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## ERGONOMIC CONSIDERATION FOR A STANDING WORKSTATION

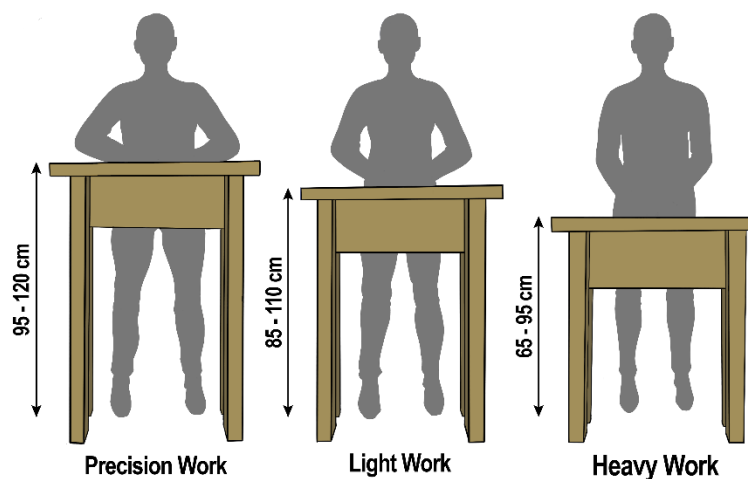
Industrial work environments have depended on standing workstations for hundreds of years. Yet standing workstations are not always designed correctly. A person's body is affected by the arrangement of the work area and by the tasks that need to be performed while standing. There is a relationship between the workstation design and the postures needed to operate or view the equipment. The arrangement of the tools, control placement, and display that the worker needs to use all impact the overall workstation design. These workstation constraints influence and limit the worker's postures. These restrictions present the worker with less opportunity to change position and use different muscle groups. Lack of workstation flexibility may contribute to worker discomfort.



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Employing the following guidance will help to create a standing workstation that will maximize neutral postures, allow work to be done faster and easier and minimize exposure to work related musculoskeletal disorder (WMSD) risk factors.

**Height:** The ideal height of the workstation is dependent on the worker performing the task, nature of the task, and size of the object being worked on. Therefore, the height of the workbench should be adjustable to allow all workers to perform precision, light, or heavy work. The minimum range of adjustability should be 65 centimeters (cm) (25.5 inches (in)) (5<sup>th</sup> percentile female performing heavy work) to 120 cm (47 in) (95<sup>th</sup> percentile male performing precision work).

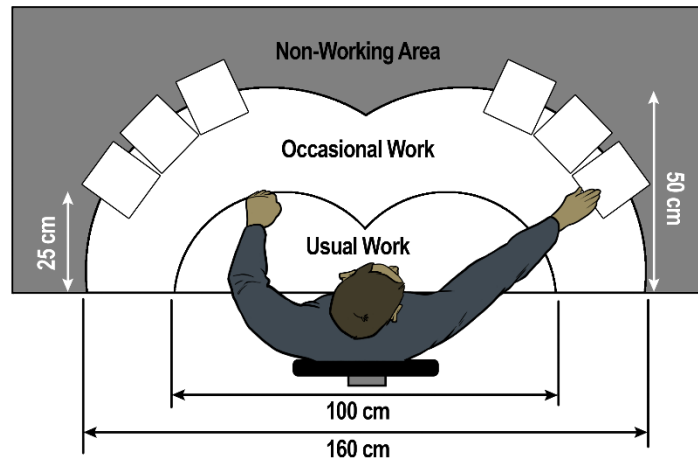


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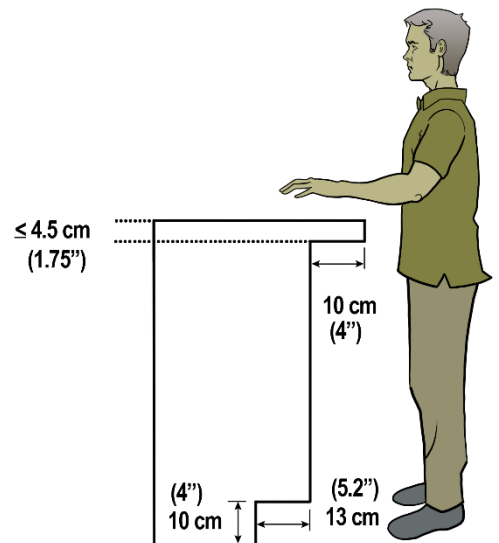
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**Reach:** For frequently performed tasks, the work should be performed within the users “usual” work zone, which is 25 cm (10 in) or less from the edge of the work surface and no more than 50 cm (20 in) from the midline of the body. Less frequent work should be performed in the “occasional” work zone, which is between 25–50 cm (10-20 in) from the edge of the work surface and 50–80 cm (20-31.5 in) from the midline of the body. If items need to be lifted at the standing workstation, heavier items weighing 5 or more pounds should be placed in the usual work zone. Lighter items should be placed in the occasional work zone.



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**Clearance:** What is happening below the work surface is just as important what is happening above the work surface. Toe space and knee clearance are critical features to consider with a standing workstation. The work-surface thickness should be less than 4.5 cm (1.75 in) to ensure the front edge does not compress the top of the thighs. This allows adequate clearance for the worker to shift their weight and adjust their posture.



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**Other Helpful Tips:**

- Wear a shock-absorbing cushioned insole, or use an ant-fatigue mat when standing for long periods of time.
- Wear shoes that allow freedom to move your toes. Pain and fatigue result if shoes are too narrow or too shallow.
- Do not twist to reach behind the shoulder but rather pivot feet to face the object.
- Do not overreach beyond the occasional work zone.
- Always face the object of work.
- Keep body close to the work.
- Use a foot rail or portable footrest to shift body weight.
- Sit when the work process allows for rest.