THINK
LIGHTWEIGHT®
LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

It's time to Think Lightweight!

www.thinklightweight.com

TODAY'S TOPICS

1. About Think Lightweight
2. What are Lightweight Structures?
3. Industry Applications
4. Product Line Review
5. Think Lightweight Component Solutions
6. Order Minimums
7. FSC
8. Project Gallery

THINK LIGHTWEIGHT®
LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

ABOUT THINKLIGHTWEIGHT

- Lightweight Panel Technology Specialists
  - Apply lightweight engineering principles to traditional wood applications
- Innovative design approach as opposed standard construction methods
- State of the art manufacturing environment and lean implementation processes
  - Industry 4.0 – Robotics Manufacturing Accelerated Program
  - *14 million lineal feet of lightweight panels manufactured*
- Think Lightweight project development philosophy is based upon understanding unique client needs and is dedicated to client success

THINK LIGHTWEIGHT®
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THE MOST EFFECTIVE STRUCTURES ARE LIGHTWEIGHT

AIRPLANE WING

An airplane wing is an example of a lightweight structure. Think about the last time you were in an airplane. How would the plane perform if that wing were solid?

BRIDGE

Think about when you drive over a bridge. The arch is a very strong structure that can support many, many times its weight just by redistributing it.

HONEYCOMB

One of the strongest shapes of nature is the honeycomb. They are well known for their strength because with the minimal amount of materials, they provide the maximum amount of strength for the surface area.

WHY YOU SHOULD THINK LIGHTWEIGHT

Weight Reduction

Strength to Weight Ratio

Cost Effectiveness

Ease of Handling

Creativity

Stability and Consistency

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INDUSTRY APPLICATIONS

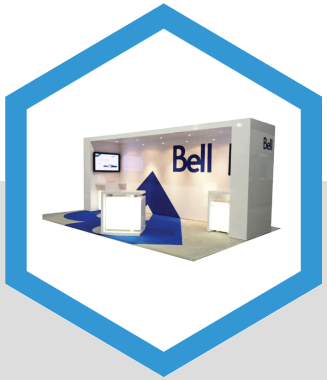
Retailers

Restaurants

Hotels

Film Studios

Furniture



Trade Shows

Museums

Offices

Public Spaces

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PRODUCTS

- Ceiling Beams
- Suspended Panels
- Architectural Panels
- Store Fixtures
- Displays
- Shelving
- Doors
- Work Surfaces
- Furniture
- Signage
- Whiteboards
- Tackboards

THINKLIGHTWEIGHT PRODUCT FAMILY

Lightweight panel technology solutions, minimize materials, maximize results!

FOAM LIGHT®

1/8" COMB LIGHT®

3/8" COMB LIGHT®

1/8" LUXA LIGHT®

LIGHT TACK®

STRUCTA LIGHT®

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FOAM LIGHT®

Foam core faced with 1/8 HDF.

KEY POINTS

- Up to 85% reduced weight compared to plywood, particleboard and MDF
- Easily apply face materials (veneer, laminate, and coatings)
- Finish with a variety of edge options
- Rigid face material supports selected methods of attachment
- Optional skin thicknesses are available

SIZES AVAILABLE

¾" x 48 x 96

1" x 48 x 96

1-¼" x 48 x 96

1-½" x 48 x 96

1-¾" x 48 x 96

2" x 48 x 96

¾" x 48 x 120

1" x 48 x 120

1-¼" x 48 x 120

1-½" x 48 x 120

1-¾" x 48 x 120

2" x 48 x 120

APPLICATIONS

- Ceiling Beams
- Suspended Panels
- Architectural Panels
- Store Fixtures
- Displays
- Shelving
- Doors
- Signage

TECHNICAL DATA

	MATERIAL THICKNESS					
	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"
SKIN THICKNESS	0.118"	0.118"	-	0.118"	0.118"	0.118"
CORE THICKNESS	0.514"	0.764"	-	1.264"	1.514"	1.764"
MAX SCREW WITHDRAWN FORCE, LBF	80	-	-	78	-	-
MAX SCREW TENSILE FORCE, LBF	125	-	-	175	-	-
MAX TENSILE STRENGTH, PSI	30	-	-	45	-	-
COMP, STRENGTH @5% STRAIN, PSI	26	-	-	28	-	-
MAX FLEXURE FORCE, LBF	110	-	-	125	-	-
MODULUS OF RUPTURE, PSI	1595	-	-	870	-	-
MODULUS OF ELASTICITY, PSI	145185	-	-	122124	-	-
WEIGHT PER PANEL, LB** (48 x 96)	40	41	-	43	44	45

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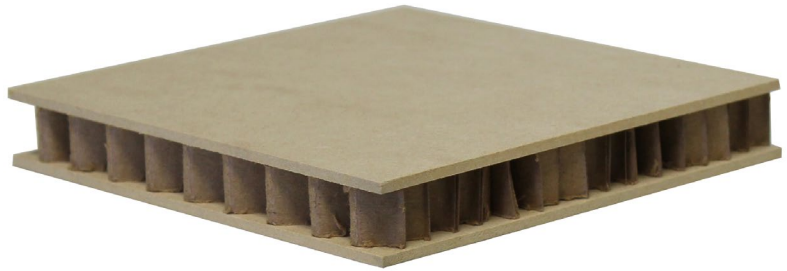
3/8” COMB LIGHT®



3/8 cell honeycomb core faced with 1/8 HDF

APPLICATIONS

- Architectural Panels
- Suspended Panels
- Work Surfaces
- Store Fixtures
- Whiteboards
- Displays
- Shelving
- Doors
- Signage
- Furniture

KEY POINTS

- This material has proven to be a great design solution for many applications where strong, lightweight and thick panels are required
- Easily apply face materials (veneer, laminate, and coatings)
- Finish with a variety of edge options
- Rigid face material supports selected methods of attachment
- Optional skin thicknesses are available

TECHNICAL DATA

	MATERIAL THICKNESS					
	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"
SKIN THICKNESS	0.118"	0.118"	-	0.118"	0.118"	0.118"
CORE THICKNESS	0.514"	0.764"	-	1.264"	1.514"	1.764"
MAX SCREW WITHDRAWN FORCE, LBF	70	-	-	64	-	-
MAX SCREW TENSILE FORCE, LBF	47	-	-	78	-	-
MAX TENSILE STRENGTH, PSI	11	-	-	19	-	-
COMP, STRENGTH @5% STRAIN, PSI	29	-	-	27	-	-
MAX FLEXURE FORCE, LBF	71	-	-	120	-	-
MODULUS OF RUPTURE, PSI	1886	-	-	870	-	-
MODULUS OF ELASTICITY, PSI	214079		-	155483	-	-
WEIGHT PER PANEL, LB** (48 x 96)	43	44	-	47	49	51

SIZES AVAILABLE

¾” x 48 x 96

1” x 48 x 96

1-¼” x 48 x 96

1-½” x 48 x 96

1-¾” x 48 x 96

2” x 48 x 96

¾” x 48 x 120

1” x 48 x 120

1-¼” x 48 x 120

1-½” x 48 x 120

1-¾” x 48 x 120

2” x 48 x 120

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LIGHT TACK®

Natural fiberboard faced with a specialty engineered wood fiber surface material

KEY POINTS

- A cost effective tackable material made from 98% recycled materials that makes a high performance stable panel
- Its smooth and water resistant surface is excellent for laminating, paint finishes, and fabric wrapping

SIZES AVAILABLE

½" x 4 x 8

APPLICATIONS

- Furniture
- Store Fixtures
- Displays
- Tackboards

TECHNICAL DATA

	MATERIAL THICKNESS				
	1/2"	-	-	-	-
SKIN THICKNESS	0.026"	-	-	-	-
CORE THICKNESS	0.438"	-	-	-	-
MAX SCREW WITHDRAWN FORCE, LBF	20	-	-	-	-
MAX SCREW TENSILE FORCE, LBF	28	-	-	-	-
MAX TENSILE STRENGTH, PSI	7	-	-	-	-
COMP, STRENGTH @5% STRAIN, PSI	22	-	-	-	-
MAX FLEXURE FORCE, LBF	44	-	-	-	-
MODULUS OF RUPTURE, PSI	1160	-	-	-	-
MODULUS OF ELASTICITY, PSI	173178	-	-	-	-
WEIGHT PER PANEL, LB** (48 x 96)	25	-	-	-	-

1/8” COMB LIGHT®

1/8 cell structural core faced with 1/8 HDF

APPLICATIONS

- Work Surfaces
- Furniture
- Store Fixtures
- Suspended Panels
- Displays
- Shelving
- Doors
- Signage

KEY POINTS

- With this high density structural core, lightweight panels are taken to the next level
- Easily apply face materials (veneer, laminate, and coatings)
- Finish with a variety of edge options
- Rigid face material supports selected methods of attachment
- Optional skin thicknesses are available

TECHNICAL DATA

	MATERIAL THICKNESS					
	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"
SKIN THICKNESS	0.118"	0.118"	-	0.118"	0.118"	0.118"
CORE THICKNESS	0.514"	0.764"	-	1.264"	1.514"	1.764"
MAX SCREW WITHDRAWN FORCE, LBF	78	87	-	81	-	-
MAX SCREW TENSILE FORCE, LBF	130	213	-	230	-	-
MAX TENSILE STRENGTH, PSI	32	52	-	56	-	-
COMP, STRENGTH @5% STRAIN, PSI	139	125	-	123	-	-
MAX FLEXURE FORCE, LBF	233	264	-	254	-	-
MODULUS OF RUPTURE, PSI	3481	2901	-	1886	-	-
MODULUS OF ELASTICITY, PSI	310821	248889	-	214079	-	-
WEIGHT PER PANEL, LB** (48 x 96)	51	56	-	68	73	79

SIZES AVAILABLE

¾” x 48 x 96

1” x 48 x 96

1-¼” x 48 x 96

1-½” x 48 x 96

1-¾” x 48 x 96

2” x 48 x 96

¾” x 48 x 120

1” x 48 x 120

1-¼” x 48 x 120

1-½” x 48 x 120

1-¾” x 48 x 120

2” x 48 x 120

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1/8” LUXA LIGHT®

1/8 cell structural core with a specialty engineered wood fiber surface material

APPLICATIONS

- Furniture
- Store Fixtures
- Architectural Panels
- Suspended Panels
- Displays
- Signage
- Whiteboards

KEY POINTS

- This extremely lightweight material has very good rigidity and strength values
- Easily apply face materials (veneer, laminate, and coatings)
- Finish with a variety of edge options
- Rigid face material supports selected methods of attachment

SIZES AVAILABLE

½” x 48 x 96

¾” x 48 x 96

1” x 48 x 96

1-¼” x 48 x 96

1-½” x 48 x 96

½” x 48 x 120

¾” x 48 x 120

1” x 48 x 120

1-¼” x 48 x 120

1-½” x 48 x 120

TECHNICAL DATA

	MATERIAL THICKNESS				
	1/2"	3/4"	1"	1-1/4"	1-1/2"
SKIN THICKNESS	0.026"	0.026"	0.026"	0.026"	0.026"
CORE THICKNESS	0.448"	0.698"	0.948"	1.198"	1.448"
MAX SCREW WITHDRAWN FORCE, LBF	28	-	-	21	-
MAX SCREW TENSILE FORCE, LBF	259	-	-	277	-
MAX TENSILE STRENGTH, PSI	64	-	-	68	-
COMP, STRENGTH @5% STRAIN, PSI	138	-	-	123	-
MAX FLEXURE FORCE, LBF	94	-	-	117	-
MODULUS OF RUPTURE, PSI	1740	-	-	1015	-
MODULUS OF ELASTICITY, PSI	287759		-	167666	-
WEIGHT PER PANEL, LB** (48 x 96)	15	20	25	31	36

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STRUCTA LIGHT®

Extruded particle board core faced with 1/8 HDF

KEY POINTS

- This unique material has design principles that give a high strength to weight ratio with the advantages of great impact resistance and low thickness swelling
- Easily apply face materials (veneer, laminate, and coatings)
- Finish with a variety of edge options
- Rigid face material supports selected methods of attachment
- Optional skin thicknesses are available

SIZES AVAILABLE

1-⅜ " x 48 x 96

1-⅝" x 48 x 96

1-¾" x 48 x 96

2" x 48 x 96

2-¼" x 48 x 96

APPLICATIONS

- Work Surfaces
- Architectural Panels
- Store Fixtures
- Suspended Panels
- Furniture
- Displays
- Shelving
- Doors

TECHNICAL DATA

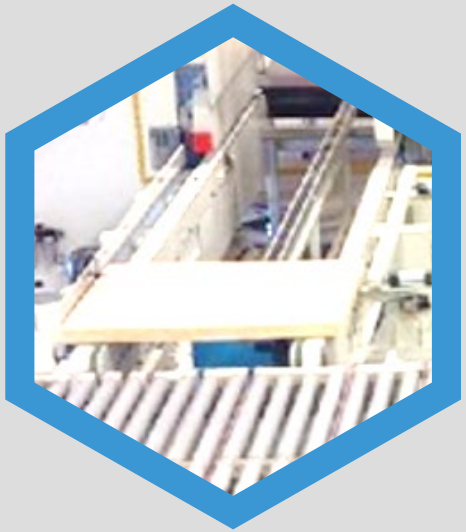
	MATERIAL THICKNESS				
	1-3/8"	1-5/8"	1-3/4"	2"	2-1/4"
SKIN THICKNESS	0.118"	0.240"	0.118"	0.240"	0.375"
CORE THICKNESS	1.120"	1.120"	1.500"	1.500"	1.500"
MAX SCREW WITHDRAWN FORCE, LBF	137	-	138	-	-
MAX SCREW TENSILE FORCE, LBF	138	-	379	-	-
MAX TENSILE STRENGTH, PSI	49	-	97	-	-
COMP, STRENGTH @5% STRAIN, PSI	236	-	324	-	-
MAX FLEXURE FORCE, LBF	218	-	270	-	-
MODULUS OF RUPTURE, PSI	1740	-	1740	-	-
MODULUS OF ELASTICITY, PSI	193483		19143		
WEIGHT PER PANEL, LB** (48 x 96)	116	138	125	147	181

LIGHTWEIGHT COMPONENT SOLUTIONS

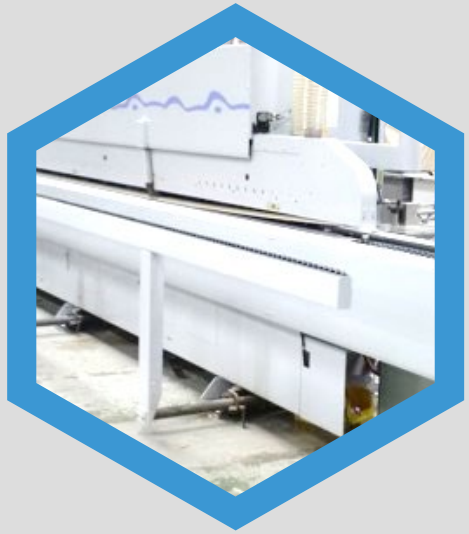
Purchase the sheet...

Or we create the component for you!

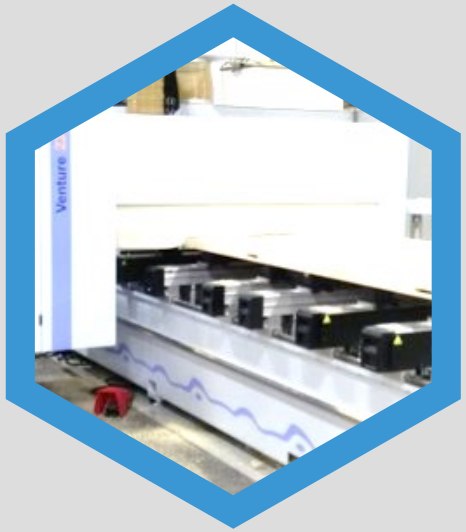
Laminating



Sizing



Edge Treatment



CNC Machining

Hardware

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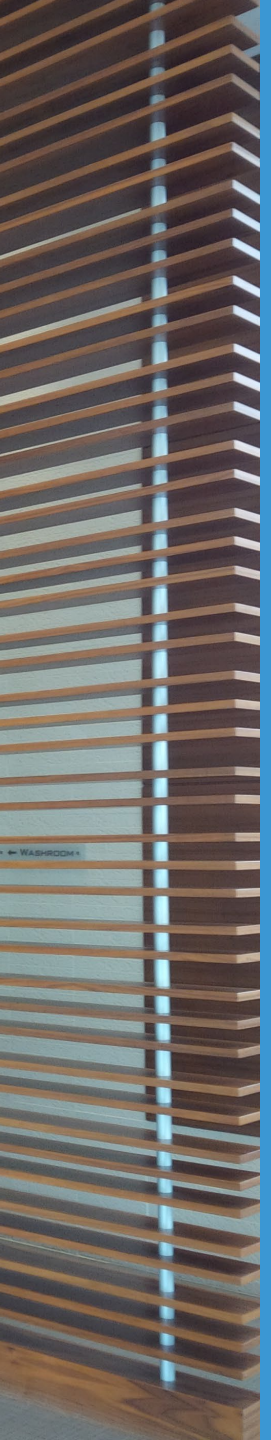
COMPONENT SELLING

Selling components is a unique advantage that Think Lightweight can offer our customers. We have the capability to finish products so all your customer needs to do is install the product. Check out the projects at the end of the slideshow for more details.



ORDER MINIMUMS

0-10 Pieces

Anything less than 10 pieces we suggest your customer purchases from your stock material and finishes themselves in house or locally.

50/10 Rule

If an order has more than over 50 pieces and a minimum size of 10 pieces of one single product.

Some exceptions may apply.

Samples/ Prototypes

We understand and accommodate the need for samples or prototypes to get a job off the ground.

OUR CAPABILITIES

Maximum panel thickness

- Cut to size: 3”
- Uncut: No limit (in certain products)

Maximum panel size

- 5 x 12

Standard finish options

- Veneer
- Laminate
- Primed MDF/HDF

Edge banding options

- Edge Bander Process
  We can edge panels on our edge bander up to 2”TH, this is the most cost-effective method
- Self-Edge Process
  Any panels that exceed 2”TH we can apply self-edge, this is done by hand so is much less cost-effective

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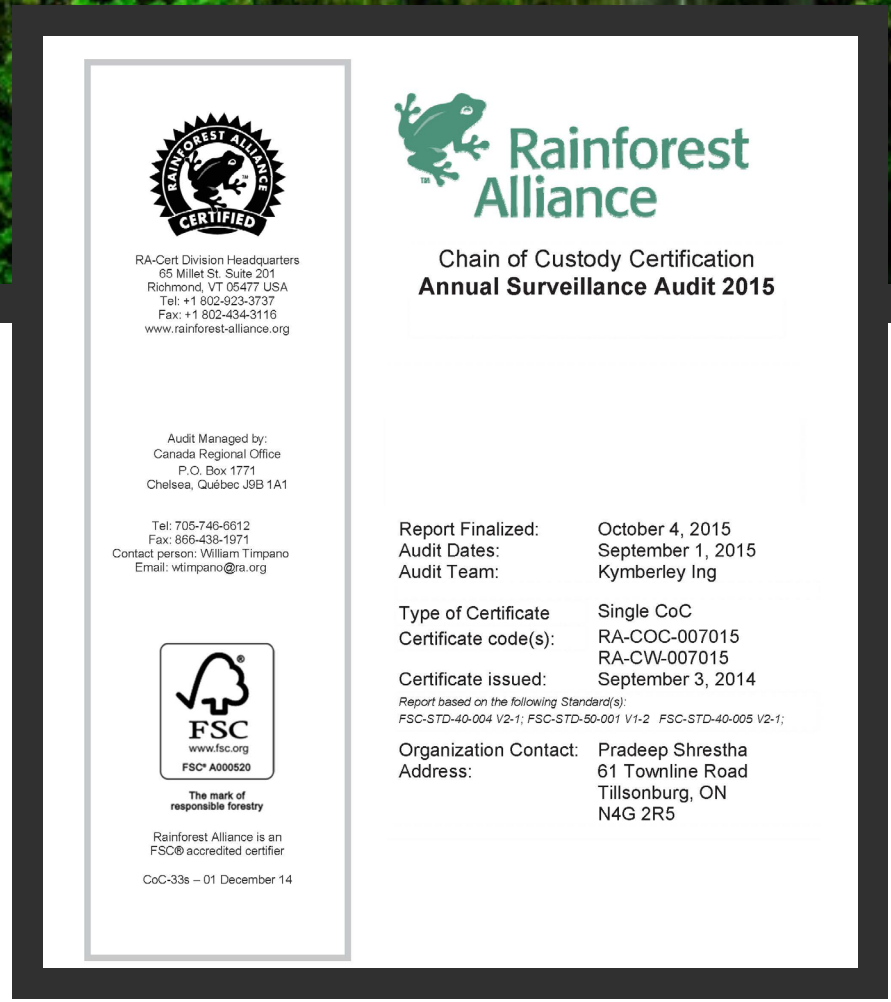
FSC CERTIFICATION

1. Company commitment to responsible environmental best practices
2. FSC Annual Chain of Custody Audit and Certification
3. All products are sold Non-FSC and available for FSC certification as required



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Tel: 705-746-6612
Fax: 866-438-1971
Contact person: William Timpano
Email: wtimpano@ra.org

FSC
www.fsc.org
FSC® A000520

The mark of responsible forestry

Rainforest Alliance is an FSC® accredited certifier

CoC-33s – 01 December 14

Rainforest Alliance

Chain of Custody Certification
Annual Surveillance Audit 2015

Report Finalized:	October 4, 2015
Audit Dates:	September 1, 2015
Audit Team:	Kymberley Ing
Type of Certificate	Single CoC
Certificate code(s):	RA-COC-007015 RA-CW-007015
Certificate issued:	September 3, 2014

Report based on the following Standard(s):
FSC-STD-40-004 V2-1; FSC-STD-50-001 V1-2 FSC-STD-40-005 V2-1;

Organization Contact:	Pradeep Shrestha
Address:	61 Townline Road Tillsonburg, ON N4G 2R5

PROJECT GALLERY

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APPLE

In 2011 Apple set itself to have the worlds greenest office space, and also went to great lengths to design a futuristic work space. This included having over 9 foot long work surfaces and 2 inches thick! Not only did they want minimal cantilever supports but also green.

The solution – a hollowcore lightweight panel with an integral metal frame which gave them the green certification, the right looks and had a deflection of just 1/8 over the 9 foot span.

BEECHCRAFT

This trade show booth for a premium provider of private jets utilized our abilities to create a strong, stable lightweight panel. The structure went unsupported from side to side with overhead accents to install lighting and electrical as needed. The long, linear ceiling beams covered with aluminum successfully achieved the look of hollow beams, but were realistically as sturdy as hollow beams. The walls were made out of lightweight material. With lightweight walls, the company was able to save costs on installation, while still maintaining the durability of a hollow wall.

BELL TRADESHOW

Lightweight panel technology fulfilled the design requirements of creating a long, unsupported ceiling to cover the booth and integrate overhead lighting for this high profile phone provider. The walls were also made out of hollow core material which made it easy to install and move as needed.

NISSAN

This stunning tradeshow booth utilized lightweight beams to achieve the hanging and curved beam dividers. The high level of detail and design was carefully executed by our team at Think Lightweight to create a modern, clean look.

The beams are made out of Foam Light with a two tone finish, wood laminate on one side and slate stone grey on the side to accomplish the sophisticated booth. Easy to install and dismantle, the lightweight beams were a show stopper!

BERTAZZONI APPLIANCE DISPLAY

European design and high quality were top of the list for this Italian appliance company. Bertazzoni embraces the fine engineering heritage of the region – the world famous sports cars and racing motorbikes, and machine tools. The lightweight, hollowcore panels and robust connection system were a perfect fit and worked well with the high volume rollout requirements.

BEST BUY

The totally new look for this retailer required a modern brushed aluminum look. Other designs were very cumbersome and required heavy duty hanging systems. These lightweight panels were laminated with an aluminum face and the grooves machined and painted to accomplish a striking metal look.

ARCHITECTURAL CEILING PROJECT

This uniquely designed trade show display shows a spectacular example of the effect that lightweight panel technology can achieve. The angled end beam structure created the overhead visual concept the customer desired and the lightweight feature allowed them to be suspended overhead easily!

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CIBC

The look of floating solid wood beams was the vision the designer had for this Canadian Banking group. Reality was accomplished with these veneered hollow core beams hung with a thin aircraft cable system, each section interconnecting to form whatever length beam was required.

FORMICA TRADESHOW

An international supplier of high pressure laminates required an eye catching booth to launch their new color range at a major woodworking trade show. The design concept was featured around the walls being created from 2 ½" thick by 19' long tapered wall panels. Impossible using traditional construction methods, very achievable using lightweight panel technology! To top it off the booth received "Best Booth in Show" award!

FREEMAN EXHIBITS

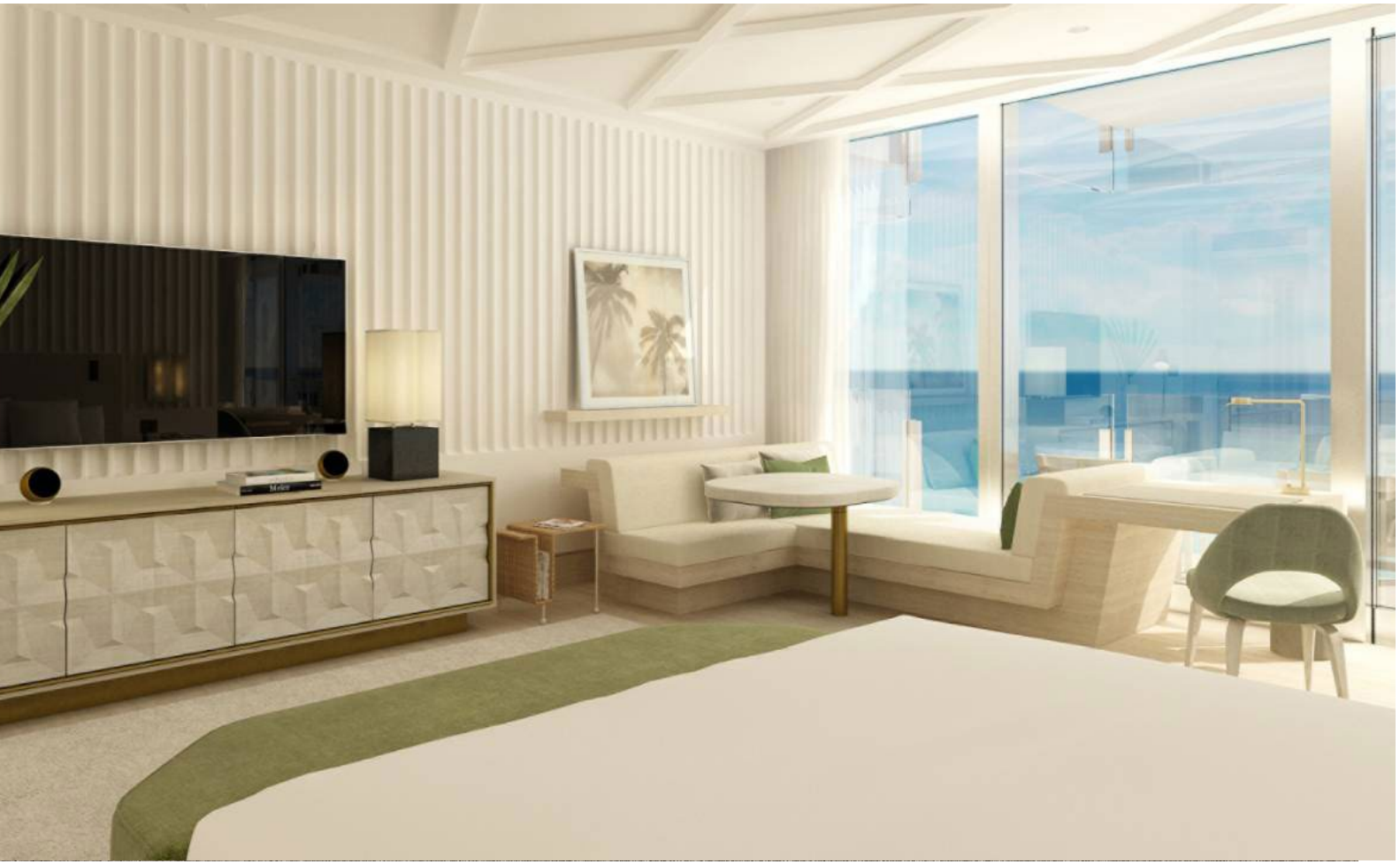
Freeman Exhibits makes and manages thousands of tradeshows, they have started using lightweight materials for their tradeshow walls and decorative ceiling accents. They commented that installation was a lot smoother with the lightweight panels, while the walls still provided the strength and durability that is needed.

GENESIS TRADESHOW

This luxury car manufacturer came up with a show stopper at a recent Auto show with one of few exhibits highlighting an overhead feature!

These lightweight honeycomb core beams with integrated LED lighting gave this brand the depth and luxury surroundings their vehicles deserved. Our lightweight ceiling beams made this tradeshow easy to handle and install while also hitting every design requirement within budget.

BEACH CLUB HOTEL



Problem: Intricate architectural diamond details on Beach Club ceilings. The contractor needed a lightweight solution as they wanted an alternative to expensive, hard to work with high density urethane. Extended lead times with the HDU was also an issue at well over 8 weeks.

Solution: Proposed Foam Light Ceiling Lineals as a substitute/alternative. We sent through a prototype and won the job!

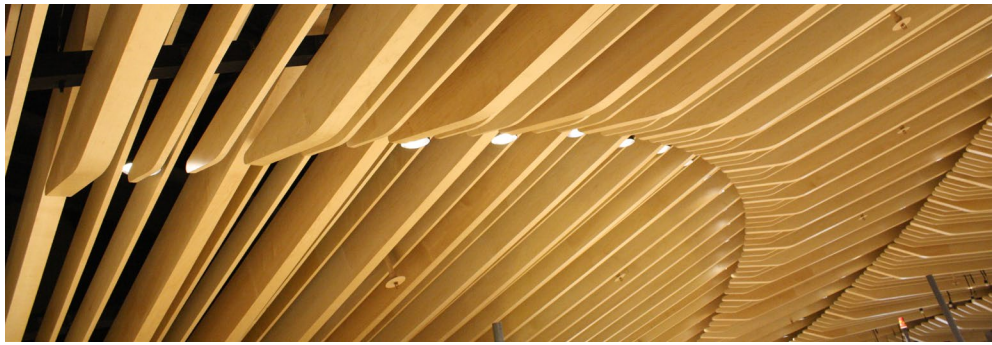
Result: We provided the ultra-light solution at 30% below budget and cut their lead time in half! We manufactured the aesthetics of painted wood beams at a fraction of the cost, and exceeded customer expectations

KING COLE AUDIO VISUAL

King Cole Audio Visual Service required reusable and lightweight 10' wall panels to create an attractive solution for their trade show registration booth customers. Think Lightweight utilized it's Foam Light panel technology to create a lightweight panel system that was easily assembled and disassembled. In addition, the end result provides an aesthetically pleasing registration environment.

AUDITORIUM CEILING PROJECT

This ceiling project was originally designed in laminated glulam materials. The challenge of excessive weight hanging from a ceiling mechanism arose immediately. Our hollow core panels replaced the solid wood creating the look the designer was after with far less weight and cost! With the lighter weight of honeycomb products, the hardware to hang the structure was also more cost-effective. The uniqueness of these beautiful ceiling beams still amaze people with their



PIZZA HUT

This popular pizza restaurant recently updated their signature locations to reflect a more upbeat industrial look, the design team were looking for cost reduction and opted for the open ceiling look. In some of the newer locations there were very few features and the idea of steel I-beams was created, this of course involved enormous material and structural cost. Working along with the designers we were able to provide a hollowcore solution that looked exactly like the real thing and suspended with steel wires.

TABLEAUX TRADESHOW BOOTH

Tableaux Decorative Grille was looking for light and easy to assemble tradeshow walls to showcase their beautiful wall art! Think Lightweight was able to design a project layout to their desired specifications. We provided a lightweight solution that proved its benefits of fast and easy installation while still being cost-effective. The overall visual affect showcased their unique product line stunningly!

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WORLD OF SCIENCE

The Edmonton Space & Science Foundation, a non-profit organization were looking for a cost effective wall system for their latest Sherlock Holmes exhibit and were pleasantly surprised with our honeycomb wall solution.

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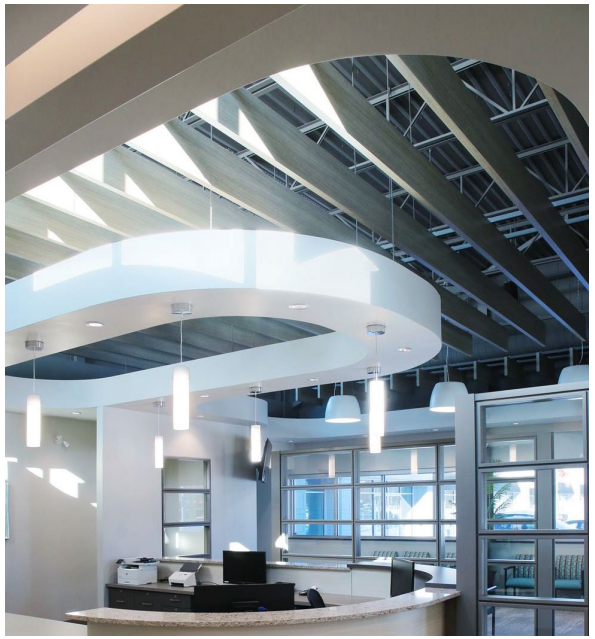
TIM HORTONS

This popular coffee shop is constantly striving to keep their locations fresh and updated. Being a franchise group they are constantly looking for competitive solutions and simplistic installation due to tight fit out schedules. They initially used traditional laminated wood panels, but encountered significant issues with warpage and installation. After success with the lightweight suspended panel above the seating areas they also incorporated lightweight beams into the program.

RECEPTION OFFICE

These lightweight beams fulfilled the customers needs to create a drop ceiling over the reception desks to close the area in. The beams turned out beautifully, they were aesthetically pleasing and easy to install while still serving the customers purpose to single out the one area.



ARCHITECTURAL PRIVACY SCREENS

A Design Professional required an attractive design concept that gave partial privacy between common and semi-private areas such as casual dining. The project was initially installed using veneer plywood sections, but had to be removed as the accumulated weight made it a dangerous structure. It was reinstalled with lightweight, hollow core panels and solved the dilemma!

THINK LIGHTWEIGHT®

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Ian McPhail

Mobile: 519.788.2859

ian.mcphail@thinklightweight.com

www.thinklightweight.com