

LINEA VENEER FLAT PANELS

LINEA Veneer Flat Panels are high-end, interior panels commonly used as ceiling tiles, wall cladding or column wraps when the look of real wood is preferred. Numerous suspension types, styles, panel sizes and finishes can be combined to achieve nearly any design objective. All panels are offered as Non-Perforated for acoustic reflectivity or can be machined in a variety of ways for sound absorption when required. Additional sound absorbing media can be installed behind the panels to further enhance acoustical performance.

FEATURES | BENEFITS

- Many standard or custom perforation types and patterns available for acoustic attenuation
- Numerous installation techniques, reveals, wood trim and ceiling access options
- Wide variety of real wood veneers or engineered wood veneers.
- Standard or custom panel sizes (Max 4'W x 10'L)
- Custom colors, stains or opaque painted finishes (Low VOC)
- Factory attached SoundTex acoustical fabric improves sound absorption
- Class A Fire Rated per ASTM E-84 (USA) and CAN/ULC S102 (Canada) is standard
- Sustainable options available including FSC, LEED, WELL, and HPD
- MDF or Particleboard composite core with No Added Urea Formaldehyde (NAUF) and high recycled content
- Simple Mechanical, Electrical and Plumbing (MEP) Integration
- Designed for use in all seismic areas
- Available with LINEA Textured Face and LINEA Microperforations

LINEA VENEER FLAT PANELS

Are intended for use in:

- Performing Arts Centers and Lecture Halls
- Government and Corporate Offices
- Airports and Travel Hubs
- Schools and Education Facilities
- Casinos and Entertainment Venues
- Churches and Places of Worship
- Museums and Libraries
- Hospitals and Health Care Facilities
- Restaurants and Cafeterias

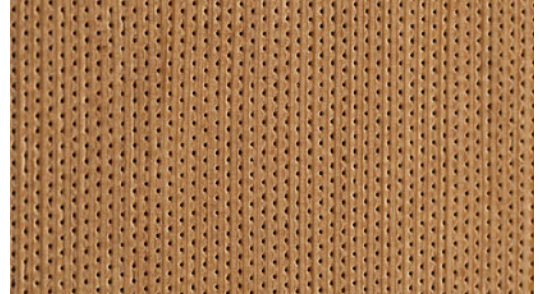
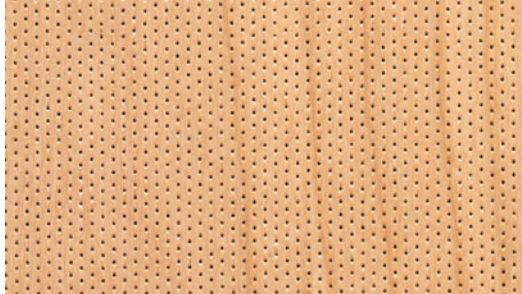


LINEA VENEER FLAT PANEL

PRODUCT DATA SHEET

Available With:

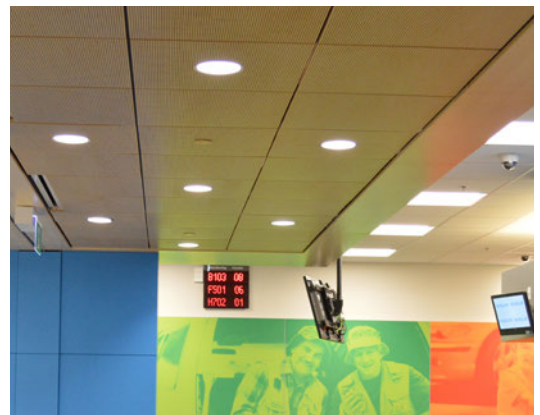
Linea Microperforations



Linea Textured Face



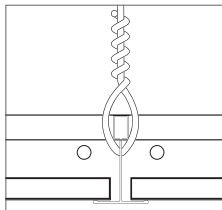
Linea Microperforations with Textured Face



CEILING INSTALLATION TYPES

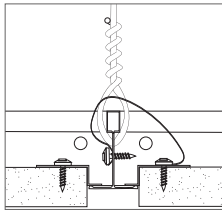
APPLICABLE TO ALL INSTALLATIONS TYPES

Species & Grain:	Select from LINEA range or Designer can specify
Core:	3/4" Fire Rated Particleboard or MDF
Style:	Non-Perforated, Perforated, MicroPerforated, Slotted, Kerf, Squared, Custom
Pattern:	Select from LINEA Standard Options or Custom
Stain:	Consultant to advise
Finish:	Clear or Tinted Clear; Matte, Satin or Semi-Gloss Sheen. <i>Antibacterial optional</i>
Fire Rating:	Class A per ASTM E84 (USA) and CAN/ULC S102 (Canada)
Surface Texture:	Smooth or Linea Textured Face
Acoustic Backer:	Black SoundTex (N/A for Non-Perforated Panels)
Panel Weight:	2.75 lb/ft ²



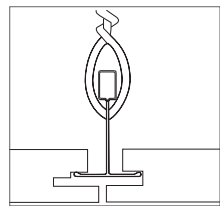
LAY-IN

Edge:	Unseen
Panel Size (Nom):	Custom or nominal sizes up to 2' x 8'
Reveal:	15/16"
Included Accessory/Hardware:	None
Recommended Accessory/Hardware:	Hold Down Clip (Seismic), Safety Clip
Note:	Panels rest in 15/16" [24mm] Heavy-Duty grid Panels greater than 2' x 2' may require additional stabilizing support fixed to the back (by others).



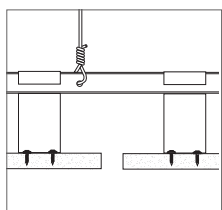
TEGULAR LAY-IN

Edge:	Square with matching veneer
Panel Size (Nom):	Custom or nominal sizes up to 2' x 8'
Reveal:	15/16"
Included Accessory/Hardware:	Z-Clips (furnished loose for site installation)
Recommended Accessory/Hardware:	Hold Down Clip (Seismic), Safety Clip
Note:	Z-clips rest in 15/16" (24mm) Heavy-Duty grid and allow the panel to float below. Panels greater than 2' x 2' may require additional stabilizing support fixed to the back (by others).



MACHINED TEGULAR

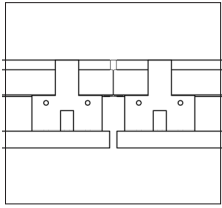
Edge:	Square, Machined with matching veneer
Panel Size (Nom):	Custom or nominal sizes up to 2' x 8'
Reveal:	1/4"
Included Accessory/Hardware:	None
Recommended Accessory/Hardware:	Hold Down Clip (Seismic), Safety Clip, Border Clips, Main Beam Adapter Clips
Note:	Panel is designed self-register (lift, shift, drop and lock) into 15/16" (24mm) Heavy-Duty grid. Panels greater than 2' x 2' may require additional stabilizing support fixed to the back (by others).



CHANNEL HANGER

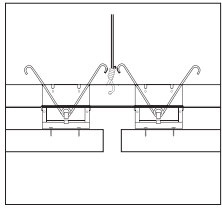
Edge:	Square with matching veneer
Panel Size (Nom):	Custom or nominal sizes up to 2' x 8' ; 3' x 5' ; 4' x 4'
Reveal:	Varies
Included Accessory/Hardware:	Hanger Clips (furnished loose for site installation) Four (4) per 2' x 2' panel,
Recommended Accessory/Hardware:	Safety Cable
Note:	Designed to simply lift, drop and lock in place using C-Channel suspension and clips. Panels greater than 2' x 2' may require additional stabilizing support fixed to the back (by others).

CEILING INSTALLATION TYPES



T-HOOK

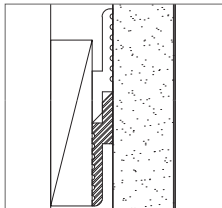
- Edge:** Square with matching veneer
- Panel Size (Nom):** Custom or nominal sizes up to 2' x 8' ; 3' x 5'; 4' x 4'
- Reveal:** Varies
- Included Accessory/Hardware:** T-Hook (furnished loose for site installation)
Four (4) per 2' x 2' panel.
- Recommended Accessory/Hardware:** Hold Down Clip (Seismic), Safety Clip
- Note:** Designed to simply lift, drop and lock in place using T-Bar suspension and clips. Panels greater than 2' x 2' may require additional stabilizing support fixed to the back (by others).



TORSION SPRING

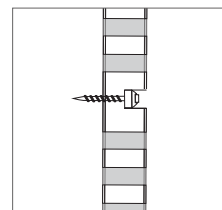
- Edge:** Square with matching veneer
- Panel Size (Nom):** Custom or nominal sizes up to 2' x 8'
- Reveal:** 1/2"
- Included Accessory/Hardware:** Torsion Spring Assembly (Spring & Grid Clip) furnished loose for site installation.
- Recommended Accessory/Hardware:** Safety cables
- Note:** Panel is designed for downward accessibility by way of torsion spring clips fixed to 15/16" [24mm] Heavy-Duty grid Panels greater than 2' x 2' may require additional stabilizing support fixed to the back (by others).

WALL INSTALLATION TYPES



Z-CLIP

- Edge:** Square with matching veneer
- Panel Size (Nom):** Custom or nominal sizes up to 4' x 10'
- Reveal:** Varies
- Included Accessory/Hardware:** Z-Clips furnished loose in pairs for site installation
- Recommended Accessory/Hardware:** Safety Cable, Seismic Clip
- Note:** Panels are hung on furring strips with low profile aluminium Clips similar to French cleat.



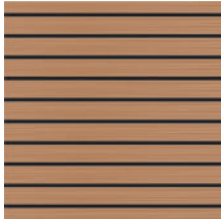
BLIND PERFORATION

- Edge:** Square with matching veneer
- Panel Size (Nom):** Custom or nominal sizes up to 4' x 10'
- Reveal:** Varies
- Included Accessory/Hardware:** None
- Recommended Accessory/Hardware:** None
- Note:** Panels are designed for concealed installation to suspension system by mechanically fastening through the partial perforations on the face.

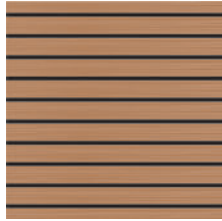
LINEA VENEER FLAT PANEL

PRODUCT DATA SHEET

Kerf Patterns



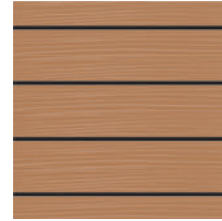
KF 8.
Kerf — 8mm
NRC Range
 (E-400) — 0.95



KF 10.
Kerf — 10mm
NRC Range
 (E-400) — 0.95



KF 16.
Kerf — 16mm
NRC Range
 (E-400) — 0.85

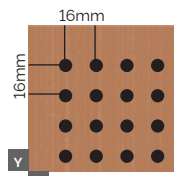


KF 24.
Kerf — 24mm
NRC Range
 (E-400) — 0.75

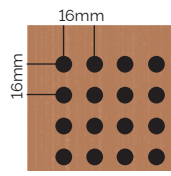


KF 32.
Kerf — 32mm
NRC Range
 (E-400) — 0.65

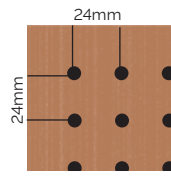
Parallel Patterns



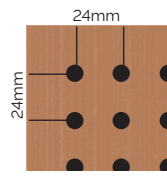
PL 1.
Hole Ø — 6mm
Spacing —Y 16mm
 —X 16mm
Open % — 10%
NRC Range
 (E-400)
Estimated — 0.55



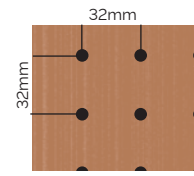
PL 2.
Hole Ø — 8mm
Spacing —Y 16mm
 —X 16mm
Open % — 18%
NRC Range
 (E-400)
Estimated — 0.75



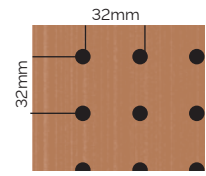
PL 3.
Hole Ø — 6mm
Spacing —Y 24mm
 —X 24mm
Open % — 5%
NRC Range
 (E-400)
Estimated — 0.40



PL 4.
Hole Ø — 8mm
Spacing —Y 24mm
 —X 24mm
Open % — 8%
NRC Range
 (E-400)
Estimated — 0.50

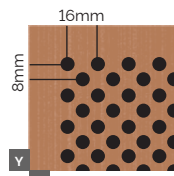


PL 5.
Hole Ø — 6mm
Spacing —Y 32mm
 —X 32mm
Open % — 3%
NRC Range
 (E-400)
Estimated — 0.35

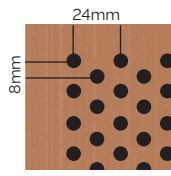


PL 6.
Hole Ø — 8mm
Spacing —Y 32mm
 —X 32mm
Open % — 5%
NRC Range
 (E-400)
Estimated — 0.40

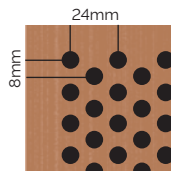
Staggered Patterns



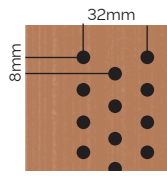
ST 1.
Hole Ø — 6mm
Spacing —Y 8mm
 —X 16mm
Open % — 20%
NRC Range
 (E-400)
Estimated — 0.75



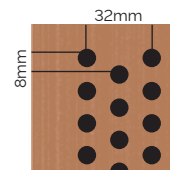
ST 2.
Hole Ø — 6mm
Spacing —Y 8mm
 —X 24mm
Open % — 13%
NRC Range
 (E-400)
Estimated — 0.60



ST 3.
Hole Ø — 8mm
Spacing —Y 8mm
 —X 24mm
Open % — 10%
NRC Range
 (E-400)
Estimated — 0.50



ST 4.
Hole Ø — 6mm
Spacing —Y 8mm
 —X 32mm
Open % — 6%
NRC Range
 (E-400)
Estimated — 0.45



ST 5.
Hole Ø — 8mm
Spacing —Y 8mm
 —X 32mm
Open % — 5%
NRC Range
 (E-400)
Estimated — 0.40

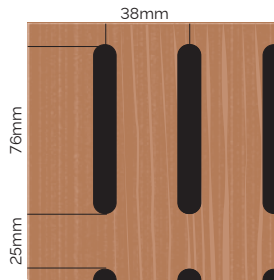


Custom Sizes and
 Patterns available.
 Contact LINEA for details

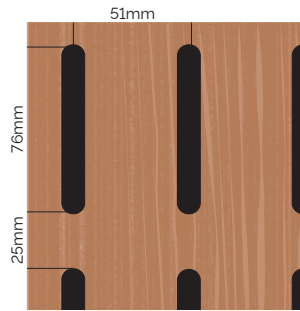
LINEA VENEER FLAT PANEL

PRODUCT DATA SHEET

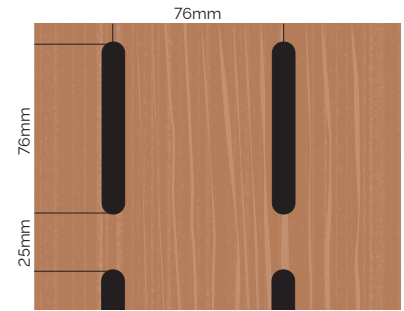
Slotted Patterns



SL 1.
 Slot Width —3/8" | 10mm
 Slot Length —3" | 76mm
 Left-Right Spacing —1-1/2" | 38mm oc
 End to End Spacing —1" | 25mm
 Open % | 19
 NRC Range (E-400) Estimated | 0.75

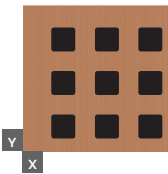


SL 2.
 Slot Width —3/8" | 10mm
 Slot Length —3" | 76mm
 Left-Right Spacing —2" | 51mm oc
 End to End Spacing —1" | 25mm
 Open % | 14.77%
 NRC Range (E-400) Estimated | 0.65



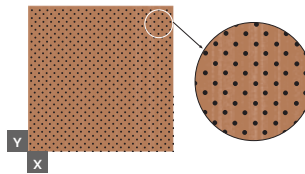
SL 3.
 Slot Width —3/8" | 10mm
 Slot Length —3" | 76mm
 Left-Right Spacing —3" | 76mm oc
 End to End Spacing —1" | 25mm
 Open % | 10%
 NRC Range (E-400) Estimated | 0.55

Squared Perforated Patterns



Hole Ø —30mm
 Spacing —Y 55mm
 —X 55mm
NRC Range
 (E-400) Estimated —0.90

MicroPerforated Patterns



Hole Ø —0.65mm
 Spacing —Y 2mm
 —X 2mm
NRC Range
 —Up to 0.95 (with 2" Insulation) *

Disclaimer

* NRC Ranges are dependent on various factors including, but not limited to, mounting method and sound and absorbing insulation behind panels. Not all perforation patterns and variations have been acoustic tested. Some NRC Ranges are based on open area calculations or as advertised by similar industry resources



LINEA VENEER FLAT PANEL

PRODUCT DATA SHEET

PHYSICAL DATA

WOOD SELECTIONS	
Wood Species	LINEA Veneer Flat Panels may be specified in a wide variety of real wood or engineered wood veneers.
Internal Core	LINEA Veneer Flat Panel cores are made from Class A fire rated, high recycled content MDF or Particleboard composite materials. Cores can be specified as FSC Certified and with No Added Urea Formaldehyde (NAUF)
FINISHES	
Finishes	LINEA Veneer Flat Panels for interior applications are factory finished smooth in a Clear 10° matte sheen in either a solvent-based or low voc water-based coating depending on customer specifications. Tinted clear finishes, custom stains and painted finishes are also available. Sheen options include matte, satin, or semi-gloss..
Acoustic Fabric	The back of the LINEA Veneer Flat Panel has a factory applied Soundtex® acoustic fabric backer for enhanced sound absorption (excluding Non-Perforated).
Surface Texture	Surface appearance as Smooth or LINEA Textured Face. Texture options include: Fine, Medium, or Coarse
Antibacterial	LINEA offers an Antibacterial Coating for interior wood product installations where cleanliness and hygiene are of the utmost importance. The coating has been specially formulated to provide excellent object/surface protection levels and deliver extraordinarily high physical/chemical resistance. Furthermore, the presence of active metals boosts durability and protects the coating film from bacterial attack and the effects will last over time. <i>Contact LINEA for details.</i>
PANEL SIZES	
Sizes	LINEA Veneer Flat Panels are manufactured and sold in common sizes as nominal 2x2, 2x4, 2x6, 2x8, 4x4, 4x8. Custom sizes available to suit site requirements or can be customized smaller or larger up to a maximum of 4x10 for more design flexibility
Tolerances	LINEA Veneer Flat Panels are built in accordance with CISCA dimensional tolerances.
Panel Weight	2.75 lbs/SF
TECHNICAL DATA	
Fire Rating Veneer/ Composite	LINEA Veneer Flat Panels with real wood or engineered wood veneers are laminated to Class A Fire Rated, recycled, MDF or Particleboard composite cores. The combination of Wood Veneer and Finish is less than 1mm thick (0.5mm in most cases) and therefore should not be considered significant to the overall rating (per AWI/AWMAC).
Acoustics	LINEA Veneer Flat Panels come standard with Soundtex® acoustic backing for enhanced sound absorption (excluding Non-Perforated). When paired with acoustical insulation or duct liner behind, LINEA Veneer Flat Panels can achieve high NRC Ratings up to 0.95. Generally, the higher the open area percentage the greater the sound attenuation.
Seismic	LINEA Veneer Flat Panels are engineered for applications in all seismic areas when installed per LINEA installation instructions and local code.
Suspension Systems	LINEA Veneer Flat Panels are commonly suspended from, but not limited to, 15/16" Heavy Duty T-Grid using no less than 12-gauge steel wire. Wall panels. For wall applications, Z-clips provide a secure attachment to furring or a ply board wall.
Installation and Safety	LINEA Veneer Flat Panel are designed to be installed to 15/16" HD T-bar using a variety of installation hardware or machining profile options. LINEA recommends the use of Safety and Fall Restraint accessories for all installations. Local building codes should be consulted in order to determine additional seismic requirements.
Warranty	1 Year Warranty on all LINEA panel products. <i>Contact LINEA for details.</i>
SHIPPING AND SITE CONDITIONS	
Shipping	LINEA products are carefully packaged and shipped in palletized wooden crates.
Site Conditions	Wood products are hygroscopic in nature and must be stored, installed & maintained in a controlled building environment. Temperature range should be maintained between 60° - 90° F (15° - 32° C). Relative Humidity range should be kept within a minimum 25% - max. 55% (not to exceed 20% RH from peaks to valleys). Failure to maintain site conditions will void the LINEA warranty.

LINEA VENEER FLAT PANEL

PRODUCT DATA SHEET



LEED®

Linea products can contribute towards LEED certification

MR-2.1 2.2	Construction Waste Management
MR-3.1 3.2	Materials Reuse
MR-4.1 4.2	Recycled Content
MR-5.1 5.2	Regional Materials (location dependent)
MR-7.0	Wood available as FSC Certified, upon request
EQ-3.1 3.2	Construction IAQ Management Plan
EQ-4.1 4.2 4.4	Low emitting materials



Disclaimers

Appearance

Variation in panel appearance may occur due to the natural characteristics of real wood and wood grain. Variation may be reduced, but not eliminated by using custom stains, tinted clear finishes, paint finishes or engineered wood veneers. To maximize visual consistency, panels should be unpacked and examined collectively to determine the most desirable arrangement for installation.

Panel Sizes

For all LINEA Veneer Flat Panels greater than 2x2 (ceilings only), Linea recommends the installer fasten additional metal supports across the back of the panel to ensure the panel remains flat.

Perforations

Slotted and Kerf perforations run parallel to the length of the panel and borders vary with panel size. Use caution when handling perforated panels in order to avoid puncturing SoundTex acoustic fabric with tools or fingers.

Fire Performance

Individual product components (wood, fabric, metal, finish) comply with Class A fire retardant testing. ASTM E-84 and CAN/ULC S-102 submittal data is based on supplier tests. Product assembly testing has not been completed due to assemblies varying on a project-by-project basis. To exceed today's changing codes and environmental requirements, Linea recommends sprinkling both the ceiling and the plenum (concealed space) in lieu of using chemical fire retardants. Linea recommends the specifier consult a fire protection engineer, NFPA 13, and local codes for assistance where fire suppression and automatic fire detection systems are present.

Acoustics

A selection of standard LINEA Veneer Flat Panels have been lab tested per ASTM C423 for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method. This test method covers the measurement of sound absorption in a reverberation room by measuring decay rate. Due to assemblies varying on a project-by-project basis, not all configurations have been tested. The acoustical performance of all LINEA Veneer Flat Panel products is dependent on project design, application, mounting method, and additional sound absorbent material.

Test Results Disclaimer

Test results achieved by 3rd party, NVLAP accredited laboratory testing and in accordance with ASTM C423; Mounting per ASTM E795: Type E-400 & Type A; and achieved with SoundTex fabric as well as 1-1/2" thick, 2 lb/ft³ acoustical infill. Results in field may differ from test lab results due to the varying and unique environmental characteristics of each space and location.