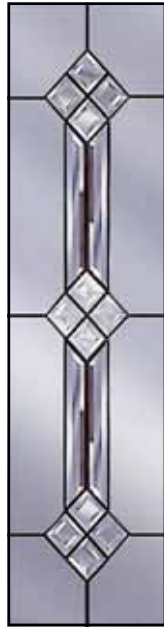
# NORTHERN EXPRESS GLASS Limited

## Panels

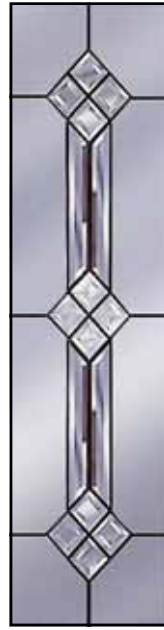
*Combined Lead, Film & Bevels*



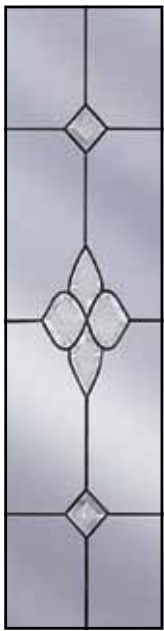
FD43C



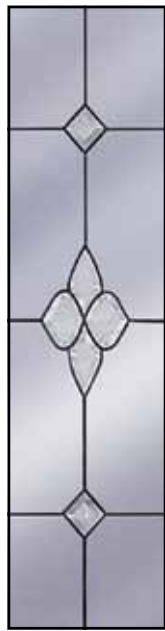
FD44B



FD45A



FD46A



FD47B



FD48D







# NORTHERN EXPRESS GLASS Limited

## Panels

*Combined Lead, Film & Bevels*



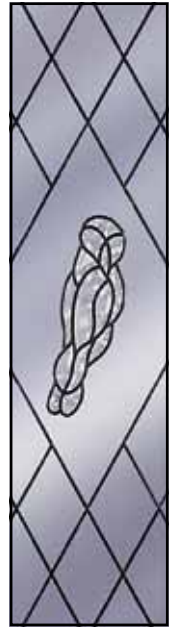
FD49A



FD50C



FD51C



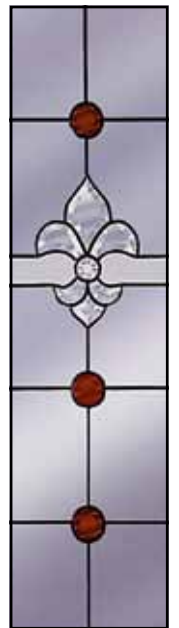
FD52A



FD53C



FD54A





# NORTHERN EXPRESS GLASS Limited

## Panels

*Combined Lead, Film & Bevels*



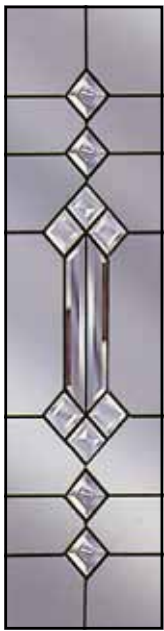
FD55C



FD56C



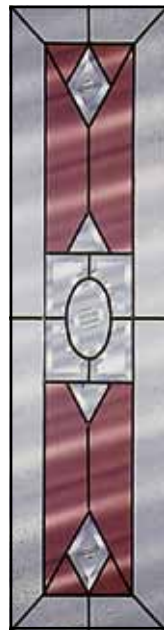
FD57A



FD58B



FD59C



FD60C



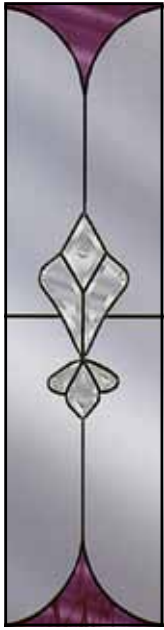




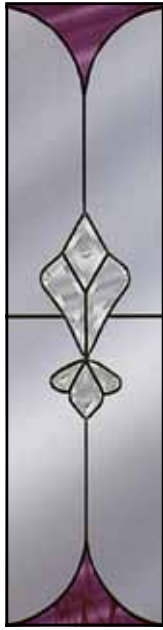
# NORTHERN EXPRESS GLASS Limited

## Panels

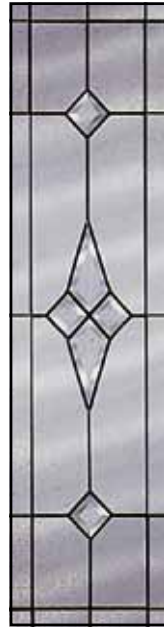
*Combined Lead, Film & Bevels*



FD61A



FD62A



FD63A



FD64B



FD65A



FD66C

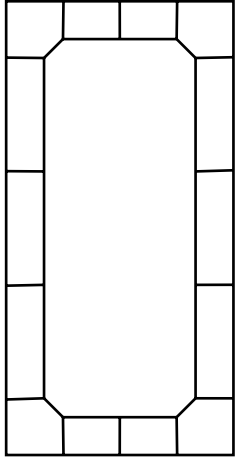




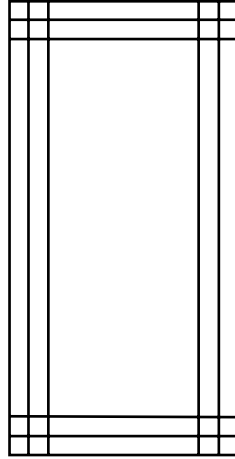
# NORTHERN EXPRESS GLASS Limited

**Lead Only**

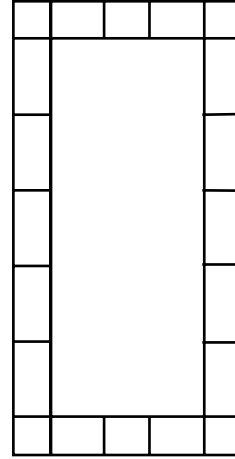
*Standard Lead Designs*



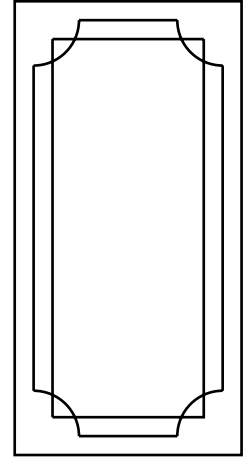
Cumberland



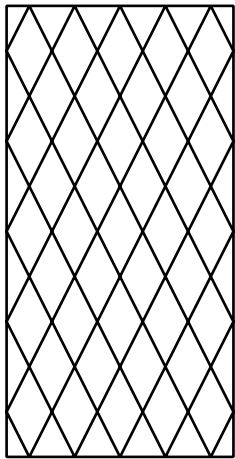
Northumberland



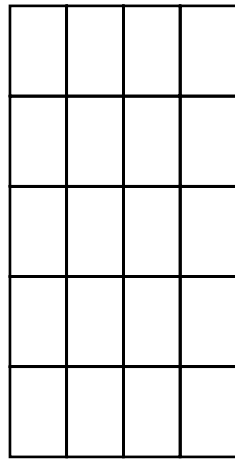
Westmorland



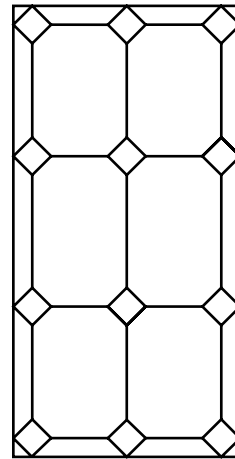
Cleveland



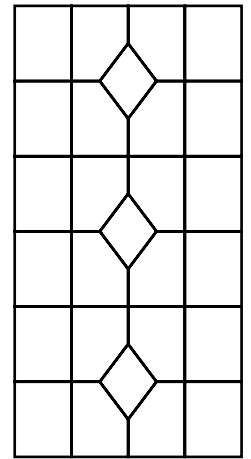
Diamond



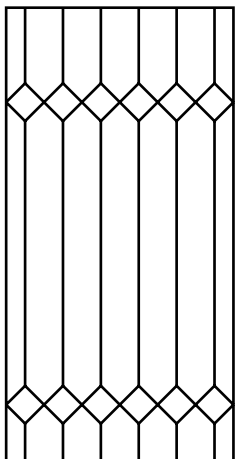
Rectangular



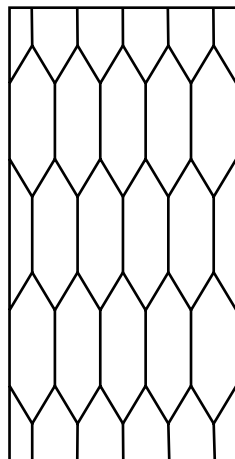
Hanover



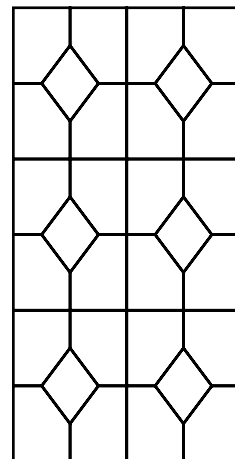
Queen Caroline



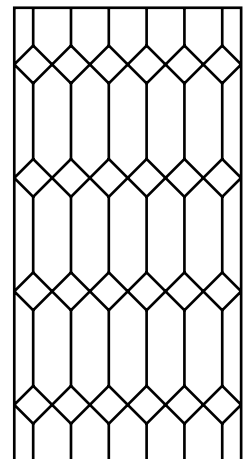
Stuart



Jacobean



Queen Anne



Windsor





BS EN 1279  
CMS 3044



# NORTHERN EXPRESS GLASS Limited



BS EN 12150  
CMS 3032 T

**NEG**

*10 Year Warranty*

1. If within TEN YEARS from the date of dispatch from our works, any unbroken double glazed unit is, through faulty manufacture, affected by material visual obscuration due to condensation or foreign particles within the cavity we will, subject to compliance with our normal Claims Procedure, supply a replacement unit.
2. Any claim under this warranty is subject to our representative being afforded reasonable opportunity to inspect any unit prior to de-glazing. On such inspection, if it is determined that the unit was not of faulty manufacture, you may be required to pay the costs of inspection.
3. Where replacement units are supplied, they will be our standard type of product current at the time of replacement and delivered to our customer's normal place of business.
4. This warranty applies only to the Manufacturer's units installed in normal building service conditions within the mainland of England, Scotland and Wales.
5. Our warranty **does not** cover:-
  - a. Consequential damage or loss arising from the glazing of a replacement unit except insofar as the restoration of such damage or loss falls within the rights of the Owner/ Occupier under Common Law or Statute.
  - b. Units which have not been handled, stored, installed and maintained completely in accordance with the instructions laid down in the Glass & Glazing Federation Glazing and Maintenance Manuals.
  - c. Units used in service conditions such as (but without limitation) use in transport vehicles, ships or temperature cabinets or use at altitude over 800 metres or transportation of units over such elevation.
  - d. Units displaying the optical phenomenon, occasionally seen as interference colour bands and known as "Brewster's Fringes"
  - e. Any units containing items not manufactured by ourselves such as Leaded Lights or stickers/markers.
  - f. The fitting costs incurred in replacing the unit
6. This warranty is not meant to be part of any contract of sale but is meant to offer its recipient rights additional to those given to him/her by any contract of sale or at common law. Accordingly, although the scope of this warranty is limited by the terms of paras. 1-5, so that any person to whom it is offered must accept it on those terms or reject it entirely, any limitations imposed by those paras. alone are not meant to take away any rights enjoyed or reduce any obligation owed independently of this warranty.

***NB. Maintenance Recommendations as published are  
The responsibility of the Owner/Occupier concerned.  
Failure to comply with them could invalidate the warranty***



BS EN 1279  
CMS 3044



# NORTHERN EXPRESS GLASS

## Limited



BS EN 12150  
CMS 3032 T

## NEG

### *Technical Data*

Northern Express Glass's (NEG) method of bonding glass, colour and lead together, uses original materials not available to other manufacturers, and should not therefore be confused with copies or inferior alternatives.

NEG products are tested as follows:

#### UV STABILITY

NEG products have been tested to BS3415 to withstand the sun's UV rays (which cause fading) and passed with significant success.

#### MATERIALS

All materials used to create NEG products are exclusive to NEG, and have been tested to meet the conditions laid down in EN1279-2&3 for sealed unit manufacture.

#### DESIGN

Because of the hand-crafted individual nature of the NEG product range, variations in colour may appear from time to time. Similarly, because of the nature of the printing process, colours in this catalogue may appear slightly different to those on the finished product. Slight imperfections in the colour of the finished product may appear (dust etc), but as with traditional stained glass are, considered as part of the product and will be deemed as normal.

Colours can be varied from one design to another; this must be specified at the time of order.

Certain designs are intended for either portrait or landscape situations, this must be considered when altering the format. Bevelled Glass contains crystals of a pre-set size, and large variations in glass dimensions can affect the layout of patterns.

Whilst this catalogue illustrates the wide range of NEG standard designs, our own specialist design facilities allow individual patterns to be created with relative ease.

All designs in this catalogue are defined by their unique NEG code number, and are also identified with an A, B, C or D. This determines their degree of complexity and consequently the tariff rate at which they will be charged.

All designs are viewed from the outside of the building.

#### GLASS

All designs will be incorporated in the outer pane of the sealed unit unless specified otherwise.

NEG uses the full range of patterned glass available to enhance the look of the decorative piece when included in a sealed unit (Minster is recommended).

#### INSTALLATION

NEG operate in accordance with GGF guidelines with safety glass where required by EN12150 parts 1&2:2000.

All NEG warranties will only be honoured if NEG instructions are followed, particularly with regard to the use of glazing silicones.

#### WARNING

The unauthorised use, copying or incorporation of any NEG owned design in any article contained in this brochure, constitute a criminal offence by virtue of section 107 Copyright, Designs and Patents Act 1988, for which you could be prosecuted.



## Visual quality standard for installed insulating glass units constructed from flat transparent glass

4.10 JANUARY 1998

1. Transparent glass used in the manufacture of insulating glass units is identical to that used traditionally for single glass and will, therefore, have a similar level of quality.

2. Both panes of the sealed unit shall be viewed at right angles to the glass from the room side standing at a distance of not less than 2 metres but for toughened, laminated or coated glasses (not less than a distance of 3 metres) in natural daylight and not in direct sunlight with no visible moisture on the surface of the glass. The area to be viewed is the normal vision area with the exception of a 50mm wide band around the perimeter of the unit.

3. Flat transparent glass, including laminated or toughened (tempered) glass, shall be deemed acceptable if the following phenomena are neither obtrusive nor bunched: totally enclosed seeds, bubbles or blisters; hairlines or blobs; fine scratches not more than 25mm long, minute embedded particles.

Obtrusiveness of blemishes shall be judged by looking through the glass, not at it, under lighting conditions as described in 2.

4. When thermally toughened glass is viewed by reflection, the effect of the toughening process may be seen under certain lighting conditions. The visibility of surface colouration or patterns does not indicate deterioration in the physical performance of the toughened glass. Because of the nature of the toughening process, distortion will be accentuated when the glass is viewed in reflection or incorporated in insulating glass units.

5. Visible double reflection can occur under certain lighting aspect conditions, especially when viewed from an angle.

This is an optical phenomenon arising from multiple surface reflections in sealed units.

6. The manufacture of flat laminated glass does not usually affect the visual quality of the glass incorporated in insulating glass units.

However, the faults generally accepted in Paragraph 3 may be increased in number if several glasses and interlayers are used in the production of laminated glass.

When viewed under certain light conditions, insulating glass units incorporating clear or tinted flat laminated glass may show a distortion effect caused by reflection on the multiple surfaces of the components of the laminated glass.

### 7. Brewster's Fringes

The appearance of the optical phenomenon known as Brewster's Fringes is not a defect of the glass, and can occur with any glass of high optical and surface quality. This phenomenon is a result of the high quality now being achieved world wide by modern methods of glass manufacture.

Brewster's Fringes occur if wavelengths of light meet up with each other when they are exactly  $180^\circ$  out of phase – an example of the phenomenon known to physicists as the interference of light. The effect is similar to, although usually much smaller than, the interference fringes which can sometimes be seen on toughened glass windscreens.

Brewsters' Fringes occur when the surfaces of the glass are flat and the two panes of glass are parallel to each other; i.e. when the light transmission properties of the installation are of a very high order. This phenomenon is not a defect of the product, being dependent on the laws of

physics and not on the quality of the insulating glass. In fact it arises because modern glass made by the float process is flat, therefore, free of the distortion inherent in sheet glass.

The occurrence of Brewster's Fringes is in its nature rather like (though very much more rare than) the fact that under certain conditions, the observer will see a reflection of himself in any window or door – and no-one could claim that this was a defect of glass.

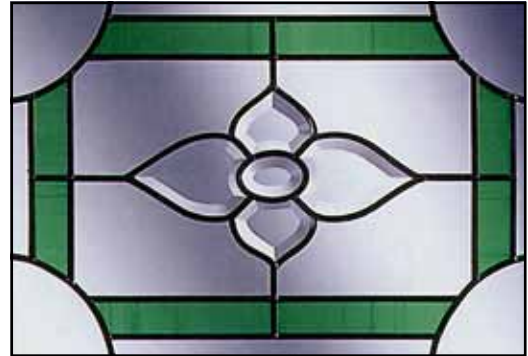
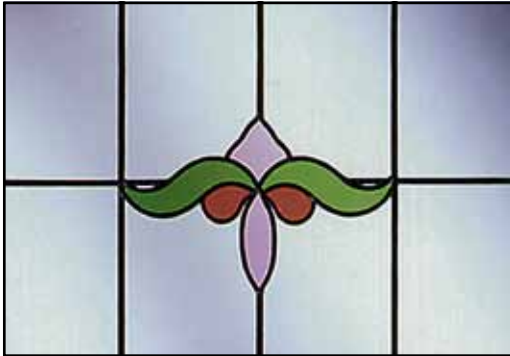
### Note: Patterned Glass

The above criteria do not apply to patterned glass, as due to the method of manufacture, imperfections such as seeds and bubbles are deemed to be acceptable.





# NORTHERN EXPRESS GLASS Limited



INSULATED GLASS UNIT MANUFACTURERS

TOUGHENED GLASS MANUFACTURERS

NATIONWIDE DELIVERIES

GLASS CUT TO SIZE

DECORATIVE GLASS DESIGNS



BS EN 1279  
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Company Registered In England No. 2796677  
World Wide Web: [www.n-e-g.co.uk](http://www.n-e-g.co.uk)  
E-Mail: [orders@n-e-g.co.uk](mailto:orders@n-e-g.co.uk)