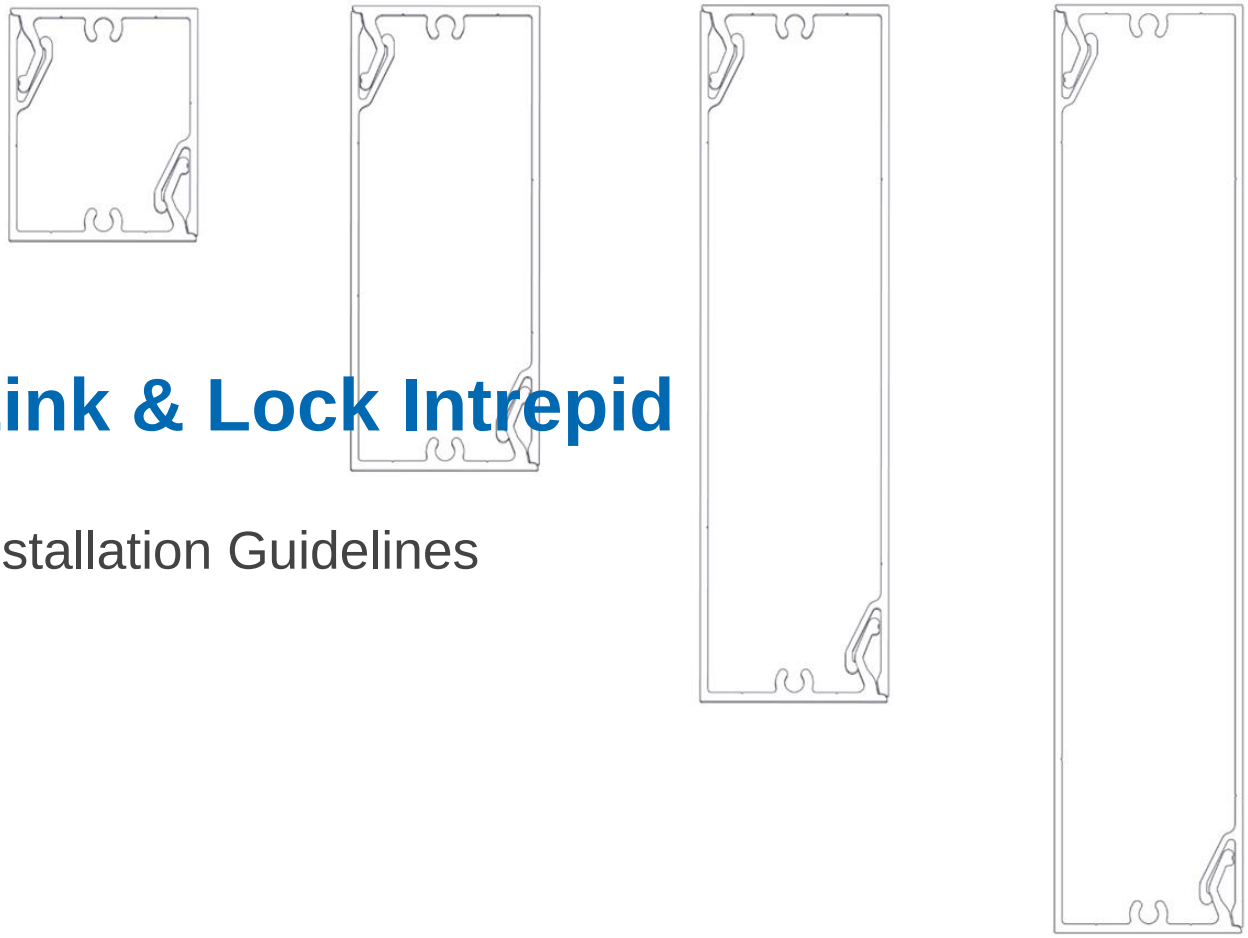
LONGBOARD®
INSPIRING ARCHITECTURE



Link & Lock Intrepid

Installation Guidelines

Table of Contents

Material Specifications

Finishes

- Longboard Products are available in a wide range of powder coated finishes
- Custom solid colors are available upon request

All Longboard Products are produced 1” (25mm) oversized, as one end is drilled for the coating process and both ends have 1/2“ (12mm) of masking tape (woodgrains only) which must be cut off for best results.

Expansion & Contraction

Although interior applications likely will not experience a large degree of temperature change, it is good practice to follow the standard attachment procedure described in this guide. See **Appendix for Tables 1 & 2, expansion/contraction calculations per foot/meter of material.**

Material Ordering & Delivery

• Packaging:	Link & Lock is sold by the set (pair) and in widths of 2”, 4”, 6”, 8” End caps are sold by the box: 20 caps/bx End Mounts are sold by the box: 20 mounts/bx
• Ship/Receiving:	Most Popular Finishes -ready to ship within 1 week Additional Finishes -ready to ship within 14 weeks Delivered on 24’ (7.3m) long skids weighing up to 2000 lbs. A mechanical lift with forks is required on site to receive the order.
• QC:	Always inspect the delivery for damage and contact LB ASAP if there are any issues: info@longboardproducts.com or 1-800-604-0343 and include your PO# and any pictures if possible. Mark the delivery receipt as “damaged” and accept the delivery as-is. Longboard is not responsible for the installation of blemished or damaged material.

Storage & Handling

Be sure to store the material flat, keep it dry, safe & secure and remain in unopened cartons until ready to be installed. See **Appendix for proper handling and care instructions.**

Cleaning Recommendations

- Initial and periodic cleaning for best looking product
- Basic methods use a combination of moderate water pressure, soft sponge/brush and a mild detergent (Safe for your hands, safe for the product)

⚠ NEVER use aggressive, acid or alkaline cleaners on Longboard finishes. Do not use cleaners containing Trisodium Phosphate, Phosphoric Acid, Hydrochloric Acid, Hydrofluoric Acid, Fluorides, or any other compound that is known to react with metal.
See Cleaning Guide for full requirements & cleaning schedule:
longboardproducts/resources/care-maintenance.com

Warranty

Upon substantial completion of the project, register for warranty online here: longboardproducts.com/warranty
⚠ Registration is required for the warranty to be in effect.

Graffiti Removal

Standard Woodgrain

Use Standard soap & water only

D2000 Solid Color

	Prosoco Cleaner	MEK Solvent
Permanent Marker	✓	✓
Oil Based Spray Paint	✓	✓
Water Based Spray Paint	✓	✓
Adhesive Tape	✓	✓

MEK Solvent

Prosoco Anti-Graffiti Cleaner

SPECIAL ORDER - EXT. LEAD TIMES CONTACT LB

Anti-Graffiti High Gloss Woodgrain

	MEK Solvent
Permanent Marker	✓
Oil Based Spray Paint	✓
Water Based Spray Paint	✓
Adhesive Tape	✓

MEK Solvent

Note: Cleaning the surface with a cleanser that is not diluted as per instructions, may result in damage to the coating.

Components

Components (Typical)

The Link & Lock™ system consists of two (2) matching L-shaped extrusions, snapped together to make a complete set. For all LB components go to longboardproducts.com.

Link & Lock™ Battens

Size	12′	24′	End Caps (20/box)	End Mounts (20/box)
2″	2X2LL.145	2X2LL.289	2LLEC.2	2LLEM.2
4″	2X4LL.145	2X4LL.289	2LLEC.4	2LLEM.4
6″	2X6LL.145	2X6LL.289	2LLEC.6	2LLEM.6
8″	2X8LL.145	2X8LL.289	2LLEC.8	2LLEM.8
Link & Lock™ HD Battens				
4"	2X4LLHD.145	2X4LLHD.289	2LLHDEC.4	2LLHDEM.4
6"	2X6LLHD.145	2X6LLHD.289	2LLHDEC.6	2LLHDEM.6
8"	2X8LLHD.145	2X8LLHD.289	2LLHDEC.8	2LLHDEM.8
Link & Lock™ Box Battens				
4 x 4"	4X4LL.145	4X4LL.289	4LLEC.4	-
4 x 6"	4X6LL.145	4X6LL.289	4LLEC.6	-

Link & Lock™ Batten

Link & Lock™ HD Batten

4 x 4"

4 x 6"

Link & Lock ™ Box Battens

Mounting Accessories	Qty	SKU
Link & Lock Mounting Clip	48, bag	LLMC.N48
Dewalt® 1/2" Pilot Point Drill Bit	1	DRILLBT.05

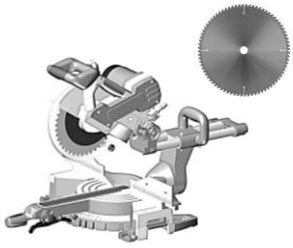
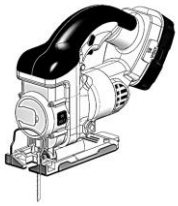
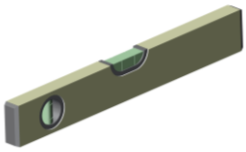
L&L Mounting Clip

1/2" Pilot Point

Tools/Cutting/Fastening

Tools

Commonly used tools for Link & Lock install.

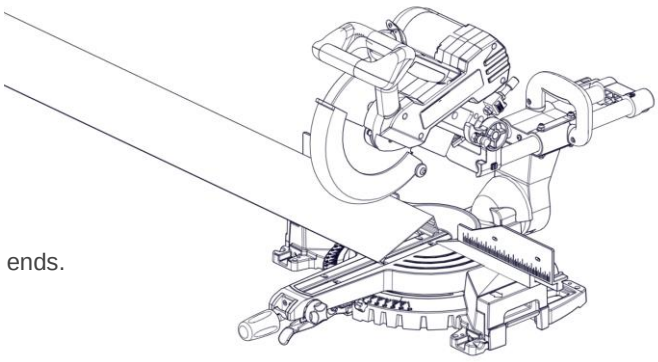
			
Table Saw with Carbide Metal Blade Non-ferrous 60-80T (for cutting aluminum)	Miter Saw with Carbide Metal Blade Non-ferrous 60-80T (for cutting aluminum)	Cordless Drill with clutch	Jig Saw (for protrusions)
			
Rubber Mallet (or Hammer)	Level	Hole Saw (for lighting fixtures)	Quick Grip Bar Clamp

Cutting

⚠ Always be sure to wear appropriate PPE: eye & hearing protection.

Cut battens using a Miter Saw and Table Saw always allowing for expansion & contraction. Trim the taped/drilled ends of all stock length material by at least **1/2“ (12mm) each end** and discard.

⚠ DO NOT Install Link & Lock without trimming the ends.



Fastening

Longboard Link & Lock™ consists of two (2) matching L-shaped extrusions, snapped together to make a complete set. The back “L” is mechanically fastened to the substrate, using Longboard **Mounting Clips** fastened every **6-8’ O.C. up to 12ft when using Stiffeners** with #12 (#14 for L&L HD) sharp-point screws (for wood substrates) or self-drilling (for metal substrates). The Mounting Clips are included in the order for 6’ spacings.

Fasteners must be corrosion resistant and comply with all local building codes.

⚠ All fasteners should be suitable for exterior use and be compatible with the substrate type. **Fasteners should be anchored into a solid secure substrate.**

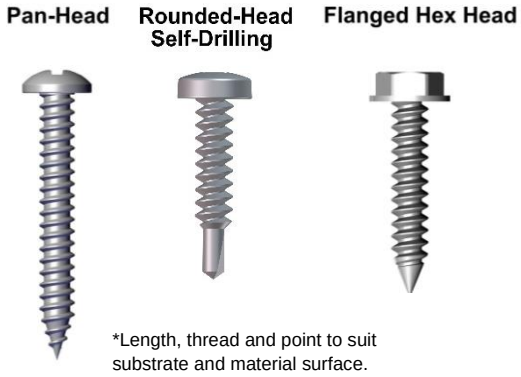
Layout and predrill the back “L” at all fastener locations.
Refer to **Preparation drilling for Install** for hole dimensions and further details.

⚠ See **Appendix for project specific fastener spacing:**
Allowable Span - Tables 3-9

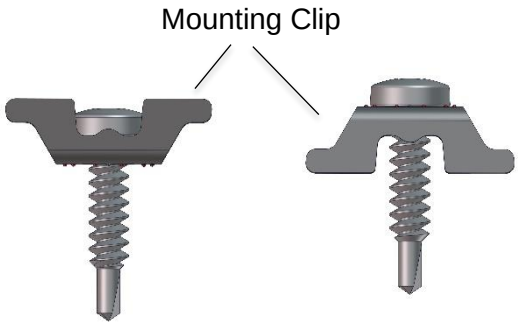
Fastener Types/Sizes for L&L		
L&L	**Pan Head**	**Hex Head**
2”	#12	#12
4”	#12	#12
6”	#12	#12
8”	#12	#12
4”x4”	#12	#12
4”x6”	#12	#12
4” HD	#14	#14
6” HD	#14	#14
8” HD	#14	#14

Fastener types

RECOMMENDED

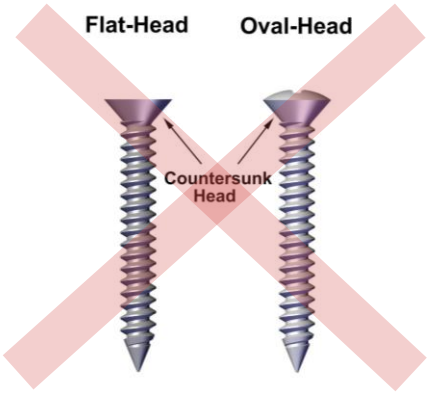


*Length, thread and point to suit substrate and material surface.

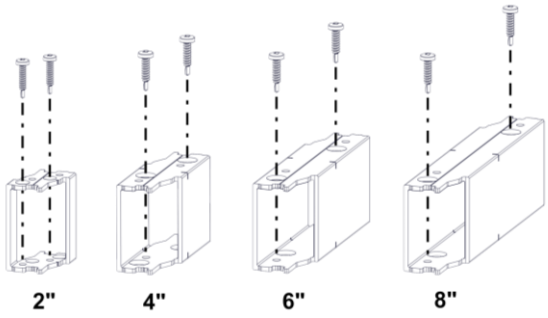


Batten (flat orientation) Fin orientation

DO NOT USE



Fastener Types/Sizes for End Mounts		
End Mount	**Pan Head**	**Hex Head**
2”	#10	
4”	#12	#12
6”	#12	#12
8”	#12	#12
4” HD	#14	#14
6” HD	#14	#14
8” HD	#14	#14



Framing requirements
Always consult your local building authority and follow local building code requirements.
See Typical dimensions for sizes and weights of the L&L system.

Wood Framing
- Size: 2x4 minimum

Metal Framing
- Gauge: 18 ga. minimum

Concrete/CMU

Wood or metal furring is recommended over concrete and CMU.

Wood Furring:
- Size: 2x2 minimum

Metal Furring:
- Size: 18 ga. minimum
- Type: Hat channel, Stud, or Z-Girt

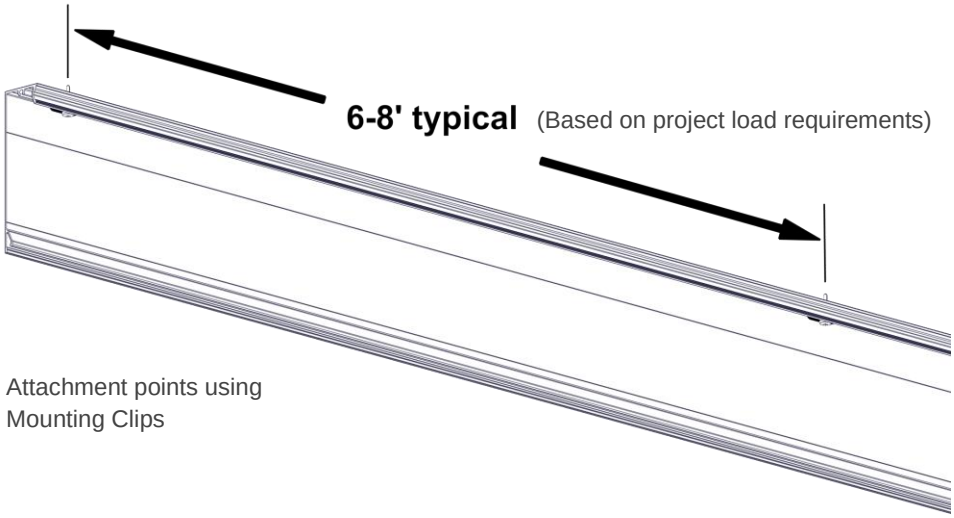
Install details

Typical dimensions

- Longboard Link & Lock system typical dimensions:

L&L	Width	Depth	Length	Weight(lbs/LF) *per set
2”	2” (50.8mm)	1 5/8” (41.3mm)	12’/24’	0.93
4”	4” (101.6mm)	1 5/8” (41.3mm)	12’24’	1.3
6”	6” (152.4mm)	1 5/8” (41.3mm)	12’/24’	1.6
8”	8” (203mm)	1 5/8” (41.3mm)	12’/24’	1.9
4”x4”	4” (101.6mm)	4” (101.6mm)	12’/24’	1.8
4”x6”	6” (152.4mm)	4” (101.6mm)	12’/24’	2.1
4” HD	4” (101.6mm)	2” (50.8mm)	12’/24’	1.7
6” HD	6” (152.4mm)	2” (50.8mm)	12’/24’	2.4
8” HD	8” (203mm)	2” (50.8mm)	12’/24’	3

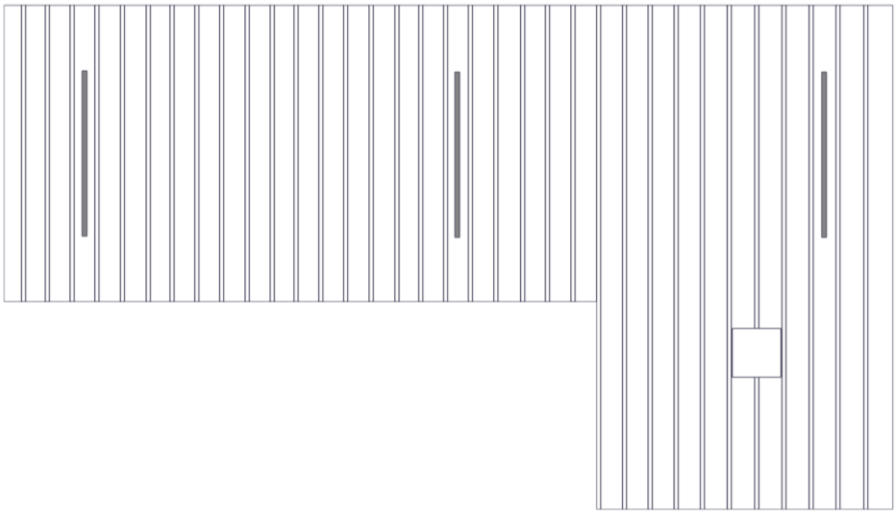
- It is good practice to leave a 1/4” (6mm) gap between every component joint or 24’ (7.3m) to allow for expansion & contraction. Consider the joints where components meet each other to dictate which component is installed first (eg: right angle butt joints, mitered joints etc.).
- Mounting Clips allow for movement of the battens, to expand & contract during thermal changes.
- Fasten Mounting Clips every 6-8’ typical (based on load requirements), alternating from top to bottom for battens using die lines for guides.

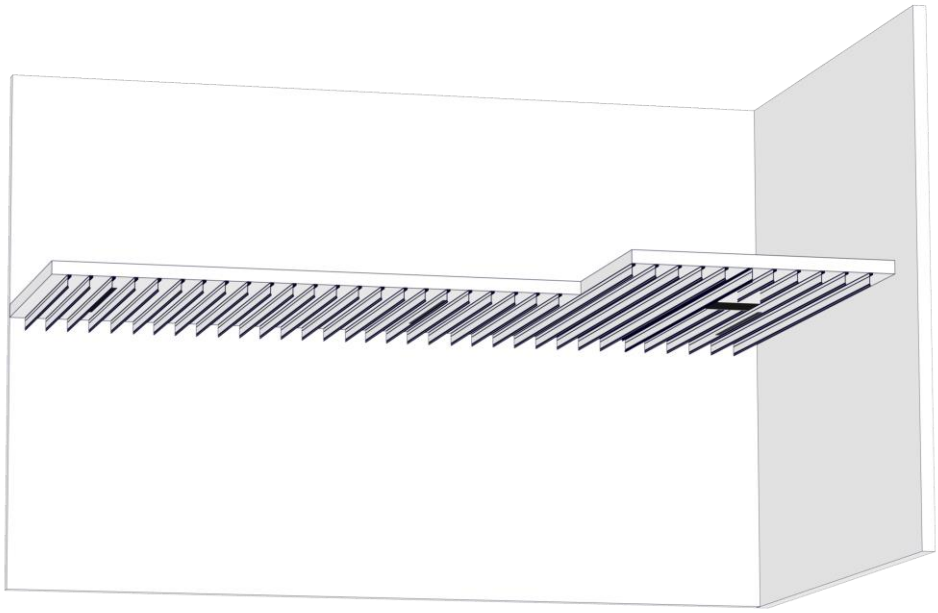


System layout and Install steps

Perimeter and field area limitations

Measure and layout your wall area to consider Link & Lock alignment with fixtures, penetrations, and adjacent walls, for desired appearance.



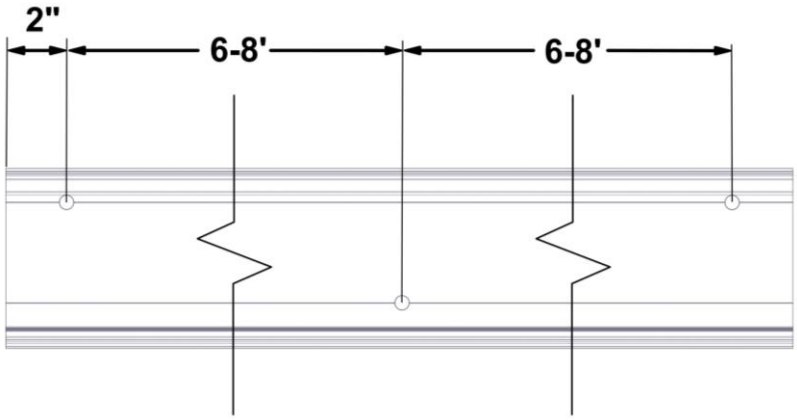


Preparation drilling for Install

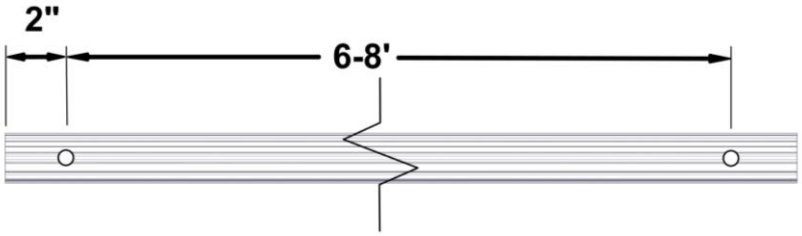
To prepare Link & Lock for install, layout and predrill the back “L” with 1/2" holes every 6-8’ O.C. typical, with the first hole 2” in from the end to allow space for the End Cap.
For the Batten orientation, alternate the holes from top to bottom using the Dielines for guides.
For Fin orientation, use Pilot Point Drill Bit (see below) as recommended for ease of drilling.
Note: To hard fasten 1 location per length, omit the drilled hole at that location and use for hard fastening.

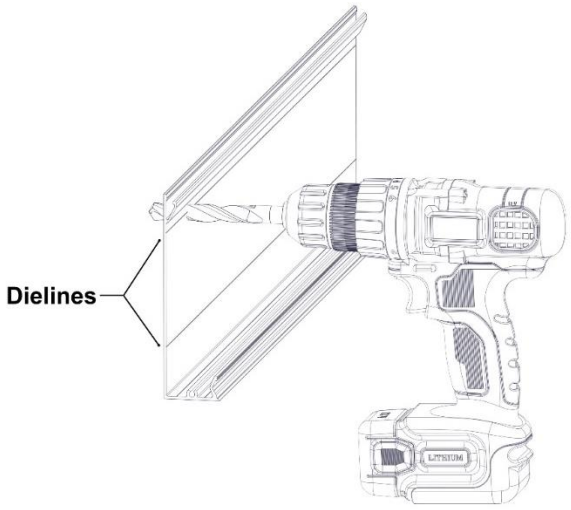
See **Appendix for project specific fastener spacing:**
Allowable Span - Tables 3-9

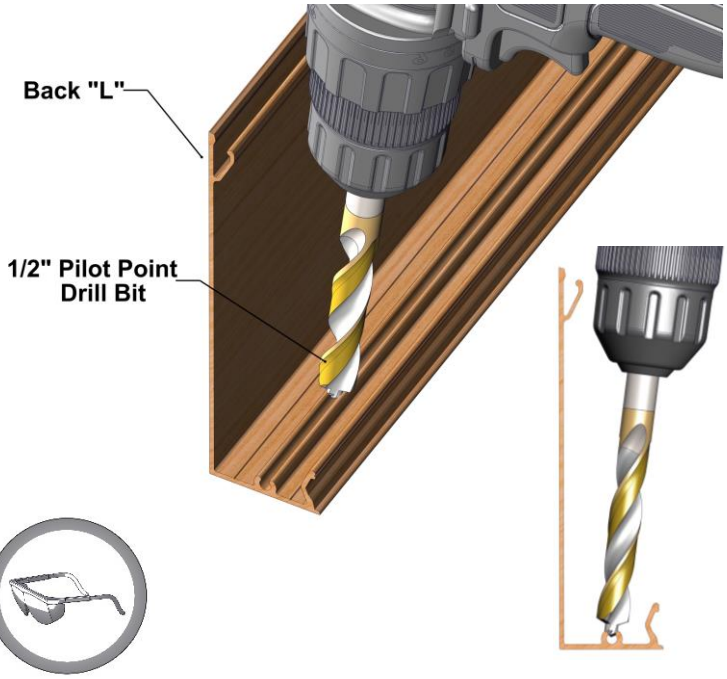
Batten orientation



Fin orientation

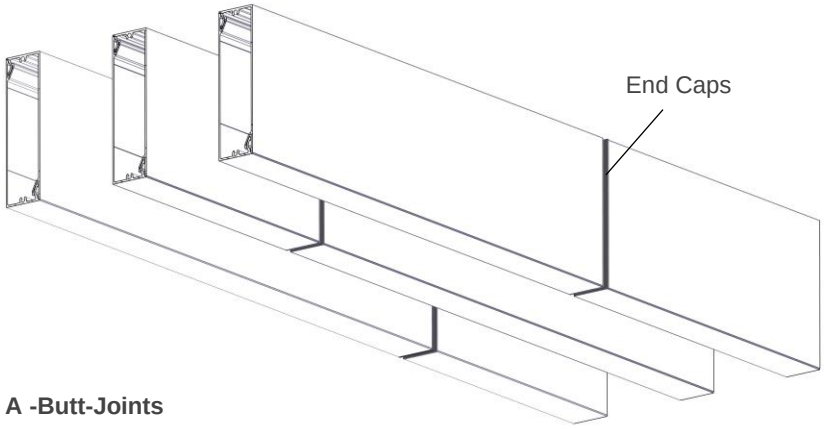




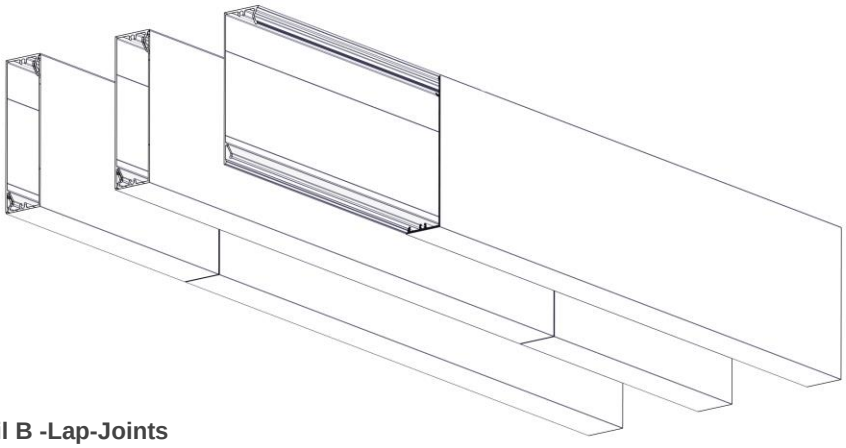


Butt-Joints & Lap Joints

- ⚠ BUTT-JOINTS. When installing butt-joints, ensure to leave a 1/4” (6mm) min. gap. every 24’ (7.3m) min. (**See Detail A)**. Fasteners should be anchored into a solid secure framing member, blocking, furring strip, or backer plate, etc.
- ⚠ LAP-JOINTS. When installing lap-joints, ensure to leave a 1/4” (6mm) min. gap. every 24’ (7.3m) min. (**See Detail B)**. Fasteners should be anchored into a solid secure framing member, blocking, furring strip, or backer plate, etc.
- Use touch-up paint pens (purchased separately) to finish the ends at the butt-joint or lap-joint.
- It is good practice to hard-fasten each back “L” at one point per length typically near the center, to keep the battens from migrating.
- DO NOT hard-fasten more than one (1) location per batten.

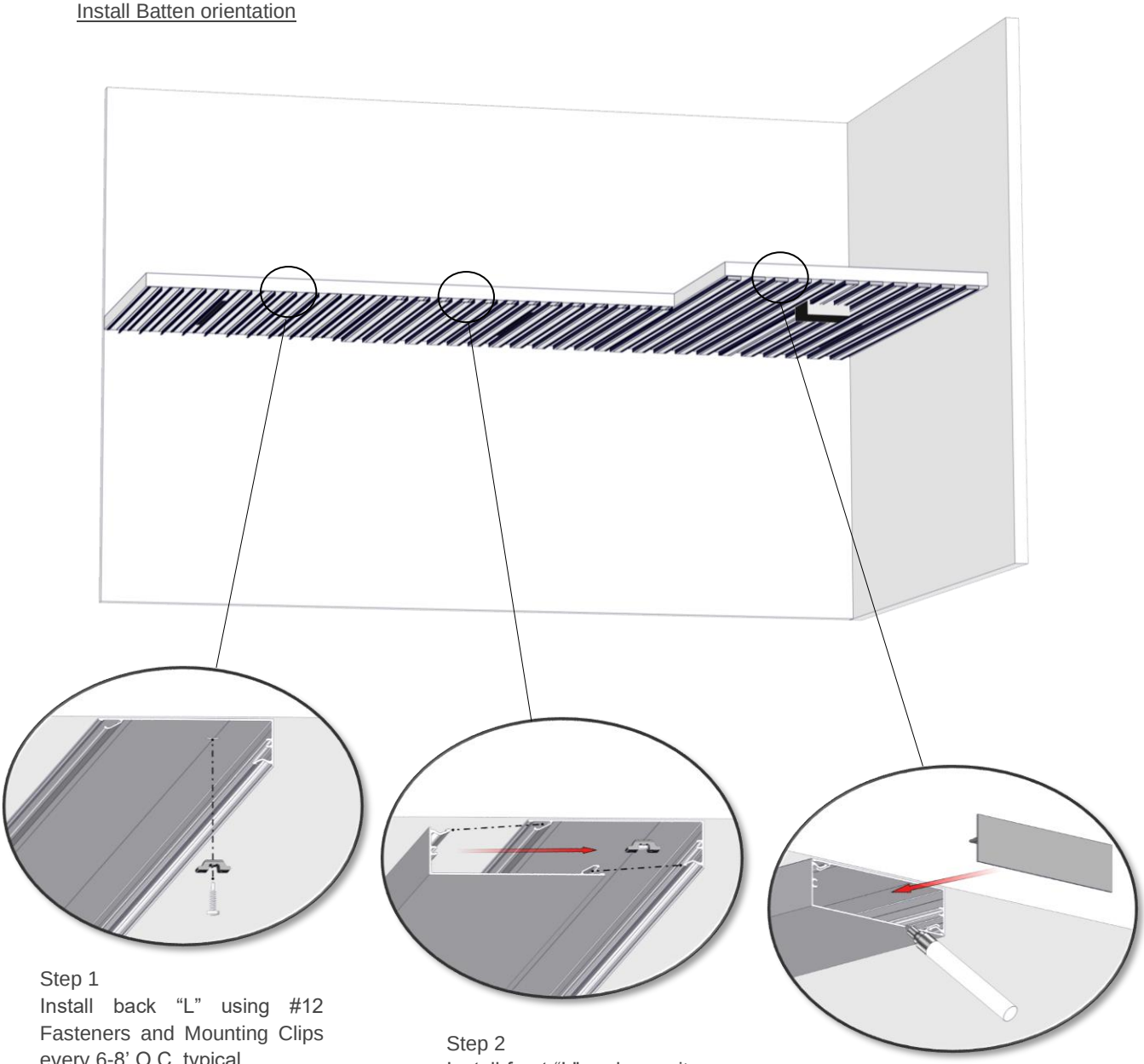


Detail A -Butt-Joints



Detail B -Lap-Joints

Install Batten orientation



Step 1
Install back “L” using #12 Fasteners and Mounting Clips every 6-8’ O.C. typical.

Note: Be sure to fasten in the center of the 1/2" holes to allow for movement each way. Hard fasten near the center of each length to prevent migration of the material over time.

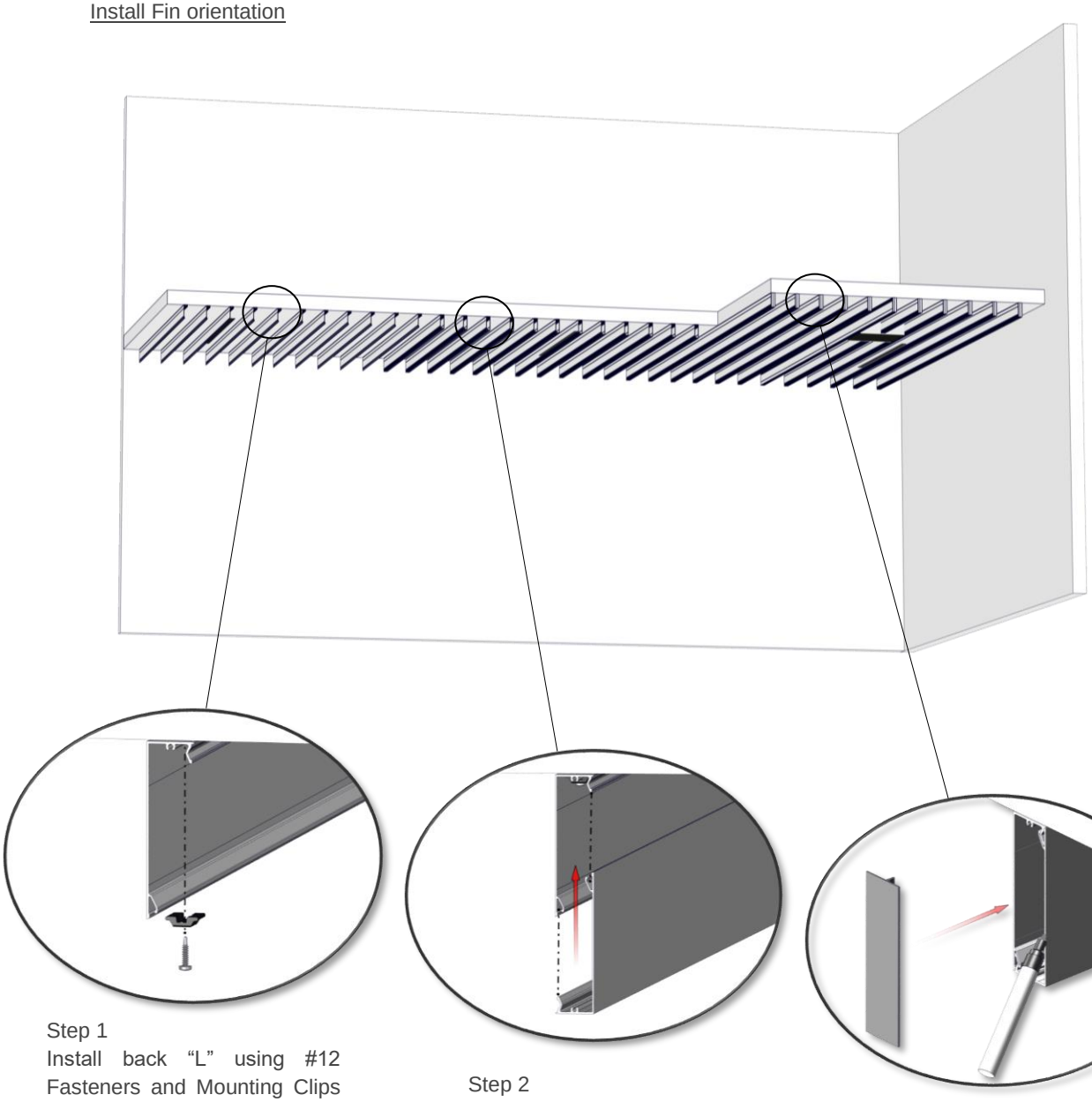
Cut off Taped/Drilled L&L ends (1/2" each end).

Step 2
Install front “L” and snap it into place, aligning it with ends and joints.

If necessary, use a rubber mallet or hammer and block to protect the finish.

Step 3
Install End Caps, which are friction fit, by pressing them into place using the palm of your hand. If necessary, use a rubber mallet to snap them into place. If required, touch up the cut ends with matching paint pen.

Install Fin orientation



Step 1
Install back “L” using #12 Fasteners and Mounting Clips every 6-8’ O.C. typical.

Note: Be sure to fasten in the center of the 1/2" holes to allow for movement each way. Hard fasten near the center of each length to prevent migration of the material over time.

Cut off Taped/Drilled L&L ends (1/2" each end).

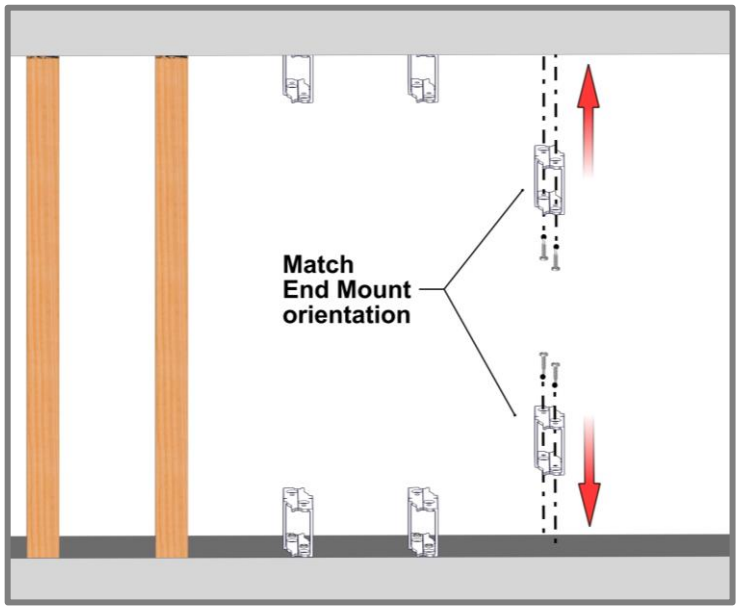
Step 2
Install front “L” and snap it into place, aligning it with ends and joints.

If necessary, use a rubber mallet or hammer and block to protect the finish.

Step 3
Install End Caps, which are friction fit, by pressing them into place using the palm of your hand. If necessary, use a rubber mallet to snap them into place. If required, touch up the cut ends with matching paint pen.

Install End to End orientation

Note: Use Tables 3-9 in Appendix for Allowable Span.



Step 1

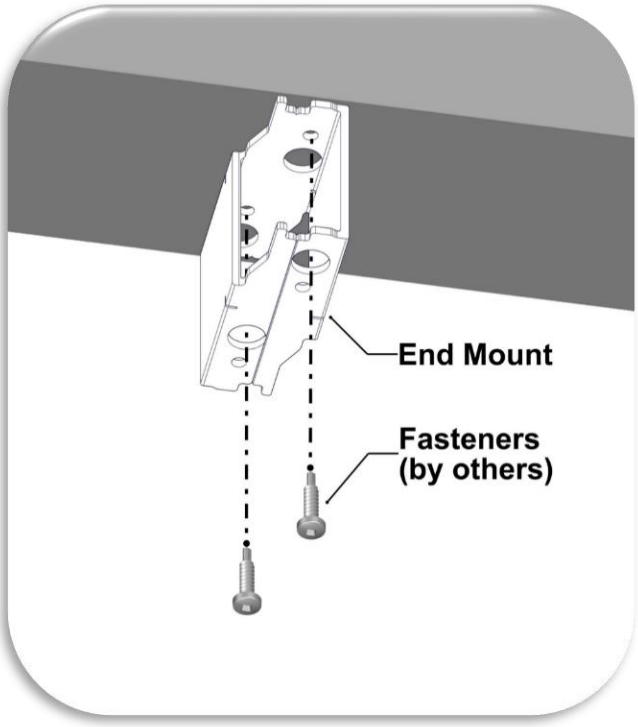
Place End Mounts into position at the top and bottom of the install. It is good practice to check your installation every 2-3 rows for level/plumb and flat/straight, for best results.

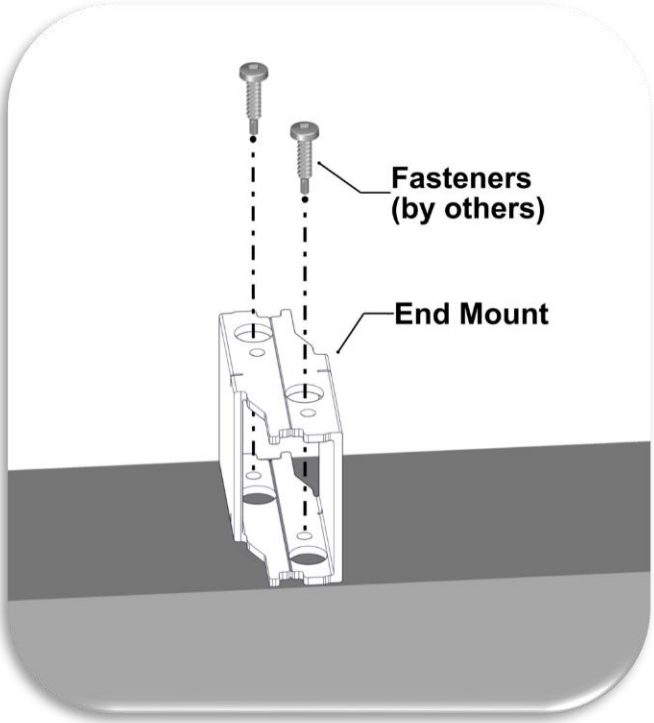
Fastener Types/Sizes for End Mounts		
End Mount	**Pan Head**	**Hex Head**
2”	#10	
4”	#12	#12
6”	#12	#12
8”	#12	#12
4” HD	#14	#14
6” HD	#14	#14
8” HD	#14	#14

Step 2

Install the End Mounts using #12 Fasteners (#10 for 2” End Mount). Make sure to match the orientation of the End Mounts so the Link & Lock set matches on the top and the bottom. See above for **Fastener Types for End Mounts.**

⚠ TIP: Check the position of the End Mounts once installed to allow a plumb and straight look.





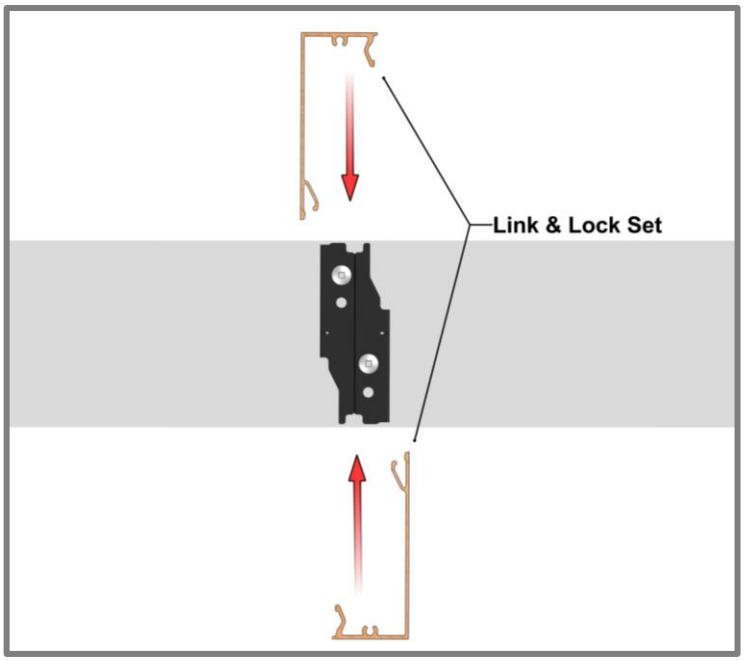
Step 3

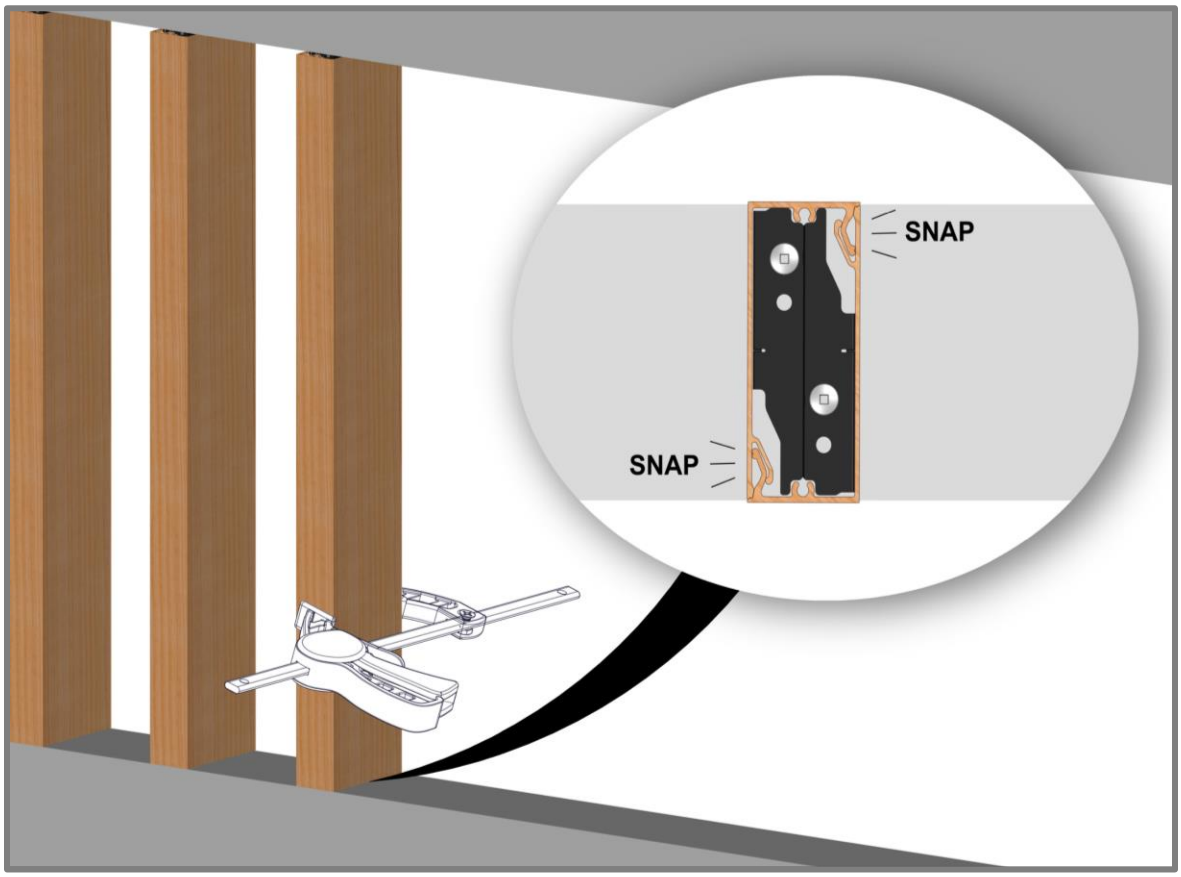
Measure, cut and install Link & Lock Set and snap it into place onto the End Mounts. Use clamps with rubber pads as common practice to securely snap the front “L” onto the back “L”.

If necessary, use a rubber mallet or hammer and block to protect the finish.

⚠TIP: When measuring the Link & Lock, make sure to leave a gap (~1/4”) for expansion and building movement.

⚠ **Cut off Taped/Drilled L&L ends (1/2" each end).**



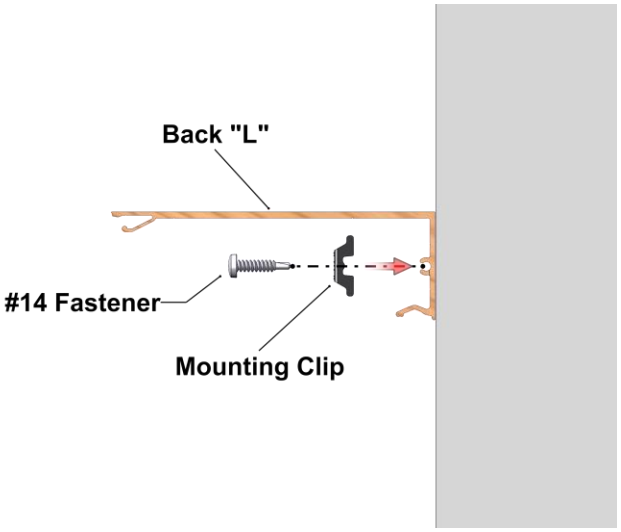


Link & Lock HD

- Used for greater spans compared to standard Link & Lock
- Available sizes: 4”, 6” & 8” (2” depth)
- Uses standard Mounting Clip and attachment methods
- Use #14 Fasteners

Refer to System Layout and Install steps section for typical install details.

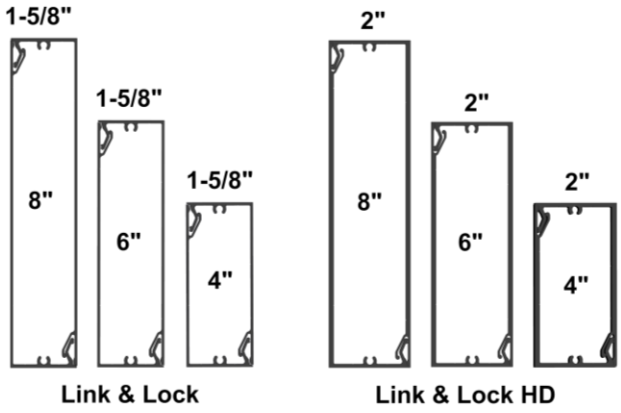
To Compare allowable spans:
See **Appendix for allowable spans for project specific load.**
Allowable Span – Tables 3-9



6” L&L
6’ span max
@30PSF

6” L&L HD
12’ span max
@30PSF

Profile Comparison

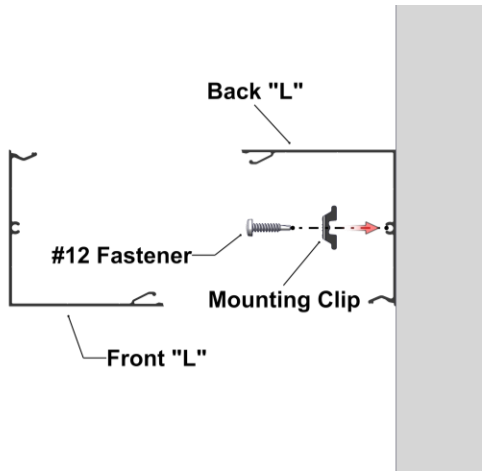


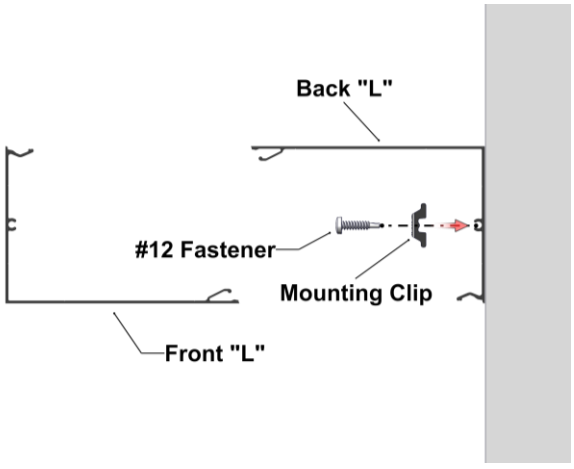
4x4 & 4x6 Link & Lock

- Available sizes: 4”x4” & 4”x6”
- Uses standard Mounting Clip and attachment methods with #12 Fasteners

Refer to System Layout and Install steps section for typical install details.

See **Appendix for allowable spans for project specific load.**
Allowable Span – Tables 10-11





Appendix

Expansion and Contraction Tables

TABLE 1 - IMPERIAL

AVERAGE TEMPERATURE AT TIME OF CUTTING & INSTALLATION

	°C	-50	-40	-30	-20	-10	0	10	20	30	40	50
	°F	-58	-40	-22	-4	14	32	50	68	86	104	122
MIN/MAX POST CONSTRUCTION TEMP.	°C	°F	EXPANSION OR CONTRACTION (INCH/FOOT)										
	-50	-58	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022	-0.024	-0.027
	-40	-40	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022	-0.024
	-30	-22	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019	-0.022
	-20	-4	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016	-0.019
	-10	14	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014	-0.016
	0	32	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011	-0.014
	10	50	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008	-0.011
	20	68	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005	-0.008
	30	86	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003	-0.005
	40	104	0.024	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000	-0.003
	50	122	0.027	0.024	0.022	0.019	0.016	0.014	0.011	0.008	0.005	0.003	0.000

TABLE 2 - METRIC

AVERAGE TEMPERATURE AT TIME OF CUTTING & INSTALLATION

	°C	-50	-40	-30	-20	-10	0	10	20	30	40	50
	°F	-58	-40	-22	-4	14	32	50	68	86	104	122
MIN/MAX POST CONSTRUCTION TEMP.	°C	°F	EXPANSION OR CONTRACTION (MM/METER)										
	-50	-58	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840	-2.070	-2.300
	-40	-40	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840	-2.070
	-30	-22	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610	-1.840
	-20	-4	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380	-1.610
	-10	14	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150	-1.380
	0	32	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920	-1.150
	10	50	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690	-0.920
	20	68	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460	-0.690
	30	86	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230	-0.460
	40	104	2.070	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000	-0.230
	50	122	2.300	2.070	1.840	1.610	1.380	1.150	0.920	0.690	0.460	0.230	0.000

TABLE 3

LONGBOARD®
INSPIRING ARCHITECTURE

2" INTREPID		PSF (FACTORED/ULITIMATE)										
		10	20	30	40	50	60	70	80	90	100	110
ALLOWABLE SPAN (ft)	6'	■	■	■	■	■	■	■	■	■	■	■
	8'	■	■	■	■	■						
	10'	■	■	■								
	12'	■										

All testing has been performed using L/180 deflection limits
INTREPID is not designed as a life-saftey item, such as gaurd rail or barrier etc.

TABLE 4

LONGBOARD®
INSPIRING ARCHITECTURE

4" INTREPID		PSF (FACTORED/ULITIMATE)				
		10	20	30	40	50
ALLOWABLE SPAN (ft)	6'	■	■	■	■	■
	8'	■	■	■		
	10'	■	■			
	12'	■				

All testing has been performed using L/180 deflection limits
INTREPID is not designed as a life-saftey item, such as gaurd rail or barrier etc.

TABLE 5

LONGBOARD®
INSPIRING ARCHITECTURE

6" INTREPID		PSF (FACTORED/ULITIMATE)			
		10	20	30	40
ALLOWABLE SPAN (ft)	6'	■	■	■	■
	8'	■	■		
	10'	■			
	12'	■			

All testing has been performed using L/180 deflection limits
INTREPID is not designed as a life-saftey item, such as gaurd rail or barrier etc.

TABLE 6

LONGBOARD®
INSPIRING ARCHITECTURE

8" INTREPID		PSF (FACTORED/ULITIMATE)				
		10	20	30	40	50
ALLOWABLE SPAN (ft)	6'	■	■	■	■	■
	8'	■	■	■		

All testing has been performed using L/180 deflection limits
INTREPID is not designed as a life-saftey item, such as gaurd rail or barrier etc.

TABLE 7

LONGBOARD®
INSPIRING ARCHITECTURE

4" HD INTREPID	PSF (FACTORED/ULITIMATE)										
ALLOWABLE SPAN (ft)	10	20	30	40	50	60	70	80	90	100	120
6'	■	■	■	■	■	■	■	■	■	■	■
8'	■	■	■	■	■	■	■	■	■		
10'	■	■	■	■	■						
12'	■	■	■								
14'	■	■									
16'	■										
18'	■										

All testing has been performed using L/180 deflection limits
INTREPID is not designed as a life-saftey item, such as gaurd rail or barrier etc.

TABLE 8

LONGBOARD®
INSPIRING ARCHITECTURE

6" HD INTREPID	PSF (FACTORED/ULITIMATE)								
ALLOWABLE SPAN (ft)	10	20	30	40	50	60	70	80	90
6'	■	■	■	■	■	■	■	■	■
8'	■	■	■	■	■	■	■		
10'	■	■	■	■	■				
12'	■	■	■						
14'	■	■							
16'	■								

All testing has been performed using L/180 deflection limits
INTREPID is not designed as a life-saftey item, such as gaurd rail or barrier etc.

TABLE 9

LONGBOARD®
INSPIRING ARCHITECTURE

8" HD INTREPID	PSF (FACTORED/ULITIMATE)						
ALLOWABLE SPAN (ft)	10	20	30	40	50	60	70
6'	■	■	■	■	■	■	■
8'	■	■	■	■	■		
10'	■	■	■				
12'	■	■					
14'	■						

All testing has been performed using L/180 deflection limits
INTREPID is not designed as a life-saftey item, such as gaurd rail or barrier etc.

TABLE 10

LONGBOARD® INSPIRING ARCHITECTURE

4X4 LINK & LOCK		PSF (FACTORED/ULITIMATE)									
		30	40	50	60	70	80	90	100	110	120
ALLOWABLE SPAN (ft)	8'										
	10'										
	12'										

All testing has been performed using L/180 deflection limits

TABLE 11

LONGBOARD® INSPIRING ARCHITECTURE

4X6 LINK & LOCK		PSF (FACTORED/ULITIMATE)									
		30	40	50	60	70	80	90	100	110	120
ALLOWABLE SPAN (ft)	8'										
	10'										
	12'										

All testing has been performed using L/180 deflection limits

Sound Absorption (NRC & SAA)

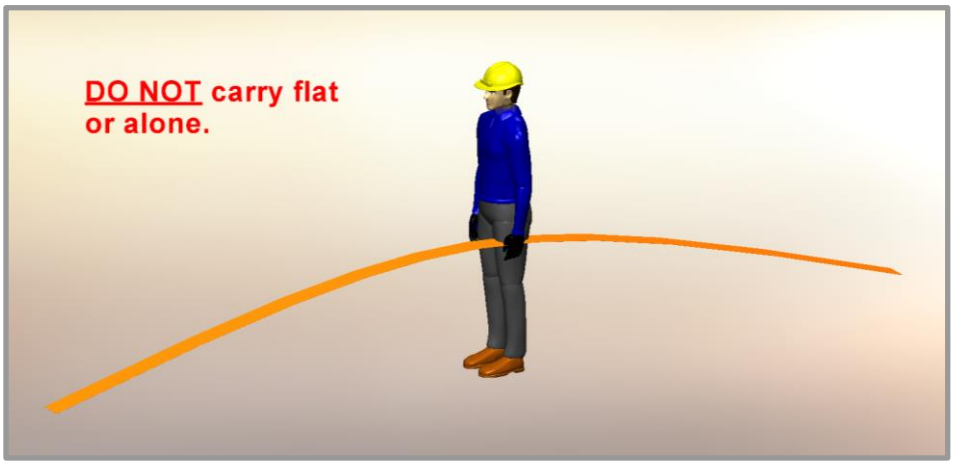
	SOUND ABSORPTION	
LINEAR METAL CEILINGS:	NRC	SAA
6" LINK & LOCK BAFFLES @ 6" O.C. w. insulation[1]	0.80	0.81
6" LINK & LOCK BAFFLES @ 6" O.C	0.10	0.12

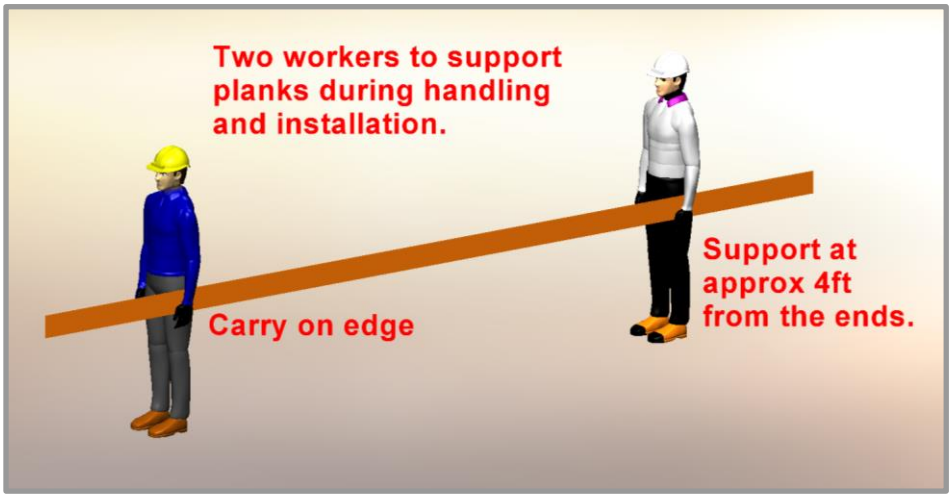
The test reported in this document conformed explicitly with ASTM C423-17: "Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method."

[1]Insulation = 1" Fiberglass backer, 3lbs/ft³ density

Proper Handling of Longboard Products

To help avoid injury and product damage, Longboard products require proper handling to and from storage areas during installation. When carrying or installing any products it is recommended that they be moved or carried by at least two people with each support point approximately 4ft from the ends. **Carrying products without proper support can cause excessive bending which may damage the appearance or finish of the product.** Any short cut lengths should also be carried on edge while supporting the material. See below for details.





⚠ Delivery, Storage & Handling ⚠

- Always inspect the delivery for damage and contact LB ASAP if there are any issues: info@longboardproducts.com or 1-800-604-0343 and include your PO# and any pictures if possible. Longboard is not responsible for the installation of blemished or damaged material.
- Be sure to store the material flat, keep it dry, safe & secure and remain in unopened cartons until ready to be installed.
- Always wear appropriate PPE when handling products.

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Every effort has been made to ensure that the information in these installation guidelines is accurate. Longboard is not responsible for printing or clerical errors.

For more information, contact client care at info@longboardproducts.com or call toll free 1-800-604-0343.