ADDITIONAL SAFETY WARNING

Angle grinder safety warning

Safety instructions for all operations

**Safety warnings common for grinding, sanding, wire brushing, polishing or cutting-off operations:**

1. **This power tool is intended to function as a grinder, sander, wire brush, polisher or cut-off tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** *Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.*
2. **Do not convert this power tool to operate in a way which is not specifically designed and specified by the tool manufacturer.** *Such a conversion may result in a loss of control and cause serious personal injury.*
3. **Do not use accessories which are not specifically designed and recommended by the tool manufacturer**. *Just because the accessory can be attached to your power tool, it does not assure safe operation*.
4. **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool**. *Accessories running faster than their rated speed can break and fly apart.*
5. **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool**. *Incorrectly sized accessories cannot be adequately guarded or controlled.*
6. **The dimensions of the accessory mounting must fit the dimensions of the mounting hardware of the power tool.** *Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.*
7. **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** *Damaged accessories will normally break apart during this test time.*
8. **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments**. *The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss*.
9. **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment**. *Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.*
10. **Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring.** *Cutting accessory contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock*.
11. **Position the cord clear of the spinning accessory**. *If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.*
12. **Never lay the power tool down until the accessory has come to a complete stop***. The spinning accessory may grab the surface and pull the power tool out of your control*.
13. **Do not run the power tool while carrying it at your side**. *Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.*
14. **Regularly clean the power tool’s air vents**. *The motor’s fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.*
15. **Do not operate the power tool near flammable materials**. *Sparks could ignite these materials.*
16. **Do not use accessories that require liquid coolants**. *Using water or other liquid coolants may result in electrocution or shock*.

Further safety instructions for all operations

**Kickback and related warnings:**

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory’s rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel’s movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

1. **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up**. *The operator can control torque reactions or kickback forces, if proper precautions are taken*.
2. **Never place your hand near the rotating accessory**. *Accessory may kickback over your hand.*
3. **Do not position your body in the area where power tool will move if kickback occurs.** *Kickback will propel the tool in direction opposite to the wheel’s movement at the point of snagging*.
4. **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory**. *Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback*.
5. **Do not attach a saw chain woodcarving blade, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade**. *Such blades create frequent kickback and loss of control.*

Additional safety instructions for grinding and cutting-off operations

**Safety warnings specific for grinding and abrasive cutting-off operations:**

1. **Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel**. *Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe*.
2. **The grinding surface of center depressed wheels must be mounted below the plane of the guard lip**. *An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected*.
3. **The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator**. *The guard helps to protect the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing*.
4. **Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel**. *Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.*
5. **Always use undamaged wheel flanges that are of correct size and shape for your selected wheel**. *Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges*.
6. **Do not use worn down wheels from larger power tools**. *Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.*
7. **When using dual purpose wheels always use the correct guard for the application being performed.** *Failure to use the correct guard may not provide the desired level of guarding, which could lead to serious injury.*

**Additional safety warnings specific for cutting-off operations:**

1. **Do not “jam” the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut**. *Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage*.
2. **Do not position your body in line with and behind the rotating wheel**. *When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.*
3. **When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur**. *Investigate and take corrective action to eliminate the cause of wheel binding*.
4. **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut**. *The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece*.
5. **Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback**. *Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel*.
6. **Use extra caution when making a “pocket cut” into existing walls or other blind areas**. *The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback*.
7. **Do not attempt to do curved cutting**. *Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage, which can lead to serious injury.*

**Additional safety instructions for sanding operations**

**Safety warnings specific for sanding operations:**

1. **Use proper sized sanding disc paper. Follow manufacturers recommendations, when selecting sanding paper.** *Larger sanding paper extending too far beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback*.

**Additional safety instructions for polishing operations**

**Safety warnings specific for polishing operations:**

1. **Do not allow any loose portion of the polishing bonnet or its attachment strings to spin freely. Tuck away or trim any loose attachment strings.** Loose and spinning attachment strings can entangle your fingers or snag on the workpiece.

**Additional safety instructions for wire brushing operations**

**Safety warnings specific for wire brushing operations:**

1. **Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush.** *The wire bristles can easily penetrate light clothing and/or skin*.
2. **If the use of a guard is recommended for wire brushing, do not allow any interference of the wire wheel or brush with the guard.** *Wire wheel or brush may expand in diameter due to work load and centrifugal forces.*

Residual risks

Even when the power tool is used as prescribed it is not possible to eliminate all residual risk factors. The following hazards may arise in connection with the power tool’s construction and design:

1. Health defects resulting from vibration emission if the power tool is being used over longer period of time or not adequately managed and properly maintained.
2. Injuries and damage to property to due to broken accessories that are suddenly dashed.

**⚠ WARNING**!

**This power tool produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this power tool.**

INTENDED USE

The angle grinder suitable for grinding, sanding, abrasive cutting-off operations and wire brushing metal, concrete, stone and similar materials without the use of water.