



BODY BENEFITS

EK425LX/EK628LX – 6-Ton Crimpers



EK425LX/EK628LX

Rated Best 6-Ton Crimper Overall in eight performance categories

- **Ergonomic In-Line** design provides reach to help get into hard to reach spaces protecting body contusion
- **Improved Grip** eliminates unnecessary strain

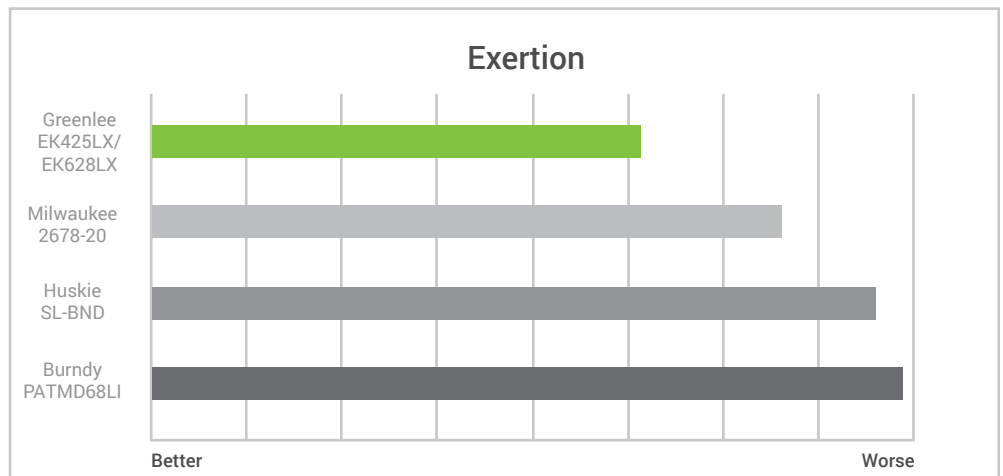
Testing Spotlight

Less Exertion

Test subjects report the strain experienced from using the tool on a 10-point scale. 10 is the most strenuous and 1 is the least strenuous. Perceived exertion is the best overall measure for ergonomics as the body can be more sensitive than objective measures and collects data from multiple sources simultaneously and integrates them.

Lower Exertion Signifies:

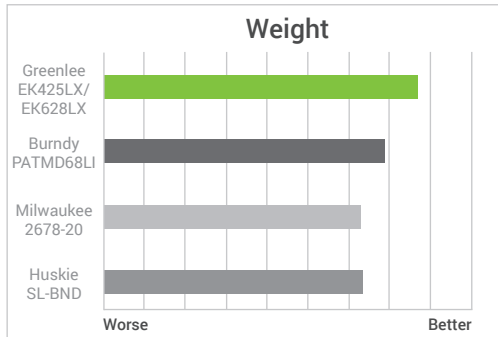
- The tool was easier to use
- Less strain and fatigue
- Decreased risk of injury
- Improved productivity



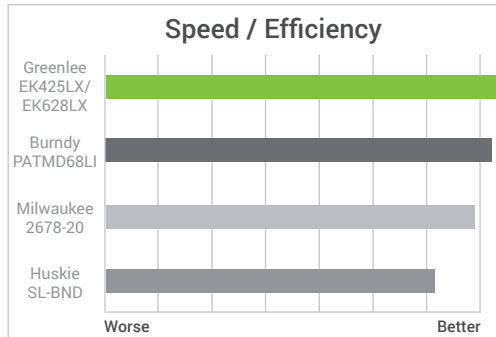
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EK425LX/EK628LX SUBJECTIVE TESTING HIGHLIGHTS

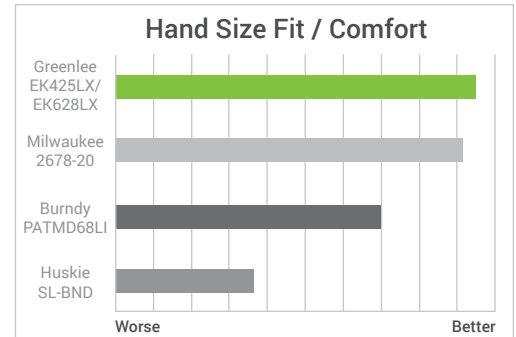
Survey: Participants rated the tools in 8 categories on a 10-point scale after using the tools, with 10 being best and 1 being worst. The categories surveyed were:



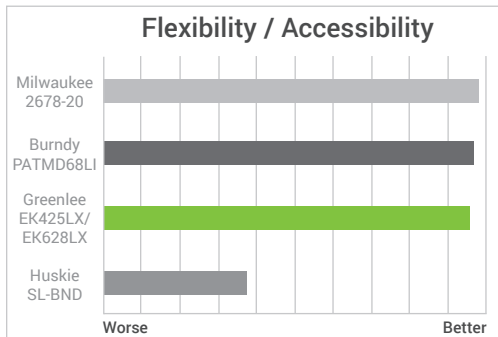
Weight: The operator's perception of the weight of the tool. Actual weight of the tool is a factor, but so is the balance of the tool. In many cases a heavier tool will feel lighter if it is better balanced than a competitive model due to lower operator fatigue.



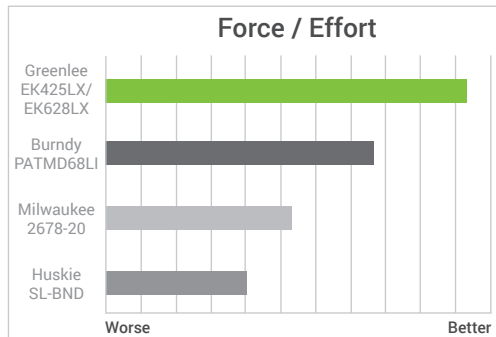
Speed / Efficiency: Operator's perception of how quick and efficient the tool is to use. Linked to productivity.



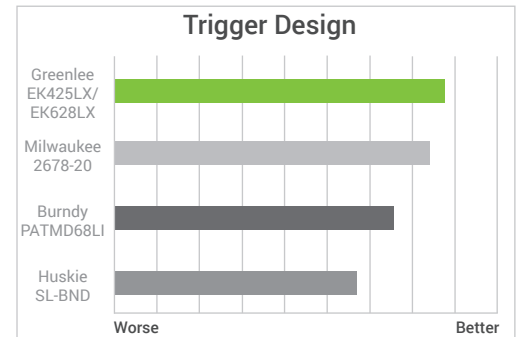
Hand Size Fit / Comfort: Perception of well the tool fits in the operator's hand, as well as, the comfort when in use. Linked to hand and wrist strain/carpal tunnel syndrome.



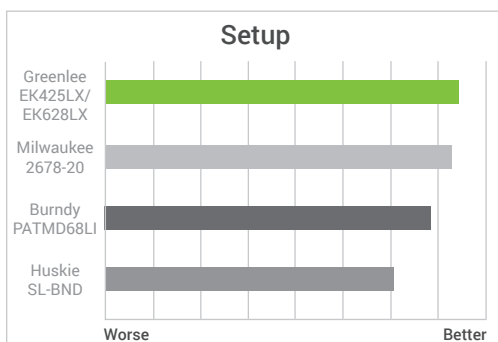
Flexibility / Accessibility: Perception of tools ability to adjust to match job conditions. Linked with improved posture which reduces risk of injury.



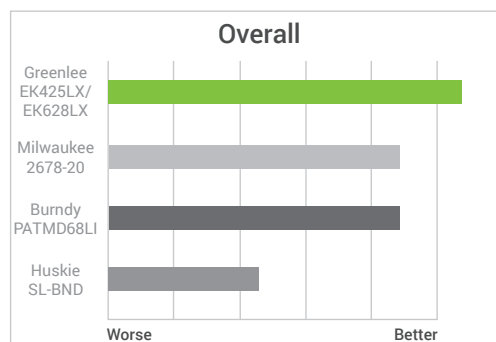
Force / Effort: Perception of the force of effort it takes to operate the tool. Linked with reduced fatigue and muscle strain.



Trigger Design: Perception of the ease of using the trigger. Linked with reduced risk of tendinitis.



Setup: Perception of ease of setting up tool for the job. Linked to productivity.



Overall: Overall rating of the tools performance.

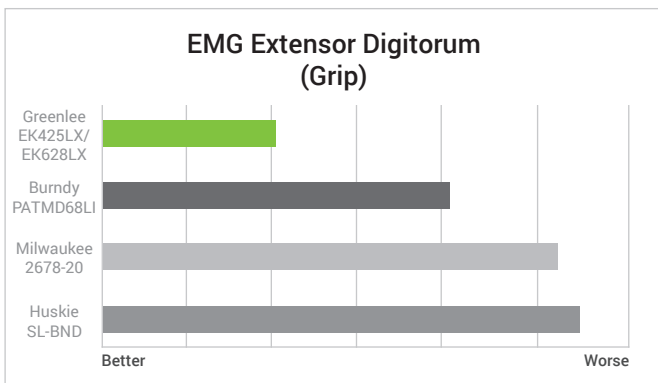
Injury Prevention

Reduced strain from reduced weight, improved grip and trigger design, and decreased effort to use translates into reduced risk of muscle and tendon injuries.

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EK425LX/EK628LX OBJECTIVE TESTING HIGHLIGHTS

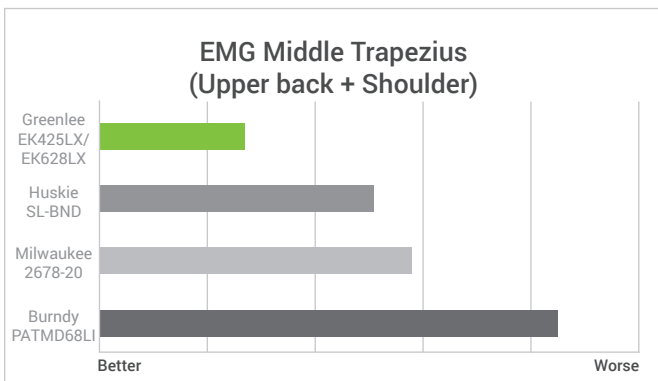
Electromyography (or EMG): Measures the activation of muscles or how hard a muscle is working. For the tool operator this translates to higher EMG = greater effort and strain. Muscle strain leads to fatigue and increased risk of injury.



Extensor Digitorum

- One of the muscles involved in the grip of the tools
- Lower EMG signifies less muscle strain

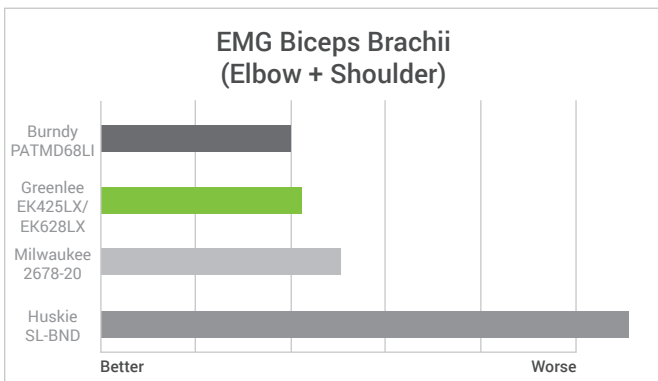
Possible Injuries Include: Trigger finger and tendinitis



Middle Trapezius

- Muscle stabilizes of shoulder during use
- Lower EMG signifies less muscle use and fatigue

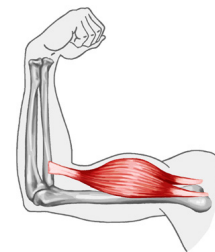
Possible Injuries Include: Back sprain, rotator cuff tear, and arm weakness



Biceps Brachii

- Muscle involved in elbow and shoulder motions
- Lower EMG signifies less effort and exertion

Possible Injuries Include: Muscle sprain and tendon avulsion



Results determined through testing performed by Iowa State University's ATHENA lab using the Greenlee EK425LX, Milwaukee 2678-20, Burndy PATMD68LI, and Huskie SL-BND on H-tap connectors for 1/0 AWG steel reinforced copper cable. Results may vary depending on the connector type, work environment, operator technique and personal characteristics.

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UNDERSTANDING THE TRUE IMPACT OF POOR ERGONOMICS

ERGONOMIC INJURIES ARE THE MOST COMMON TYPE OF INJURY REQUIRING DAYS AWAY FROM WORK.^{1*}

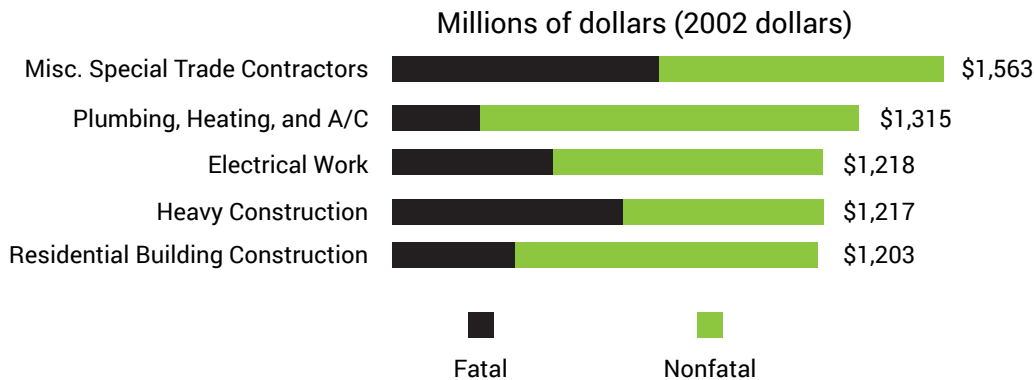
\$100,397

Repetitive motion injuries had an average total cost (direct medical and non-direct) per injury, which require days away from work. The non-direct costs are typically larger and are driven by days away from work.

\$56,309

Average total cost for all injuries (direct medical and non-direct) of nonfatal injury requiring days away from work for Electrical work per injury.

ESTIMATED COSTS OF WORK-RELATED INJURIES BY CONSTRUCTION INDUSTRY



*Total cost numbers are underestimates calculated by applying inflation from 2002 dollars to obtained from (study) to 2016 dollars.

The study did not include time spent in light duty work as an additional cost (even though the worker is not yet able to return to work tasks) or self-employed construction workers (they were not captured by the cost assessment methods the study used).

The study also relies heavily on worker's compensation to provide information for the costs of injuries even though workers compensation reimbursement rates vary from state to state becoming another source for underestimating the true cost of injury.

The medical cost associated with these injuries are also pre-Affordable Care Act are likely underestimates even with the adjustments for inflation.

1 - Waehrer G, et al. "Costs of Occupational Injuries in Construction in the United States", *Accid Anal Prev.* 2007 November ; 39(6): 1258-1266

2 - 2017 Liberty Mutual Workplace Safety Index

3 - Electronic Library of Construction Occupational Safety & Health. "The Construction Chart Book 4th Edition." Section 48: Costs of Work-related Injuries and Illnesses in Construction.

4 - American Society of Safety Engineers. "BoSC article 6." Return on Investment (ROI) for Safety, Health, and Environmental (SH&E) Management Program.

*Musculoskeletal disorders