



# CINEMA SCREEN SURFACES

The world's most popular cinema screen surfaces from Harkness Screens

Harkness cinema screens are available for all sizes of cinema. Screens are suitable for digital and 35mm projection. Specialised surfaces are available for 3D cinema. Screens are available for screening rooms and post-production facilities. All screen surfaces are specially formulated for cinema applications and give excellent colour rendition, contrast and uniform brightness. Screens have no visible seams under projection conditions.

## Types of screen and application

### Matt Plus

For screens up to 11m (36ft); optically brightened PVC matt white screen.

### Perlux™

Perlux screens have specially formulated coatings to enhance brightness without 'hot spotting'. Use Perlux 140 for screens up to 14m (46ft).

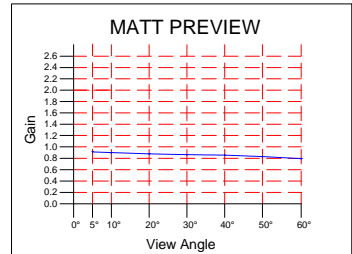
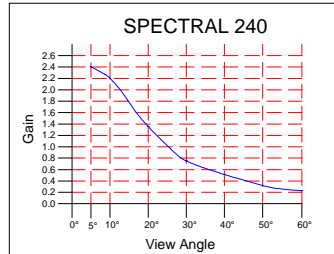
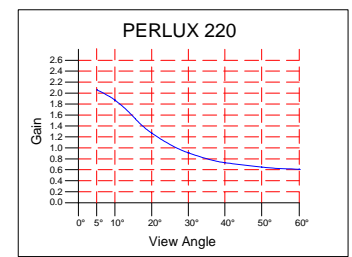
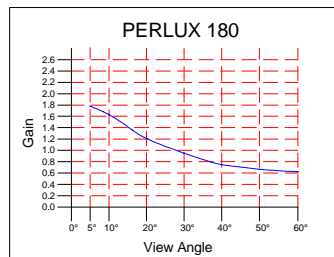
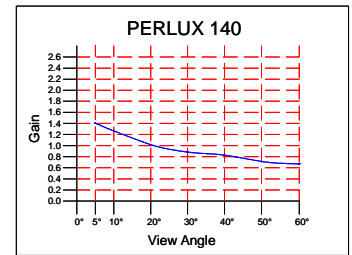
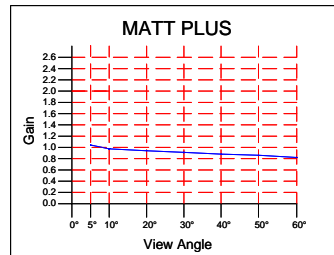
Use Perlux 180 for screens greater than 14m (46ft). Perlux 220 is an ultra high-gain surface for use with certain 3D projection systems and very large 2D screens.

### Spectral

Spectral 240 has a special aluminium coating, which gives extremely good performance with passive 3D projection using polarised light.

### Matt Preview

A coated screen recommended for screening rooms, preview theatres and film laboratories. It is particularly suitable for close viewing and high luminance levels.



## Digital projection

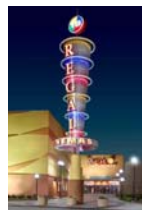
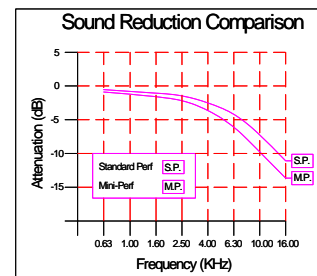
Using gain screens is strongly recommended above 10m (33ft). Brightness levels are enhanced and lower power lamps may be used, saving significantly on operating costs.

## Acoustic performance / screen perforations

Harkness screens are perforated for behind screen speakers.

The usual perforation pattern for cinema operations is 'standard perf'. For viewing distances of less than 5m, mini-perf (MP) is recommended. Where there are no speakers behind the screen, non-perforated screens are available.

Perforated Form	Hole Size	Open Area
Standard Perf	1.2mm (0.047")	4.5%
Mini-Perf	0.5mm (0.020")	1.7%



The screen is one of the least costly parts of the overall investment in the cinema fit-out, but it can have major impact on the viewing experience. Don't compromise - fit Harkness Cinema Screens.

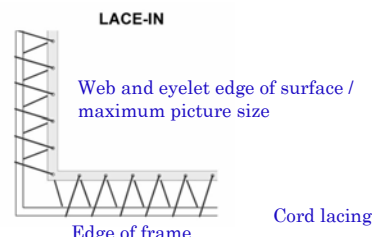
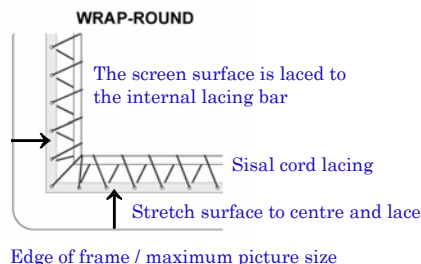
## Edge finishing

Harkness cinema screens have a triple fold web edge. Grommets are spaced at 150mm and have metal inserts for strength.

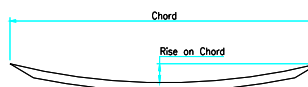
## Frames/Masking

Harkness screens can be used in 'wrap-round' frames or 'lace-in' frames. Normally, wrap-round frames are used when no moving masking curtains are specified. Lace-in frames are used with moving masking systems.

**Wrap-Round frame (rear view).**  
The wrap-round frame provides a full frame picture.



It is recommended to curve screen frames for Perlux and Spectral. With digital projection in retrofit situations, it is acceptable to put Perlux 140 on to an existing flat frame (but not higher gain screens). For most auditoria, suggested curvature is depth of curve (rise on chord), 5% of the screen width (chord).



Harkness can supply frames and masking systems and a special acoustically transparent cloth (Sound 2000M).

## Despatch/Storage

Perlux 140/180 and Matt Plus can be folded for transport and easy access to site. Screens should not be stored for longer than 2 months if rolled or 1 month if folded. If screens are very cold, e.g. following air transport, then they must be allowed to warm up before unpacking, otherwise cold cracking may occur. Packing must be protected from mechanical damage at all times.

	USA Manufacture (max)		Europe Manufacture (max)		Packing Method	Weight (Kgm <sup>2</sup> )
	(m)	(ft)	(m)	(ft)		
Matt Plus*	30 x 20	98' x 65' 6"	30 x 20	98' x 65' 6"	Folded	0.43
Perlux 140/180	23.5 x 11.8	77' 3" x 38' 11"	Not available		Folded	0.43
Perlux 140+/180+/220+	24.1 x 12.4	79' 3" x 40' 7"	26.5 x 11	87' x 36'	Rolled	0.50
Spectral 240	24.1 x 12.4	79' 3" x 40' 7"	26.5 x 11	87' x 36'	Rolled	0.50
Matt Preview	24.1 x 12.4	79' 3" x 40' 7"	26.5 x 11	87' x 36'	Rolled	0.50

### Packing Method

Folded screens: Packed as a parcel up to 90m<sup>2</sup> (1000ft<sup>2</sup>); above this in a wooden crate.

Rolled screens: packed in a tube up to 7m (23ft) height; above this in a long wooden box.

All Spectral screens from USA are in long wooden boxes.

\* Matt Plus - larger sizes are available to special order

## Fire Certification

Harkness screens have fire certification for most markets in the world.

## Installation

The following principles should be followed when installing Harkness cinema screen surfaces:

- The auditorium should be clean with no building works taking place.
- Installation should be at ambient temperature (20/24°C - 68/74°F).
- Care should be taken to avoid the screen coming into contact with sharp objects during installation.
- Excessive loads should not be placed on any specific point of the screen.
- Use of cotton gloves is recommended.
- The viewing surface must not be touched (the rear of the screen is identified by the product label).
- All coated roll-packed surfaces must never be creased during installation.
- Sisal cord is recommended to install Harkness cinema screens. Please refer to Data Sheet Ref DS-036 for detailed installation procedures.

## Care and Maintenance

The general environment where the screen is installed should be kept reasonably clean to avoid dirt and dust build-up.

Screens can be periodically brushed using a long handle soft brush, doing this vertically with limited pressure.

Professional cleaning solutions are also available.

*For full information regarding Harkness Cinema Screen Surfaces and other products, please refer to Product Data Sheets available from our website (pdf format)*



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In the interest of product enhancement, Harkness Screens reserves the right to introduce modifications or alterations without notice. Issue No. 07: 03/09