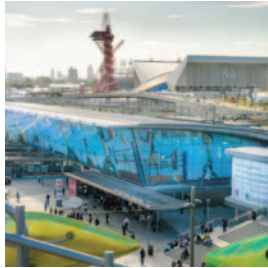


contrAvision® *Perforated Window Films*



Contra Vision® Performance™
 Contra Vision® Sprint™
 Contra Vision® Campaign™

See-through graphics invented here

Our first pioneering inventions of 30 years ago were the starting point for today's see-through graphics industry. We pride ourselves on a culture of inventiveness and product development, which is continually expanding the possibilities for see-through graphics.

An unrivalled range of see-through graphic products

Every window is different and a one-size fits all approach to see-through graphics can lead to disappointing results. That is why we have developed an expansive range of products, which can provide solutions for a variety of locations. The range includes long-term and short-term products, for application to the inside and outside of a window, a choice of transparency levels and also a solution for night-time visibility of see-through graphics.

Progressive product technology to optimise performance

We are continually striving to introduce new product enhancements to improve printability, visual performance, durability, window adhesion and removability. Our range features two liner options which are optimised for different printing platforms. Contra Vision® Perforated Window Films incorporate our unique Contra Vision® *Grayliner*™ technology which gives the best indication of how printed graphics will appear on the window.

30 years' experience of specialising in see-through graphics

We are delighted to offer our know-how and experience to printers and specifiers to ensure optimal product specification and the best results.



BlackBerry Headquarters before branding, UK



BlackBerry Headquarters wrapped in Contra Vision® *Performance*™, UK

| | | | |
|--|-------------------------------------|---|----|
| White on Black perforated window films for one-way vision | Contra Vision® <i>Performance</i> ™ | Durable, premium product manufactured to exacting standards. Excellent printability and quick and clean removal. | 4 |
| | Contra Vision® <i>Campaign</i> ™ | Economical films suitable for short-term applications such as retail campaigns. Retains high specification adhesive for clean removal. | 5 |
| A wide range of transparency options | High transparency (50% or 40%) | To maximise through-vision and daylight inside a building or vehicle. Works best with large or striking graphics. | 6 |
| | Low transparency (30% or 20%) | For maximum vibrancy to the printed graphics and maximum privacy. Sufficient through-vision for most static applications. | 7 |
| Inside surface application options | Contra Vision® Clear | A clear perforated window film which requires white ink to print see-through graphics. Good for cold weather and inaccessible windows. | 8 |
| | Contra Vision® <i>Sprint</i> ™ | Remarkable print-receptive adhesive, which is re-positionable on the window for easy installation. White ink not required. | 9 |
| Day and night performance | Contra Vision® BACKLITE™ | A translucent white perforated window film allows graphics to be seen in adverse lighting conditions. | 10 |
| Different liner technologies to optimise printing on solvent, latex and UV machines | Replacement Liner | Our patented layflat liner offers the highest quality performance, but not recommended for UV inkjet, or latex inkjet with an optimizer primer. | 11 |
| | Universal Liner | Our universal liner can be used with all printing technologies, including UV inkjet, and latex inkjet with an optimizer primer. | 11 |
| Overlaminates | Contra Vision® Overlaminates | Optically clear coverings to protect the perforated holes from rainwater, dirt and abrasion. | 11 |

White on Black perforated window films for one-way vision

contravision® *Performance*™

White and black perforated window films are used to produce one-way vision graphics. Typically the film is applied to the outside of windows with the graphics facing outwards and the black side facing inwards, which allows through-vision.

Contra Vision® *Performance*™ is our premium brand of perforated window films made from high-performance, thick polymeric calendered face films. The product range is manufactured to exacting standards to provide high quality printing, minimal shrinkage and problem-free installation and removal.



Contra Vision® *Performance*™ external view

We recommend Contra Vision® *Performance*™ white on black perforated window films for use on longer term applications, vehicle graphics and any other arduous applications, and where speed of removal is important, for example on building wraps. The thickness and durability of our polymeric vinyl formulation means that an overlamine is only needed in locations where the graphics will be exposed to rain and/or dirt where constant through-vision is an essential requirement or in situations where the films are exposed to abrasion or chemical washing.



Contra Vision® *Performance*™ internal view out

Technical

- 180 micron thick German-engineered polymeric calendered vinyl
- Formed by laminating white and black layers together to give optimum consistency and printing performance
- The polymeric formulation ensures minimal shrinkage after installation to avoid dirt-attracting adhesive from becoming exposed
- REACH compliant, avoiding the use of potentially harmful substances
- The clear, solvent acrylic adhesive is optimised to give easy, low temperature application, reliable adhesion and quick and clean removal when required
- Please refer to the relevant technical data sheets or www.contravision.com for more information
- Please contact your local supplier for availability of roll lengths and widths, liner types and transparencies

contravision® *Campaign*™

Contra Vision® *Campaign*™ Perforated Window Films are suitable for the production of short-term see-through window graphics on static applications, for example seasonal promotions or changeable point-of-purchase graphics communicating special offers or discounts. We would recommend Contra Vision® *Performance*™ for vehicles, building wraps and longer term applications.



Contra Vision® *Performance*™ and Contra Vision® *Campaign*™ both feature **Contra Vision® *Grayliner*™**, a major patented improvement to perforated window films. These window films come with a grey coloured liner instead of the traditional white or clear varieties. The grey colour visible through the perforated holes gives a more accurate representation of how the printed image will look on a window.



Printed graphic with traditional white liner

Technical

- 150 micron face film giving the best possible printing, application and removal performance for this class of product
- Features a clear, solvent acrylic adhesive to give easy, low temperature application, reliable adhesion and clean removal when required
- REACH compliant, avoiding the use of potentially harmful substances
- Please refer to the relevant technical data sheets or www.contravision.com for more information
- Please contact your local supplier for availability of roll lengths and widths, liner types and transparencies

It avoids the “washed out” appearance of prints on a white liner and deters the use of excessive, wasteful amounts of ink that can damage the performance of perforated window films. It also helps to showcase the printed image in the best possible way, increasing the likelihood that test prints are accepted and reducing the likelihood that final prints are rejected prior to installation.



Same printed graphic with Contra Vision® *Grayliner*™

High transparency

Contra Vision® Perforated Window Films are available in a wide range of transparencies, offering the choice of different degrees of image strength, privacy and apparent 'tint' when viewed from the back side. Please contact your local supplier for availability information.

The transparency of the film is determined by the diameter and spacing of the holes in the vinyl.

Our higher transparency films of 50% and 40% provide the best quality through-vision from the inside. There are laws or regulations in some countries, states or local authorities which specify minimum transparency requirements of vehicle windows. Please check before use.

Exterior view in

Clear Panel



50%



40%



Interior view out



Low transparency

Lower transparency films such as 20% and 30% create see-through graphics with a greater visual impact. They allow smaller type sizes to be used, better privacy and protection from solar heat gain and UV radiation.

Other factors apart from transparency are important when creating impactful see-through window graphics. The use of striking images with bright, contrasting colours will increase visual impact and privacy within a vehicle or building. One-way see-through graphics are only effective where there is more light on the outside (image side) than on the inside (black side). Contra Vision® BACKLITE™ see-through graphics offer a solution if light levels are reversed, for example during the hours of darkness.

30%



20%



Solid Vinyl



Solid Vinyl

contrAvision® *Clear Perforated Window Film*

See-through graphics films applied to the outside of windows give the maximum visual impact. They are the simplest and the most cost-effective to produce.

See-through graphics applied to the inside of a window are protected from vandalism, rainwater and street dirt. Access to the inside of glazing is often easier than to the outside and can enable colder weather application. Inside-applied see-through graphics are not generally suitable for use with tinted glass, which will dull the impact of the graphics.

Contra Vision® Clear Perforated Window Film can be used for the production of all inside application see-through graphics. The film is suitable for all ink types although white ink is required to back-up the graphics. The design is printed reverse-reading and then backed up with a layer of white ink followed by a layer of black to produce one-way vision see-through graphics. A white layer (without a black layer) produces Contra Vision® BACKLITE™ see-through graphics that are more visible during the hours of darkness with internal illumination.

Please contact your local supplier for availability of roll lengths and widths, liner types and transparencies.



Access to the inside of glazing is often easier than to the outside

contrAvision® *Sprint™*

Contra Vision® *Sprint™* features a remarkable, print-receptive adhesive. Print onto the product's white adhesive face and, surprisingly, it still retains adhesive properties. Apply the material to the inside surface of glass with the printed face visible from the outside.

The great advantage of Contra Vision® *Sprint™* is that it enables easy installation and repositioning of graphics when required. Posters can also be taken down from the window, stored and reused again later.

The product features Contra Vision® *Grayliner™*. The maximum recommended size for a Contra Vision® *Sprint™* application is A0 (36" x 48") and it is only suitable for eco or low solvent printing.

Please contact your local supplier for availability of roll lengths and widths, and transparencies.



contrAvision® BACKLITE™



Contra Vision® BACKLITE™ daytime view



Contra Vision® BACKLITE™ internal view out



Contra Vision® BACKLITE™ night-time view

Contra Vision® Translucent White Perforated Window Film enables see-through graphics to be illuminated at night using (back) lighting from inside the window. This overcomes a problem faced by conventional (white on black) perforated window film, which suffers from image fading and becomes transparent if the inside is illuminated at night.

Existing internal or in-store lighting is usually sufficient to create the Contra Vision® BACKLITE™ effect. The impact of the illuminated graphics can be increased by removing point sources of light from directly behind the window and adding spot or flood lights from outside the field of vision.

Contra Vision® Translucent White Perforated Window Film is also an option for indoor settings such as airports and shopping centres, where there is not enough natural light to strongly illuminate the front side of the graphics.

The view out through a translucent white perforated window film is still remarkably good and natural light is allowed into the building. The eye will tend to focus on the outside view and ignore the ghost image of the print that is visible on the inside of the film. In some settings the ghost image has been used as a design feature to enhance interior décor.

Please contact your local supplier for availability of roll lengths and widths, liner types and transparencies.

Replacement Liner Universal Liner

Contra Vision® Replacement Liner offers unrivalled printability and adhesion for solvent and most latex printers. It is constructed with a precision "lay flat" liner replacing the original perforated liner, which offers two significant advantages.

Firstly, the liner construction does not include a layer of perforated paper, which can absorb moisture and curl the material. This ensures the perforated window film lays flat during printing and overlaminating. Secondly the replacing of the original perforated liner ensures the adhesive spreads out evenly over the face film. This minimises the "silvering effect" which is sometimes visible when perforated window films are applied to a window.

Contra Vision® Replacement Liner is not suitable for UV inkjet or latex inkjet with an optimizer primer.

Contra Vision® Universal Liner (also known as Additional Liner) is suitable for use with all printing technologies, including UV inkjet and latex inkjet with an optimizer primer. We believe our extensive testing and optimisation of liner thickness and construction makes Contra Vision® Universal Liner best in class for this type of liner, ensuring superb printability and adhesion.

AV Overlaminates

Contra Vision® Overlaminates

Perforated window film cannot be clearly seen through if rain or other water sits in the holes, because the water acts like a tiny lens distorting the view. Contra Vision® laminating films are 'optically clear' when bridged over the perforated holes, maintaining through-vision while providing protection from abrasion and washing chemicals and preventing dirt and water from entering the perforated holes.





The Contra Vision® range of perforated window films is available from:

Please contact your local supplier for availability of roll lengths and widths, liner types and transparencies.
Please visit www.contravision.com for more in-depth product and technical information



This document is intended as a source of information, is given without guarantee, and does not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of the product for their specific intended purpose.

Contra Vision®, Contra Vision® Performance™, Contra Vision® BACKLITE™, Contra Vision® Campaign™, Contra Vision® Sprint™ and Contra Vision® *Grayliner*™ are trade marks of Contra Vision Ltd.

| APPLICATION | CONTRA VISION PRODUCT | TRANSPARENCY | LINER / PRINTING TECHNOLOGY / PRODUCT CODE | |
|---------------------|--|------------------|--|-----------------|
| | | | Replacement Liner | Universal Liner |
| Outside Application | Contra Vision® Performance™ White on Black Perforated Window Film | 50% Transparency | WBPRG50 † | WPAG50 |
| | | 40% Transparency | WBPRG40 | WPAG40 |
| | | 30% Transparency | WBPRG30 | WPAG30 |
| | | 20% Transparency | WBPRG20 | WPAG20 |
| | Contra Vision® Campaign™ White on Black Perforated Window Film | 50% Transparency | | WBCMAG50 |
| | | 40% Transparency | | WBCMAG40 |
| | | 30% Transparency | | WBCMAG30 |
| | | 20% Transparency | | WBCMAG20 |
| | Contra Vision® BACKLITE™ Translucent White Perforated Window Film | 30% Transparency | | TWPAG30 |
| | | 20% Transparency | | TWPAG20 |
| Inside Application | Contra Vision® Performance™ Clear Perforated Window Film | 30% Transparency | | CLPAC30 |
| | | 20% Transparency | | CLPAC20 |
| | Contra Vision® Sprint™ White on Black Perforated Window Film | 30% Transparency | WBMSG30 | |
| | Contra Vision® BACKLITE™ Clear Perforated Window Film | 30% Transparency | | CLPAC30 |
| | | 20% Transparency | | CLPAC20 |
| | Contra Vision® Laminating Film PET laminating film for small posters only | | | CL20YY |
| Overlaminates | Contra Vision® Laminating Film Cast PVC laminating film | | | CL50CY |