

Meet Casper.

Casper™ Cloaking Technology BY DESIGNTEX

User Overview

Designtex Casper Cloaking Technology

Process Overview

To ensure success for your Casper project, please review the 5 steps below. You can also view Casper overview **video** . Any questions, please contact casper@designtex.com

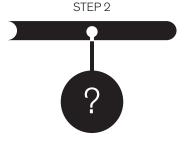


VALIDATE

The most important step in considering Casper for your project is making sure that it is compatible with your displays and if so, in what orientation the film will need to be installed.

Casper is limited in its ability to cloak some types of displays. It is designed to work with LED screens 40" wider. Displays smaller than this dimension may or may not cloak. Also, Casper will not cloak most touchscreen, phone screens and other smaller devices.

Click **here** Casper validation video.



CONSIDER

When considering Casper for your space, there are a few things to keep in mind:

Casper can change opacity depending on the viewing angle; it will not be fully opaque in all circumstances. The worst case scenarios are when the viewer is very close to the glass and viewing at an extreme angle.

The addition of Casper Graphic can help alleviate this issue.

To test, place the sample in several locations on the glass and note the appearance of Casper.

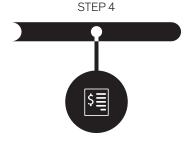
Click **here** to view Casper considerations video.



PLAN

If you are ready to start planning and budgeting for Casper, some simple rules of thumb will allow you to quickly determine approximately how much material you'll need for your project.

Click **here** to view Casper planning your project video.



PURCHASE

Casper is distributed globally by our partner, Decorative Films. If you are an end user, both the Casper and the installation can be purchased from either a professional window film installer or a Steelcase Dealer. To find a local resource, contact casper@decorativefilm.com or casper@designtex.com. You can also search Steelcase Dealer locations.

If you are a glass film installation company and are interested in reselling and installing Casper, contact Decorative Films about qualifying as a Casper reseller.

Click **here** to view Casper purchase and installation video.



INSTALL

Although Casper installs like a window film, it isn't. It's a technology that is applied to glass and it is critical to use a professional installer who will follow all the of the installation guidelines. We highly recommend you use a company with an established record of professionalism and the ability to install Casper.

Click **here** to view Casper purchase and installation video.

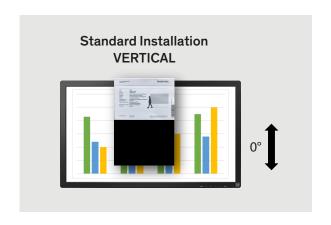
Validation Guide

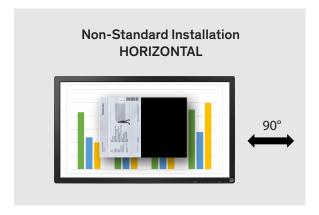
Validating Monitors For Compatibility with Casper

To ensure that a monitor works properly with Casper and to determine the correct installation orientation of the film, use the following validation process:

- 1. Be sure to test the monitor with some of type of image or data being shown.
- 2. Always test Casper while standing in the room with the monitor to be cloaked with nothing between the monitor and the Casper sample
- 3. While standing in front of the monitor to be cloaked, hold a Designtex Casper sample **vertically** and view the monitor.
 - If the information on the monitor can't be seen, then the technology is compatible with Casper when it is installed vertically at 0°
 - If the information on the monitor is clearly visible, try rotating the memo 90° so it is horizontal
 - If when the memo is rotated 90° the information on the monitor can't be seen, then the technology is compatible with Casper when installed horizontally at 90°
 - If the monitor DOES NOT cloak and the image is clearly visible no matter how the sample is rotated, then the technology is not compatible with Casper
 - You may find that Casper DOES cloak the information on the screen when held at a 45°, but an installation at this angle is impractical and very expensive due to the difficulty of installation and large amount of waste.
- 4. Note the direction of intended installation and include this information when planning your Casper application.

Questions? Contact casper@designtex.com





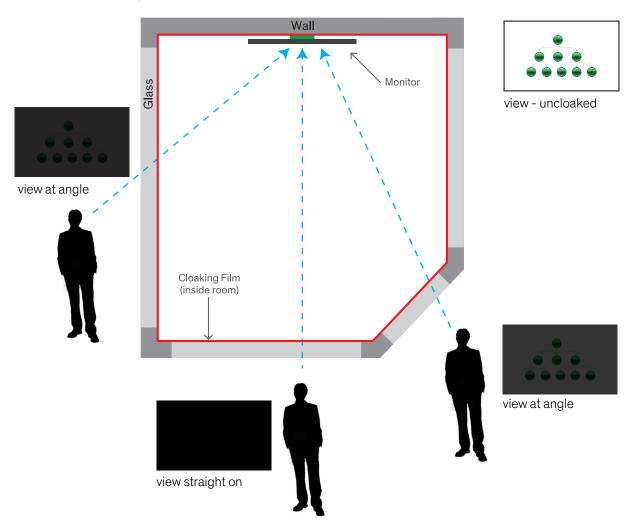


Viewing Angles

Casper is most effective when viewing a display that is parallel to the glass where the technology is installed. Casper should appear completely opaque when viewed from directly in front of the display and the display is at eye level. To an observer moving past the conference room at an acute angle or viewing a display at table level, Casper will appear less opaque. This light leakage may make displays partially visible while still providing confidentiality.

To determine if this will be an issue for your application, position a sample at several locations – centered, far left, and far right - in the room to demonstrate the degree of opaqueness/confidentiality that Casper will provide at different positions. The worst case scenarios are when the viewer is very close to the glass and viewing at an extreme angle. The addition of Casper Graphic can help alleviate this issue.

Questions? Contact casper@designtex.com.



Display Compatibility Reference

Use the following pages to determine if your display is compatible with Casper and if so, in which direction Casper needs to be installed. Please note, you should always validate your display before installing Casper to ensure it is compatible. Displays listed here were determined to successfully cloak in a consistent, controlled environment. Changes in orientation, additional layers of glass or film in front of the display, or even failure to remove any protective masking on the display can affect the degree to which Casper is able to hide the information. Displays listed as being compatible with Casper are not guaranteed to fully cloak under all circumstances.

A list of a few monitor displays that have been tested can be viewed **here.**

Questions? Please contact casper@designtex.com.

WILL CLOAK

Most LED displays 40" and larger

Telepresence and media:scape units

Google Jamboard

MAY CLOAK

OLED displays

Small computer monitors

Laptop computers

Notebook computers

Touchscreen computers and kiosk displays

Displays mounted behind glass

WON'T CLOAK

Microsoft Surface Hub (1st gen.)

Cisco Spark Board

Direct LED displays

Passive 3D displays

Plasma displays

CRT monitors and displays

Prysm Laser Phosphorous Displays (LPDs)

Smart Kapp white boards

Traditional white boards

Projection devices

Planning Your Project

Once you've determined that Casper works with your technology, you can use the following guidelines to estimate how much material you'll need depending on how your choose to install the film.

This tool is intended to help you calculate a rough quantity of material required for your project. Alwasy confirm direction of install and total linear feet required with your installer based on site conditions.

This guide assumes a VERTICAL installation of the film. To plan using a non-standard, horizontal installation, please contact your local Designtex representative or qualified Casper film Installer.

To **roughly** determine the number of linear feet your project will require, first determine if you plan a floor to ceiling coverage or a specific height band.

Now count the numbers of panels* of glass you wish to cover and multiply by the height of the Casper film.

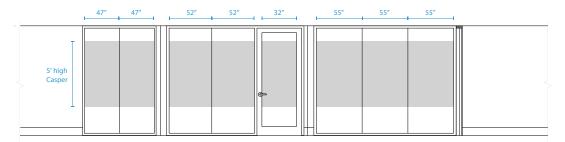
*For panels wide than 56", count as 2.

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Height of Casper in feet x # of glass panes wider than 48" = Total linear feet of 56" Casper (+ 20% to cover waste)

Height of Casper in feet x # of glass panes narrower than 48" = Total linear feet of 48" Casper (+ 20% to cover waste)

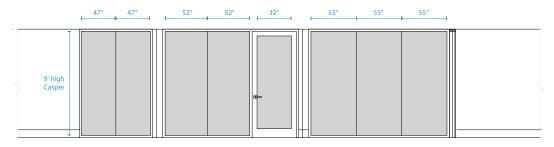
EXAMPLE FOR A 5' HIGH BAND OF CASPER



3 panels < 48" X 5' = 15 linear feet + 20% = 18 linear feet of 48" Casper

5 panels > 48" X 5' = 25 linear feet + 20% = 30 linear feet of 56" Casper

EXAMPLE FOR A FLOOR TO CEILING CASPER



3 panels < 48" X 9' = 27 linear feet + 20% = **34 linear feet of 48**" Casper

5 panels > 48" X 9' = 45 linear feet + 20% = **54 linear feet of 56" Casper**

Purchasing Casper

Casper Cloaking Technology is available exclusively from Decorative Films, LLC and sold through the Steelcase Dealer and Installer Dealer network.

To order Casper:

- Check that the displays work with Casper. Before specifying Casper Cloaking Technology, always validate the customer's technology works with Casper by testing the technology with a physical memo sample of Casper oriented vertically.
- Determine how many linear feet you need. Refer to this
 document for more instruction: Designtex Casper_Plan Your
 Project.pdf Always consult with your local film installer to verify
 field conditions and Casper orientation direction to determine
 the number of linear feet required for your project including any
 waste factor.
- Quote, coordinate delivery and install with your installation partner. Designtex and/or Decorative Films can help to recommend local installers on a project basis should you ever need.

For questions on setting up an account or ordering, please contact:



www.decorativefilm.com

Decorative Films, LLC

3909 Cornell Place, Frederick, MD 21703 USA

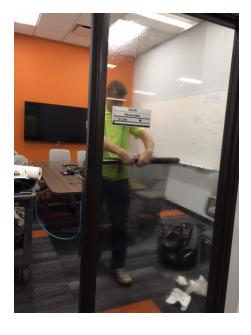
T: 888.657.5224 | F: 240.363.4818 | <u>casper@decorativefilm.com</u>

Installing Casper

Casper is installed by professional window film installers. Skilled installers will have experience working with all types of adhesive films and have special cutting and handling tools for application. Don't confuse them with graphics installers who, while highly skilled, may lack the experience and tools for handling this type of material.

Although Casper installs like a window film, it isn't. It's a technology that is applied to glass and it is critical to use a professional installer who will follow all the of the installation guidelines. We highly recommend you use a company with an established record of professionalism and the ability to install Casper.

Casper will be installed using a wet installation method. Using this method, an installer removes the release liner from the back of Casper to expose the adhesive. Using a spray bottle, the installer coats the cleaned glass and the adhesive with a water and soap solution. The installer then positions Casper on the glass, and uses a squeegee to push out the fluid so the adhesive can dry. This "curing" process can take several days before the adhesive is completely set.







For assistance with installation or to learn more about the process, contact Decorative Films.