THINK LIGHTWEIGHT

LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

thinklightweight.com

Presentation To:

Date:

Today's Topics

- About Think Lightweight
- What are Lightweight Structures?
- Industry Applications
- Product Line Review
- Think Lightweight Component Solutions
- FSC
- Industry 4.0 Manufacturing Process
- Project Gallery

About Think Lightweight

- 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

The Most Effective Structures are Lightweight

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 where solid?

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.

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.

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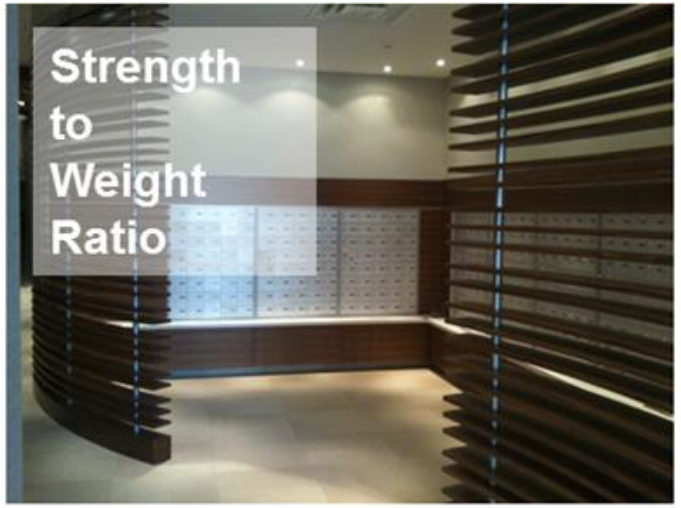
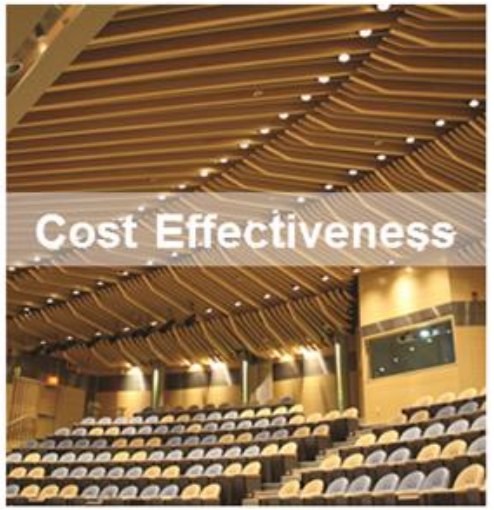
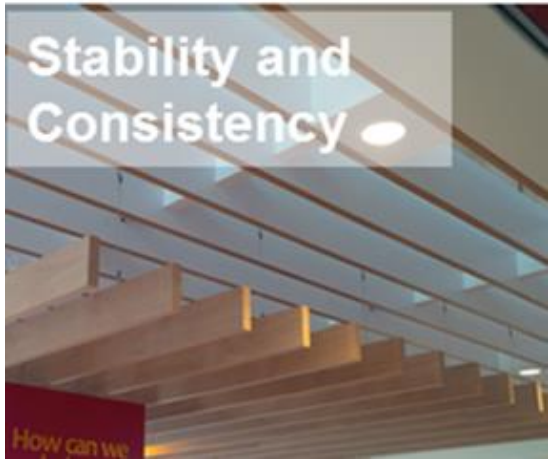
Why You Should Think Lightweight





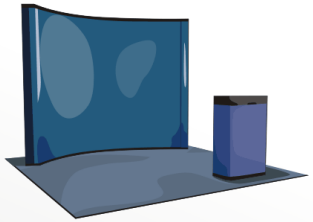


Industry Applications

Retailers

Restaurants

Hotels



Trade Shows

Museums

Public Spaces

Film Studios

Furniture

Office

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

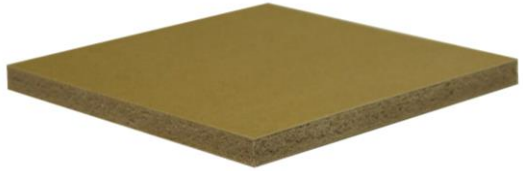
Think Lightweight Product Family

FOAM LIGHT

1/8” COMB LIGHT

3/8” COMB LIGHT

1/8” LUXA LIGHT



LIGHT TACK

STRUCTA LIGHT

Lightweight panel technology solutions, minimize materials, maximize results!

FOAM LIGHT

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LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

Foam core faced with 1/8 HDF.

- 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

- 3/4"x49x97
- 1"x49x97
- 1-1/4"x49x97
- 1-1/2"x49x97
- 1-3/4"x49x97
- 2"x49x97
- 3/4"x49x121
- 1"x49x121
- 1-1/4"x49x121
- 1-1/2"x49x121
- 1-3/4"x49x121
- 2"x49x121

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** (49 x 97)	40	41	-	43	44	45

Applications

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

3/8” COMB LIGHT

THINK LIGHTWEIGHT
LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

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

- This material has been proved 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

SIZES AVAILABLE

- 3/4”x49x97
- 1”x49x97
- 1-1/4”x49x97
- 1-1/2”x49x97
- 1-3/4”x49x97
- 2”x49x97
- 3/4”x49x121
- 1”x49x121
- 1-1/4”x49x121
- 1-1/2”x49x121
- 1-3/4”x49x121
- 2”x49x121

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** (49 x 97)	43	44	-	47	49	51

Applications

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

LIGHT TACK

THINK LIGHTWEIGHT
LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

Natural fiberboard faced with a specialty engineered wood fiber surface material.

- 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

- 1/2"x48x96

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	-	-	-	-

Applications

- Furniture
- Store Fixtures
- Displays
- Tackboards

1/8” COMB LIGHT

THINK LIGHTWEIGHT
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1/8 cell structural core faced with 1/8 HDF.

- 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** (49 x 97)	51	56	-	68	73	79

Applications

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

SIZES AVAILABLE

- 3/4”x49x97
- 1”x49x97
- 1-1/4”x49x97
- 1-1/2”x49x97
- 1-3/4”x49x97
- 2”x49x97
- 3/4”x49x121
- 1”x49x121
- 1-1/4”x49x121
- 1-1/2”x49x121
- 1-3/4”x49x121
- 2”x49x121

1/8” LUXA LIGHT

THINK LIGHTWEIGHT
LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

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

- 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

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** (49 x 97)	15	20	25	31	36

Applications

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

SIZES AVAILABLE

- 1/2”x49x97
- 3/4”x49x97
- 1”x49x97
- 1-1/4”x49x97
- 1-1/2”x49x97
- 1/2”x49x121
- 3/4”x49x121
- 1”x49x121
- 1-1/4”x49x121
- 1-1/2”x49x121

STRUCTA LIGHT

THINK LIGHTWEIGHT
LIGHTWEIGHT PANEL TECHNOLOGY SOLUTIONS

Extruded particle board core faced with 1/8 HDF

- 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

- 1-3/8"x49x97
- 1-5/8"x49x97
- 1-3/4"x49x97
- 2"x49x97
- 2-1/4"x49x97

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** (47 x 97)	116	138	125	147	181

Applications

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

THINK LIGHTWEIGHT
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Lightweight Component Solutions

PURCHASE THE SHEET…

OR WE CREATE THE COMPONENT FOR YOU!

Laminating

Sizing

Edge Treatment

CNC Machining

Hardware

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FSC Certification

- Company Commitment to Responsible Environmental Best Practices
- FSC Annual Chain of Custody Audit and Certification
- All Products are Sold Non-FSC and Available for FSC Certification as Required

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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
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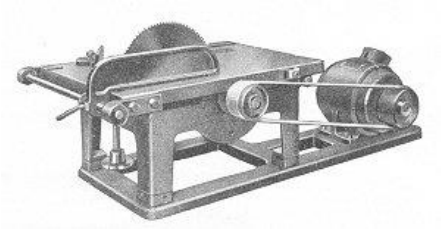
Why We're Different

Industry 2.0

Industry 3.0

Industry 4.0

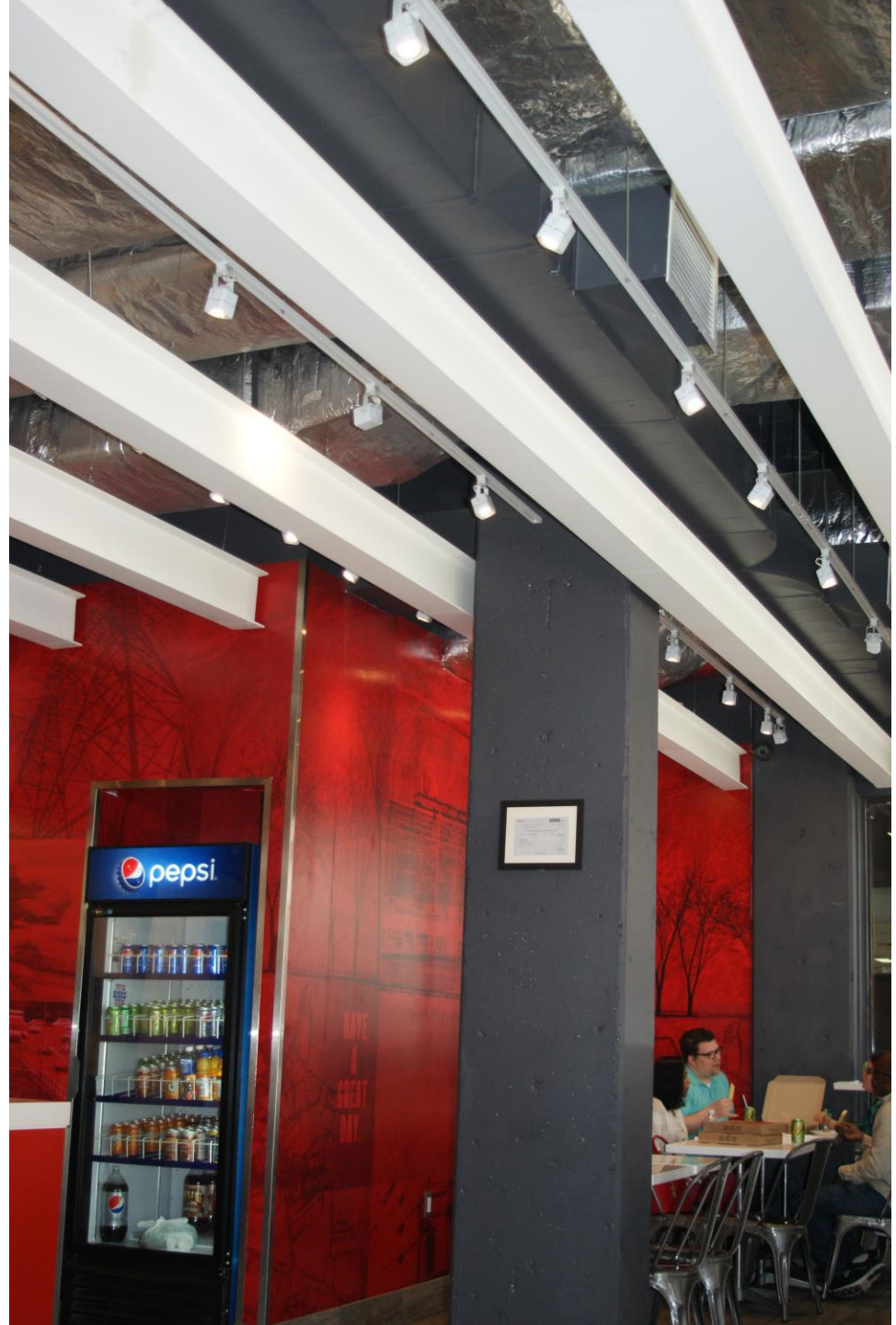


Industry 1.0

- Continuous focus on innovation in products, process and markets
- Operational Processes Utilize the Latest Technologies

Let our LIGHTWEIGHT expertise help you succeed!

Project Gallery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