

Sanders

Belt

Disk

Belt sander

The belt sander is a general-purpose finishing tool. The belt is looped around two or more pulleys and the linear motion makes it effective for sanding with the grain of wood. Abrasive belts of various grades also make the belt sander useful for shaping.

Belt sanders can be found in upright, vertical, and horizontal positions. When using a belt sander in an upright or vertical position, the work should be supported on a table.



Coffee Creek Correctional Facility

Hazard

Serious abrasion can occur from contacting the moving belt. Small work should not be abraded on the belt sander as the small piece can easily be dislodged from the operator's hands and allow contact with the belt.

Nip points are close to the point of operation and, if not guarded, can allow fingers, clothing, or hair to become caught in the machine. Nip points are created when the belt meets the pulley on all types of belt sanders and also if the distance between the work table and the downward portion of a vertical sanding belt is such that the operator can be pulled into it.

Solution

Guard the unused runs of the sanding belt.

Do not sand the face of pieces that are less than 3/4-inch thick unless you use a push shoe or some other means of supporting the stock.

Guard all nip points. This can normally be accomplished by enclosing the edge of the sanding belt and the ends of the pulleys. Also, ensure the work table is as close as possible to the sanding belt.

References

■ General Industry

Oregon OSHA Division 2/Subdivision O 29 CFR 1910.213(p)(4)

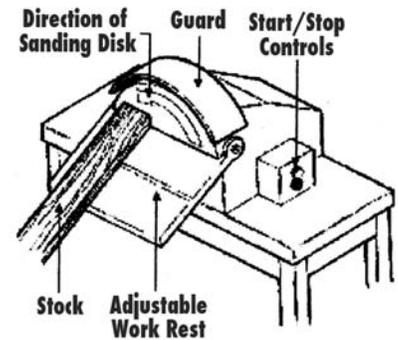
■ ANSI 01.1 *Woodworking Machinery - Safety Requirements*



This vertical belt sander is equipped with guards on the sides to effectively cover the nip points created by the belt running onto the pulleys. Also, the work table is properly positioned close to the belt — minimizing the nip point created by the distance between the belt and table.

Disk sander

The disk sander provides rotary sanding. The table (rest) on a disk sander can be at a fixed, level position or adjusted to various angles. One-half of the top half of the vertical disk is used — the half that rotates toward the table.



Hazard

Serious abrasions to the fingers and hands can occur if the operator contacts the abrasive sanding disk.

Stock can violently kick back if pressed against the portion of the sanding disk that is rotating away from the table (e.g., right side of the disk in the diagram above).

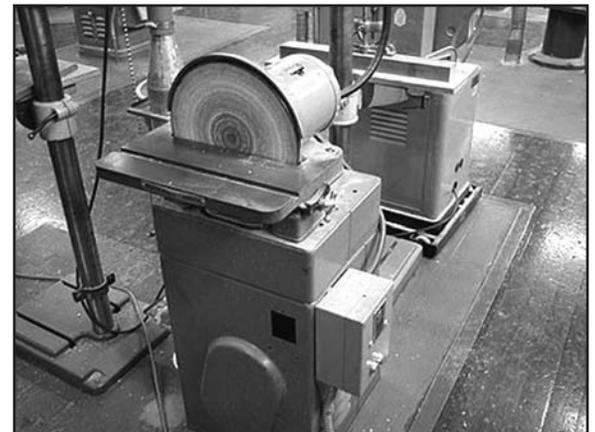
A nip point can be created if the distance between the table and the downward portion of the disk is such that the operator can be pulled into it.

Solution

Keep hands away from the abrasive surface and use only the downward side of the disk so that the wood is driven onto the table by the machine's rotation.

Do not sand pieces that are of a shape or size that can become wedged between the disk and the work table. Hold small or thin pieces of stock in a jig or holding device to prevent abrasion to the fingers or hands.

Each disk sanding machine must have an exhaust hood (or other guard if no exhaust system is installed) that encloses the rotating disk, except for the portion of the disk above the table. This also applies to drum (spindle) sanders.



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References

■ General Industry

Oregon OSHA Division 2/Subdivision O
29 CFR 1910.213(p)(3) — *Disk Sanders*
29 CFR 1910.213(p)(2) — *Drum Sanders*

■ ANSI 01.1 *Woodworking Machinery — Safety Requirements*

Disk sanders are also used for metal work. Provisions outlined above apply.



The Hobbyist's Machine Shop