# Nail & Screw Strength Chart: Shear & Pullout Values (NDS 2024)

Single-shear and withdrawal (pullout) reference values for common nails and wood screws in Douglas Fir-Larch - the data behind the nails-vs-screws debate. Screws win pullout by 2-3x; nails win shear and speed.

| Fastener | Diameter (in) | Single shear, 2x to 2x (lb) | Withdrawal per inch (lb/in) | Wins at |
|---|---|---|---|---|
| 16d common nail | 0.162 | 138 | 56 | Framing shear loads |
| 16d sinker | 0.148 | 115 | 51 | Easier-driving framing |
| 16d box (gun nail) | 0.131 | 95 | 45 | Speed (thinner = weaker) |
| 8d common nail | 0.131 | 94 | 45 | Sheathing, stud nailing |
| #6 wood screw | 0.138 | 71 | 98 | Trim, light joinery |
| #8 wood screw | 0.164 | 90 | 117 | General construction |
| #10 wood screw | 0.190 | ~110 | 135 | Heavy-duty wood joining |

*Note: Shear values are NDS single-she computed per NDS 2024 Chapter 12 (n main member. Reference only - not for s when in doubt, consult an engineer.*

Reference values only — verify against the governing standard or manufacturer before use.