

**Harkness Hall UK**Tel +44 (0) 20 8953 3611
Fax +44 (0) 20 8207 3657**Harkness Hall USA**Tel (540) 370 1590
Fax (540) 370 1592

E Mail sales@harknesshall.com www.harknesshall.com

**PROJECTION SCREEN
MATT PLUS MP****PRODUCT DATA SHEET**

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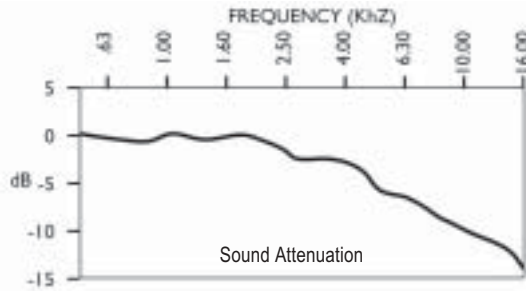
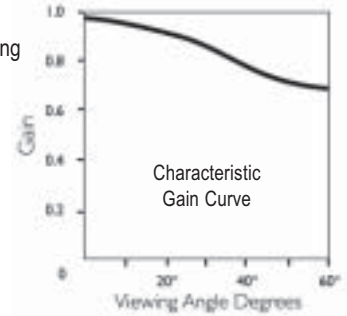
Matt Plus MP front projection screens build on the leading technology of Harkness Hall. The surface has smaller diameter perforations (less than half of standard perforation) to provide an excellent surface for close viewing while providing strong acoustic performance. MP can be used in electronic cinema where larger perforations can interfere with pixel generated images. The surface can be folded for ease of transportation and installation. Noted for invisible seams under normal projection conditions. Gain surfaces are also available in this perforation format: Perlux™ 140+ MP and Perlux™ 180+ MP.

Application

Matt Plus MP screens are recommended for a wide range of applications where close viewing conditions apply, including:

- Preview Theatre • Cinema • Electronic Cinema • Screening Room • Home Theatre • Roller Screen

Surfaces suitable for flat and curved frames, lace-in & wrapround (floating); top or bottom roller screen styles.

**Surface Edging**

- Web and eye (grommet). Triple fold web integral with surface
- Preformed pipe pocket any size on any side
- Cloth web and fixings (snaps) for press stud frames
- Straight sides or shaped to special order
- Cut square

Fire Retardancy: Certification to standards including:-

- UK BS5867 PT II (BS 3120);
- German DIN4102 B1;
- France M1;
- Portugal M2;
- Italy Class 1;
- Spain M1;
- Australia AS1530.2-93;
- USA / Canada ULc CAN 4 S102-2;
- Japan BT-08-050 (Regulation requires certification by importing company)
- Austria B3800

General Detail

View Distance	Minimum of 1.5m (5')
Maximum Size	Normal limit 30m x 20m (98' x 66')
Perforation Size	Ø0.5mm (0.020")
Perforation Density	1.7%
Weight	0.43kg/m ² (0.09lb/ft ²)
Eyelet Spacing	150mm (6") nominal

Typical Packing

Folded in parcel or parcel box up to 13m x 7m (43' x 23'). Wooden crate for larger sizes.

Despatch / Storage

This screen type can be folded for initial transport. Storage in such a form for periods over one month should be avoided, two months if tube packed. Screens should normally be transported and stored at temperatures between 5°C and 30°C (40°F and 85°F), with relative humidity less than 80%. 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. Packaging must be protected from mechanical damage at all times.

Installation

The following principles should be followed when installing Harkness Hall Matt Plus MP screen surfaces.

- The auditorium should be clean with no building works taking place.
- Installation should be at ambient temperature (20/24°C-68/75°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 should not be touched (the rear of the screen is identified by the product label).
- Creasing should be minimised during installation.

There are two principle methods to install the screen surface:

- Flying the screen by attaching several tie lines to the top of the screen, passing these over the top of the frame and using them to pull the screen into place.
- Unrolling the screen vertically across the front of the frame, if it is tube packed.

Using one of these methods, the screen surface is loosely attached to the top of the frame. After this, the top of the screen is fully attached to the top lacing bar by working from the centre outwards using each eyelet.

The lower edge of the screen should then be laced from the centre outwards, applying sufficient tension to pull the screen flat. Typically, the screen can be stretched up to 3% of its height at ambient temperature of 20/24°C-68/75°F using sisal cord lacing. Side lacing should be from the top down and sufficient to remove the flutes. Excessive side tension should be avoided, particularly on a curved frame, as it will result in straightening of the screen across the curve (belly).

Springs or elasticated ties should not be used to install Harkness Hall surfaces.

The above method can be used for both lace-in and for wrap-round frames. Normally, two people are sufficient to install a screen surface.

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. Under no circumstances should the screens be made wet or cleaned with any material containing bleach or other chemicals.

'SCREEN CLEAN' is Harkness Hall's specially formulated cleaning compound which can be used to minimise the effect of some localised stains on the screens.

In the interest of product enhancement, Harkness Hall reserve the right to introduce modifications or alterations without notice.