



ERGONOMICS

February

2009

Topic of the month: Keep Things in Easy Reach

An essential aspect of task design and work performance is keeping “things” (tools, etc) that are frequently needed within easy reach. This focus provides value in several ways:

- A long reach is often the underlying reason why people are found working in awkward, contorted postures.
- A long reach combined with lifting a load can increase exertion and multiply the load on **the shoulders and lower back**.
- Long reaches can be a source of wasted time and need to be addressed from an efficiency standpoint.
- Resolving reach problems can lead to better use of valuable floor space and can reduce congestion.
- In some circumstances the ability to reach at all is the primary issue.

Rules for Work Surfaces

Rearrange - Once an extended reach is identified, making the needed change is often a matter of rearranging the work area and moving things closer

Provide a place for everything — a predictable cause of long reach is poor organization of space. Create more workspace by providing a “place for everything and everything in its place”.

Reduce work surface size —large work surfaces invite and create the need for a long reach. It is helpful to reduce the size of a given work surface. Smaller can actually be better.

Make cutouts —Cutouts provide a good way of reducing reaches while still allowing large work areas.

Remove barriers —Often a long reach is caused by barriers, which can be eliminated or relocated.

Long reaches can be improved by:

Tilt — When working to remove items from a box it is possible to use tilt tables, stands, or even just prop up the box on one end.

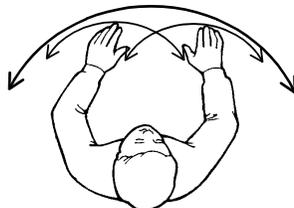
Use drop down cargo nets — Many styles of containers incorporate sides that can drop down or are removed. These designs permit easy access to materials while cutting down on the reach.

Ergonomic Principles

- Work in neutral postures
- Reduce unnecessary force
- Keep things in easy reach
- Work at proper heights
- Reduce repetitive motions
- Minimize Strain and Fatigue
- Minimize pressure points
- Provide clearance
- Move, exercise, and stretch
- Know your environment

Maintain the reach envelope

- Frequently used materials should be kept within the reach envelope of the full arm.
- Things that are almost constantly in use should be within the reach envelope of the forearms.



Shoulder Stretch – Place hands at shoulder height on each side of a door or corner. Move forward until you feel a stretch, hold it for 10 seconds and repeat 3 times.

