



**TimberStrand® LSL**



**Microllam® LVL**



**Parallam® PSL**

**1-800-628-3997**  
[www.trusjoist.com](http://www.trusjoist.com)

## **TimberStrand® LSL**

- Consistent quality and uniformity means dependable performance
- One-piece members reduce labor—saving you time and money
- Every piece is straight and strong—resists bowing, twisting, and shrinking
- Its unique properties allow you to drill holes along most of the length of the beam

**1.3E TimberStrand® LSL is perfect for window and door headers and is available in the following sizes:**

**Width:** 3½"    **Depths:** 4¾", 5½", 7¼", 8⅝", 9¼", and 11¼"

**1.3E TimberStrand® LSL columns and posts are available in the following sizes:**

3½" x 3½"    3½" x 4¾"    3½" x 5½"    3½" x 7¼"    3½" x 8⅝"

**1.7E TimberStrand® LSL is perfect for structural beams and is available in the following sizes:**

**Width:** 1¾"    **Depths:** 9¼", 9½", 11¼", 11⅞", 14", and 16"

**Width:** 3½"    **Depths:** 9¼", 9½", 11¼", 11⅞", 14", and 16"

*Some sizes may not be available in your region.*

## **Microllam® LVL**

- Supports heavier loads than comparable glulam or sawn lumber products
- Available in some regions with a Watershed® overlay for on-site weather protection
- Manufacturing process minimizes natural defects present in the wood
- Offers reliable, versatile, and economical solutions for your beam and header needs

**1.9E Microllam® LVL headers and beams are available in the following sizes:**

**Width:** 1¾"    **Depths:** 5½", 7¼", 9¼", 9½", 11¼", 11⅞", 14", 16", 18", and 20"

*Some sizes may not be available in your region.*

## **Parallam® PSL**

- Allows longer spans for open floor plans without intermediate posts or columns
- Its warm, exotic grain is perfect for applications that call for exposed beams
- Ideal for cantilever and multi-span applications
- Available with preservative treatment for exterior applications
- Uses veneer that would be considered waste in the manufacture of other veneer products

**2.0E Parallam® PSL headers and beams are available in the following sizes:**

**Widths:** 2¼", 3½", 5¼", and 7"

**Depths:** 9¼", 9½", 11¼", 11⅞", 14", 16", and 18"

**1.8E Parallam® PSL columns and posts are available in the following sizes:**

3½" x 3½"    3½" x 5¼"    3½" x 7"    5¼" x 5¼"    5¼" x 7"    7" x 7"

*Some sizes may not be available in your region.*



For more than 40 years, Trus Joist has been the world's leader in customer service, and in the innovation and manufacture of engineered lumber products.

We make the most of every wood fiber by taking trees apart and putting them back together in ways that produce engineered lumber that rivals—and even outperforms—old-growth lumber in strength, size, and consistency.

What does this mean for you? Less waste, easier installation, and higher design values for starters; plus fewer callbacks, shorter cycle times, more design flexibility, and lower overall installed cost in the end.

Trus Joist's TimberStrand® LSL, Microllam® LVL, and Parallam® PSL are structural solutions you can count on—guaranteed.

The residential products in this brochure are primarily intended for use in single- and multi-family dwellings. These products are readily available through our nationwide network of distributors and dealers.

For commercial applications such as retail stores, office buildings, schools, restaurants, hotels, nursing homes, etc., please contact your Trus Joist commercial representative. Commercial products are typically designed, manufactured and sold by Trus Joist for each specific job.

For more information on Trus Joist products, please call 1-800-628-3997.

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## Our tables are color-coded by product:

|                   |
|-------------------|
| TimberStrand® LSL |
| Microllam® LVL    |
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| Multi-product     |

## Code Evaluations:

ICC ES ESR-1387, HUD MR 1265, HUD MR 1303, HUD MR 925

## Allowable Axial Loads (lbs) for 1.3E TimberStrand® LSL

| Connection Type              | Effective Column Length | Column Size |        |        |           |        |        |           |        |        |           |        |        |           |        |        |
|------------------------------|-------------------------|-------------|--------|--------|-----------|--------|--------|-----------|--------|--------|-----------|--------|--------|-----------|--------|--------|
|                              |                         | 3½" x 3½"   |        |        | 3½" x 4¾" |        |        | 3½" x 5½" |        |        | 3½" x 7¼" |        |        | 3½" x 8¾" |        |        |
|                              |                         | 100%        | 115%   | 125%   | 100%      | 115%   | 125%   | 100%      | 115%   | 125%   | 100%      | 115%   | 125%   | 100%      | 115%   | 125%   |
| Steel and Column Bearing     | 3'                      | 10,740      | 12,140 | 13,040 | 13,425    | 15,175 | 16,300 | 16,875    | 19,075 | 20,490 | 22,245    | 25,145 | 27,010 | 26,465    | 29,910 | 32,135 |
|                              | 4'                      | 9,785       | 10,880 | 11,565 | 12,230    | 13,605 | 14,455 | 15,375    | 17,100 | 18,170 | 20,270    | 22,540 | 23,950 | 24,115    | 26,815 | 28,495 |
|                              | 5'                      | 8,605       | 9,365  | 9,810  | 10,755    | 11,705 | 12,260 | 13,520    | 14,715 | 15,415 | 17,825    | 19,395 | 20,320 | 21,205    | 23,075 | 24,175 |
|                              | 6'                      | 7,320       | 7,800  | 8,075  | 9,155     | 9,755  | 10,095 | 11,505    | 12,260 | 12,690 | 15,170    | 16,160 | 16,730 | 18,045    | 19,230 | 19,905 |
|                              | 7'                      | 6,130       | 6,445  | 6,620  | 7,665     | 8,055  | 8,275  | 9,635     | 10,125 | 10,405 | 12,700    | 13,350 | 13,715 | 15,110    | 15,880 | 16,315 |
|                              | 8'                      | 5,140       | 5,355  | 5,475  | 6,425     | 6,695  | 6,845  | 8,075     | 8,415  | 8,610  | 10,645    | 11,090 | 11,345 | 12,665    | 13,195 | 13,500 |
|                              | 9'                      | 4,340       | 4,500  | 4,585  | 5,430     | 5,620  | 5,735  | 6,825     | 7,070  | 7,210  | 8,995     | 9,315  | 9,500  | 10,700    | 11,085 | 11,305 |
|                              | 10'                     | 3,705       | 3,820  | 3,890  | 4,630     | 4,775  | 4,860  | 5,820     | 6,005  | 6,110  | 7,675     | 7,915  | 8,055  | 9,130     | 9,415  | 9,580  |
| Plate Bearing <sup>(1)</sup> | 3'-7'                   | 5,425       | 5,425  | 5,425  | 6,650     | 6,650  | 6,650  | 8,225     | 8,225  | 8,225  | 10,675    | 10,675 | 10,675 | 12,600    | 12,600 | 12,600 |
|                              | 8'                      | 5,140       | 5,355  | 5,425  | 6,425     | 6,650  | 6,650  | 8,075     | 8,225  | 8,225  | 10,645    | 10,675 | 10,675 | 12,600    | 12,600 | 12,600 |
|                              | 9'                      | 4,340       | 4,500  | 4,585  | 5,430     | 5,620  | 5,735  | 6,825     | 7,070  | 7,210  | 8,995     | 9,315  | 9,500  | 10,700    | 11,085 | 11,305 |
|                              | 10'                     | 3,705       | 3,820  | 3,890  | 4,630     | 4,775  | 4,860  | 5,820     | 6,005  | 6,110  | 7,675     | 7,915  | 8,055  | 9,130     | 9,415  | 9,580  |
|                              | 12'                     | 2,775       | 2,845  | 2,885  | 3,470     | 3,555  | 3,610  | 4,360     | 4,470  | 4,535  | 5,750     | 5,895  | 5,980  | 6,840     | 7,015  | 7,115  |
|                              | 14'                     | 2,150       | 2,195  | 2,220  | 2,685     | 2,745  | 2,775  | 3,380     | 3,450  | 3,490  | 4,455     | 4,550  | 4,600  | 5,295     | 5,410  | 5,475  |

(1) See connection details below.

## Allowable Axial Loads (lbs) for 1.8E Parallam® PSL

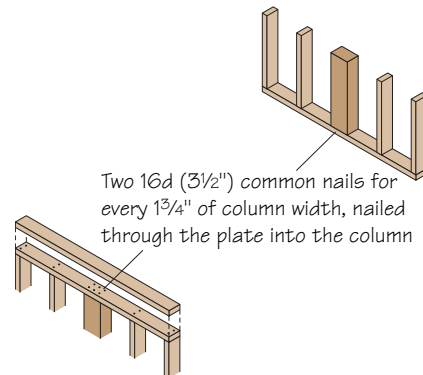
| Connection Type          | Effective Column Length | Column Size |        |        |           |        |        |          |        |        |           |        |        |          |        |        |         |        |        |
|--------------------------|-------------------------|-------------|--------|--------|-----------|--------|--------|----------|--------|--------|-----------|--------|--------|----------|--------|--------|---------|--------|--------|
|                          |                         | 3½" x 3½"   |        |        | 3½" x 5¼" |        |        | 3½" x 7" |        |        | 5¼" x 5¼" |        |        | 5¼" x 7" |        |        | 7" x 7" |        |        |
|                          |                         | 100%        | 115%   | 125%   | 100%      | 115%   | 125%   | 100%     | 115%   | 125%   | 100%      | 115%   | 125%   | 100%     | 115%   | 125%   | 100%    | 115%   | 125%   |
| Steel and Column Bearing | 6'                      | 10,598      | 11,202 | 11,551 | 15,897    | 16,804 | 17,326 | 21,196   | 22,405 | 23,101 | 33,300    | 36,685 | 38,743 |          |        |        |         |        |        |
|                          | 7'                      | 8,740       | 9,143  | 9,375  | 13,111    | 13,715 | 14,063 | 17,481   | 18,287 | 18,751 | 30,016    | 32,551 | 34,041 |          |        |        |         |        |        |
|                          | 8'                      | 7,270       | 7,553  | 7,716  | 10,905    | 11,330 | 11,574 | 14,539   | 15,106 | 15,432 | 26,655    | 28,499 | 29,565 | 35,540   | 37,998 | 39,420 |         |        |        |
|                          | 9'                      | 6,115       | 6,323  | 6,441  | 9,173     | 9,484  | 9,662  | 12,231   | 12,645 | 12,883 | 23,484    | 24,845 | 25,631 | 31,312   | 33,127 | 34,175 |         |        |        |
|                          | 10'                     | 5,203       | 5,359  | 5,449  | 7,805     | 8,039  | 8,173  | 10,407   | 10,718 | 10,897 | 20,667    | 21,703 | 22,300 | 27,556   | 28,937 | 29,733 |         |        |        |
|                          | 12'                     | 3,885       | 3,979  | 4,033  | 5,827     | 5,969  | 6,050  | 7,770    | 7,959  | 8,067  | 16,166    | 16,810 | 17,180 | 21,555   | 22,413 | 22,907 |         |        |        |
|                          | 14'                     | 3,003       | 3,064  | 3,099  | 4,504     | 4,596  | 4,649  | 6,005    | 6,129  | 6,199  | 12,893    | 13,320 | 13,566 | 17,190   | 17,760 | 18,088 | 34,168  | 35,796 | 36,736 |
|                          | 16'                     |             |        |        |           |        |        |          |        |        | 10,483    | 10,781 | 10,952 | 13,977   | 14,375 | 14,603 | 28,498  | 29,648 | 30,312 |
|                          | 18'                     |             |        |        |           |        |        |          |        |        | 8,673     | 8,890  | 9,013  | 11,565   | 11,853 | 12,018 | 24,027  | 24,871 | 25,356 |
|                          | 20'                     |             |        |        |           |        |        |          |        |        | 7,286     | 7,447  | 7,540  | 9,715    | 9,930  | 10,053 | 20,481  | 21,118 | 21,484 |
|                          | 22'                     |             |        |        |           |        |        |          |        |        |           |        |        |          |        |        | 17,638  | 18,131 | 18,413 |
|                          | 24'                     |             |        |        |           |        |        |          |        |        |           |        |        |          |        |        | 15,333  | 15,722 | 15,944 |

### General Notes

- Tables are based on:
  - Solid, one-piece column members used in dry-service conditions.
  - Bracing in both directions at column ends.
  - 425 psi for plate bearing.
  - NDS® 2001.
- Allowable loads accommodate axial loads only with ¼ column width/thickness eccentricity.

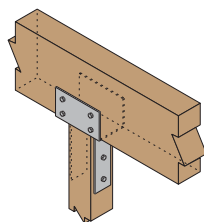
For Column Allowable Design Stresses see page 5.

### Top or Bottom Plate Connection



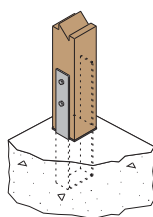
*The column and connector values listed are for dry-service conditions only. When wet-service conditions exist, contact your Trus Joist representative for other product solutions.*

Beam on Column Cap



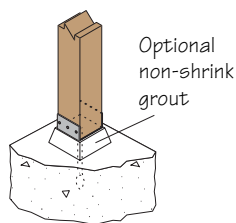
P1

Column Base



P2

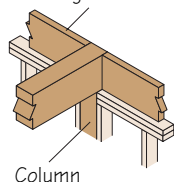
Elevated Column Base



P3

Beam on Column

Truss Joist rim board or blocking for lateral support



L1

Column Caps for TimberStrand® LSL and Parallam® PSL

| Column Product               | Beam Width | Column Size | Location on Beam | Simpson Strong-Tie™    |            | USP Structural Connectors™ |            |        |
|------------------------------|------------|-------------|------------------|------------------------|------------|----------------------------|------------|--------|
|                              |            |             |                  | Connector              | Load (lbs) | Connector                  | Load (lbs) |        |
| 1.3E<br>TimberStrand®<br>LSL | 3½"        | 3½" x 3½"   | End              | ECC44                  | 7,655      | KECC44                     | 12,030     |        |
|                              |            |             | Intermediate     | CC44                   | 15,310     | KCC44                      | 15,315     |        |
|                              |            | 3½" x 5½"   | End              | ECC46                  | 12,030     | KECC46                     | 18,595     |        |
|                              |            |             | Intermediate     | CC46                   | 24,060     | KCC46                      | 24,065     |        |
|                              |            | 3½" x 7¼"   | End              | No connector available |            | KECC48                     | 20,780     |        |
|                              |            |             | Intermediate     | No connector available |            | KCC48                      | 24,065     |        |
| 1.8E<br>Parallam®<br>PSL     | 3½"        | 3½" x 3½"   | End              | ECC44                  | 7,655      | KECC44                     | 12,030     |        |
|                              |            |             | Intermediate     | CC44                   | 15,310     | KCC44                      | 15,315     |        |
|                              |            | 3½" x 5½"   | End              | ECC46                  | 12,030     | KECC45                     | 16,405     |        |
|                              |            |             | Intermediate     | CC46                   | 24,060     | KCC45                      | 24,065     |        |
|                              |            | 5¼"         | 5¼" x 3½"        | End                    | ECC64      | 12,030                     | KECC54     | 24,610 |
|                              |            |             |                  | Intermediate           | CC64       | 36,095                     | KCC54      | 36,095 |
|                              | 5¼" x 5¼"  |             | End              | ECC66                  | 18,905     | KECC55                     | 24,610     |        |
|                              |            |             | Intermediate     | CC66                   | 36,095     | KCC55                      | 36,095     |        |
|                              | 5¼" x 7"   |             | End              | ECC6-7½                | 24,060     | KECC57                     | 31,170     |        |
|                              |            |             | Intermediate     | CC6-7½                 | 36,095     | KCC57                      | 36,095     |        |
|                              | 7"         | 7" x 3½"    | End              | ECC7½-4                | 18,375     | KECC74                     | 44,295     |        |
|                              |            |             | Intermediate     | CC7½-4                 | 56,875     | KCC74                      | 54,845     |        |
|                              |            | 7" x 5¼"    | End              | ECC7½-6                | 28,875     | KECC75X                    | 45,940     |        |
|                              |            |             | Intermediate     | CC7½-6                 | 56,875     | KCC75X                     | 56,875     |        |
|                              |            | 7" x 7"     | End              | ECC7½-7½               | 36,750     | KECC77X                    | 45,940     |        |
|                              |            |             | Intermediate     | CC7½-7½                | 56,875     | KCC77X                     | 56,875     |        |

Column Bases for TimberStrand® LSL and Parallam® PSL

| Column Product               | Column Size            | Simpson Strong-Tie™ |                          | USP Structural Connectors™ |                          |
|------------------------------|------------------------|---------------------|--------------------------|----------------------------|--------------------------|
|                              |                        | Connector           | Load (lbs)               | Connector                  | Load (lbs)               |
| 1.3E<br>TimberStrand®<br>LSL | 3½" x 3½"              | AB44                | 4,065                    | PA44                       | 5,135                    |
|                              |                        | ABU44               | 6,665                    | PAU44                      | 6,775                    |
|                              |                        | CBS44               | 9,665                    | CBS44                      | 9,665                    |
|                              |                        | CB44                | Post or concrete control |                            | KC44                     |
|                              | 3½" x 5½"              | AB46                | 4,165                    | PA46                       | 6,285                    |
|                              |                        | CB46                | Post or concrete control |                            | KC46                     |
| 3½" x 7¼"                    | No connector available |                     | KCB48                    | Post or concrete control   |                          |
| 1.8E<br>Parallam®<br>PSL     | 3½" x 3½"              | LCB44               | Post or concrete control | CBE44                      | 3,700                    |
|                              |                        | CB44                |                          | KCB44                      | Post or concrete control |
|                              | 3½" x 5½"              | LCB46               |                          | CBE46                      | 3,700                    |
|                              |                        | CB46                |                          | KCB45                      | Post or concrete control |
|                              | 3½" x 7"               | CB7½-4              |                          | KCB47                      | Post or concrete control |
|                              | 5¼" x 5¼"              | LCB66               |                          | KCB74                      | Post or concrete control |
|                              |                        |                     |                          | CB66                       | CBE66                    |
|                              | 5¼" x 7"               | CB6-7               |                          | KCB55                      | Post or concrete control |
|                              |                        |                     |                          | CB7½-6                     | KCB57                    |
|                              | 7" x 7"                | CB7½-7              |                          | KCB76                      | Post or concrete control |
|                              |                        | KCB77               | Post or concrete control |                            |                          |

General Notes

- Capacities shown cannot be adjusted for duration of load.
- Connector capacities assume a beam material with a minimum perpendicular-to-grain bearing of 625 psi.
- Connector capacities may be more than the column capacity; therefore, both the connector and the column capacity should be checked.

# Service You Can Count On

Since the 1960s, builders and specifiers have relied on quality products from Trus Joist. Cutting-edge research and development have resulted in a product line that gives you the reliable support you need in a structure. Homes built on the superior strength and consistency of TimberStrand® LSL, Parallam® PSL, Microllam® LVL, and Silent Floor® joists are homes where each piece is strong and true:

- Headers don't shrink.
- Floors are quieter.
- Tall walls start straight and stay straight.

And because Trus Joist building products use precious timber resources efficiently, these homes are not only structurally sound, but environmentally sound as well.

Trus Joist gives you quality and reliability, plus a skilled sales team and technical support staff that can help you get the best performance from our products. You also get the best product warranty in the business.



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**TJI® Floor Joists**  
**TJI® Roof Joists**



**Rim Board, Headers,  
Beams, Columns, and  
Wall Framing**



**Beams and Columns**



**Headers and Beams**