

OSHA[®] GUIDELINES

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- Part Number: 1926
 - Part Title: Safety and Health Regulations for Construction
 - Subpart: I
 - Subpart Title: Tools - Hand and Power
 - Standard Number: [1926.303](#)
 - Title: Abrasive wheels and tools.
 - GPO Source: [e-CFR](#)
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1926.303(a)

Power. All grinding machines shall be supplied with sufficient power to maintain the spindle speed at safe levels under all conditions of normal operation.

1926.303(b)

Guarding.

1926.303(b)(1)

Grinding machines shall be equipped with safety guards in conformance with the requirements of American National Standards Institute, B7.1-1970, Safety Code for the Use, Care and Protection of Abrasive Wheels, and paragraph (d) of this section.

1926.303(b)(2)

"Guarding design." The safety guard shall cover the spindle end, nut, and flange projections. The safety guard shall be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard, except:

1926.303(b)(2)(i)

Safety guards on all operations where the work provides a suitable measure of protection to the operator, may be so constructed that the spindle end, nut, and outer flange are exposed; and where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted; and

..1926.303(b)(2)(ii)

1926.303(b)(2)(ii)

The spindle end, nut, and outer flange may be exposed on machines designed as portable saws.

1926.303(c)

Use of abrasive wheels.

1926.303(c)(1)

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Floor stand and bench mounted abrasive wheels, used for external grinding, shall be provided with safety guards (protection hoods). The maximum angular exposure of the grinding wheel periphery and sides shall be not more than 90 deg, except that when work requires contact with the wheel below the horizontal plane of the spindle, the angular exposure shall not exceed 125 deg. In either case, the exposure shall begin not more than 65 deg. above the horizontal plane of the spindle. Safety guards shall be strong enough to withstand the effect of a bursting wheel.

1926.303(c)(2)

Floor and bench-mounted grinders shall be provided with work rests which are rigidly supported and readily adjustable. Such work rests shall be kept at a distance not to exceed one-eighth inch from the surface of the wheel.

1926.303(c)(3)

Cup type wheels used for external grinding shall be protected by either a revolving cup guard or a band type guard in accordance with the provisions of the American National Standards Institute, B7.1-1970 Safety Code for the Use, Care, and Protection of Abrasive Wheels. All other portable abrasive wheels used for external grinding, shall be provided with safety guards (protection hoods) meeting the requirements of paragraph (c)(5) of this section, except as follows:

..1926.303(c)(3)(i)

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When the work location makes it impossible, a wheel equipped with safety flanges, as described in paragraph (c)(6) of this section, shall be used;

1926.303(c)(3)(ii)

When wheels 2 inches or less in diameter which are securely mounted on the end of a steel mandrel are used.

1926.303(c)(4)

Portable abrasive wheels used for internal grinding shall be provided with safety flanges (protection flanges) meeting the requirements of paragraph (c)(6) of this section, except as follows:

1926.303(c)(4)(i)

When wheels 2 inches or less in diameter which are securely mounted on the end of a steel mandrel are used;

1926.303(c)(4)(ii)

If the wheel is entirely within the work being ground while in use.

1926.303(c)(5)

When safety guards are required, they shall be so mounted as to maintain proper alignment with the wheel, and the guard and its fastenings shall be of sufficient strength to retain fragments of the wheel in

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case of accidental breakage. The maximum angular exposure of the grinding wheel periphery and sides shall not exceed 180 deg.

1926.303(c)(6)

When safety flanges are required, they shall be used only with wheels designed to fit the flanges. Only safety flanges, of a type and design and properly assembled so as to ensure that the pieces of the wheel will be retained in case of accidental breakage, shall be used.

..1926.303(c)(7)

1926.303(c)(7)

All abrasive wheels shall be closely inspected and ring-tested before mounting to ensure that they are free from cracks or defects.

1926.303(c)(8)

Grinding wheels shall fit freely on the spindle and shall not be forced on. The spindle nut shall be tightened only enough to hold the wheel in place.

1926.303(c)(9)

All employees using abrasive wheels shall be protected by eye protection equipment in accordance with the requirements of Subpart E of this part, except when adequate eye protection is afforded by eye shields which are permanently attached to the bench or floor stand.

1926.303(d)

Other requirements. All abrasive wheels and tools used by employees shall meet other applicable requirements of American National Standards Institute, B7.1-1970, Safety Code for the Use, Care and Protection of Abrasive Wheels.

1926.303(e)

"Work rests." On offhand grinding machines, work rests shall be used to support the work. They shall be of rigid construction and designed to be adjustable to compensate for wheel wear. Work rests shall be kept adjusted closely to the wheel with a maximum opening of 1/8 inch (0.3175 cm) to prevent the work from being jammed between the wheel and the rest, which may cause wheel breakage. The work rest shall be securely clamped after each adjustment. The adjustment shall not be made with the wheel in motion.

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