

Use the right wheel mounting flanges, ensuring they are clean, undamaged and free from burrs.

Make sure the flange size is compatible with the size if the wheel (see table). Above 230mm the flange diameter must be one third that of the wheel.

FLANGES FOR WHEELS (From 100mm to 450mm diameter)						
Wheel Diameter	Minimum Outside diameter of flange	Minimum flange thickness at bore	Minimum flange thickness at edge of recess	Minimum depth of recess	Radial width of bearing surface	
/mm	/mm	/mm	/mm	/mm	(Minimum) /mm	(Maximum) /mm
100	30	-	-	-	-	-
125	39	-	-	-	-	-
230	39	-	-	-	-	-
300	100	13	5	2	8	16
350	117	13	8	2	10	20
450	150	16	10	2	13	25

To fit a wheel, follow the instructions supplied with your machine.

If you have hired the machine from HSS, contact your local HSS Hire Shop if you have any problems.

In any case, never force a wheel onto the machine's spindle and never over-tighten the machine's mounting bolt/flange.

Before switching the machine back ON, remember to reposition the safety guard.

Finally, run newly fitted wheels at operating speed for at least one minute before using them to cut/grind. This helps 'seat' the wheel and lets you double-check that you have fitted it correctly. Clear the work area while doing this.

DO throw used wheels away, NEVER re-use a wheel once it has been removed from a machine.

USING WHEELS

Make sure the workpiece is firmly and safely secured.

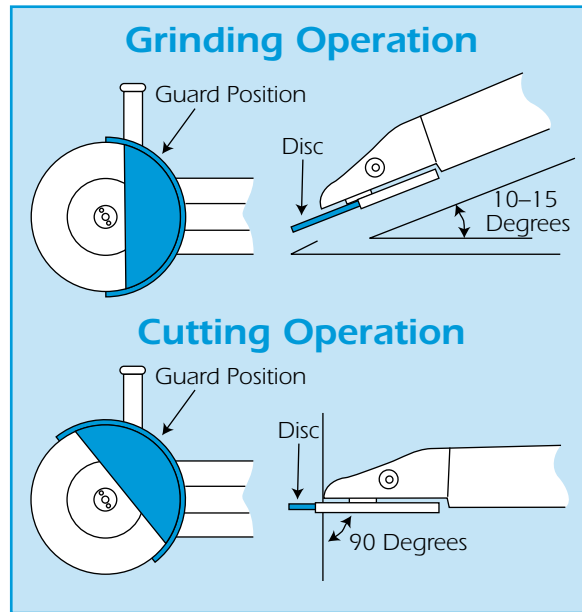
If using a portable machine, adopt a comfortable, balanced stance that lets you support and control the machine, keeps the whole of your body clear of the wheel, and lets you see clearly what you are doing.

Make sure, too that the work area is free from trip hazards and that the ground offers a secure footing.

If using a grinding wheel with a depressed centre, always hold it at an angle to the workpiece.

When cutting, work in a straight line, taking care not to trap or pinch the wheel in the cut.

Never try to force the wheel through the workpiece and never apply pressure to the side of the wheel.



Never use a grinding disc for cut-off work or vice versa. If in doubt, contact your local HSS Hire Shop.

Regularly check the disc's condition and replace if worn or damaged.

Ensure replacement discs are distortion free and undamaged and that the paper washers are not wrinkled or torn. NEVER FIT SUBSTANDARD OR OLD, USED DISCS.

Don't grind on the side of cut-off or grinding wheels less than 4.5mm thick. They are not strong enough. Use the edge instead.

When you have finished using a portable machine, wait for the wheel to stop turning and put the machine down gently; taking care not to knock the wheel. Ideally, rest the machine, clear of the ground, on a suitable cradle.

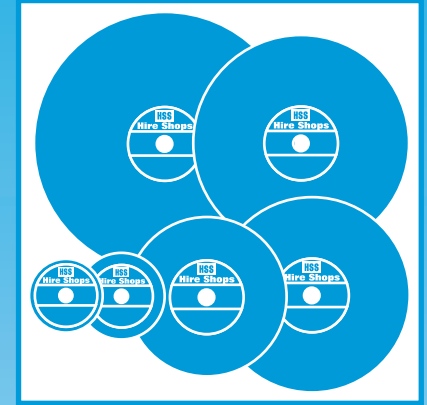
Always let the wheel come to a halt naturally. Never apply pressure to the wheel in order to slow it down.



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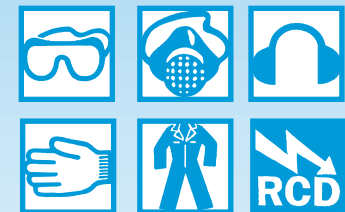
Operating & Safety Guide 631

HSS Hire Shops



ABRASIVE WHEELS

Reinforced, depressed-centre GRINDING WHEELS. Reinforced, flat CUT-OFF WHEELS.



GENERAL SAFETY

For advice on the safety and suitability of this equipment contact your local HSS Hire Shop.

Keep children, animals and bystanders away from the work area.

Never use this equipment if you are ill, feeling tired, or under the influence of alcohol or drugs.

This equipment should only be used by a competent person who has read and understood these instructions.

There is a serious risk of personal injury if you do not follow all instructions laid down in this guide.



Safety Goggles MUST be worn by everyone in the work area.



Some materials when cut contain substances which, when inhaled, can be harmful to health. A suitable mask must be worn when using this equipment.



Grinding and cutting equipment generates potentially harmful noise levels. To comply with health and safety at work regulations, ear defenders must be worn by everyone in the vicinity.



Wear gloves, protective clothing and footwear that covers all exposed skin. Avoid loose garments and jewellery that could catch in moving parts, tie back long hair.

If you sustain an injury while using an abrasive wheel, seek medical advice immediately.

Ensure the work area is well lit and ventilated, if in doubt, ask about dust extraction and ventilation equipment at your local HSS Hire Shop.

Do not work near flammable gasses or liquids, petrol or paint thinner fumes for example. Keep combustible materials at a safe distance - at least 5m.

If working above ground-level, work from a suitable, stable platform – an access tower for example. Never work from ladders or steps.

Take special care when cutting into anything containing pipework or electrical cables. If in doubt, hire a cable avoiding tool from your local HSS Hire Shop, to determine the exact position of such hazards.

Stop the machine if you experience discomfort or numbness during use.

Make sure you know how to switch the machine OFF before you switch it ON in case you get into difficulty.

Always switch OFF and unplug any tool before making adjustments to it. Check that it is switched OFF and that you have removed all spanners and keys before plugging it back in.

Having switched OFF, always wait for the disc to come to rest before putting the tool down.

Check the condition of the equipment before use.

Ensure side handles and guards are correctly adjusted and secure before starting work.

Watch your footing. Take special care if working other than on firm, level ground.

Information on COSHH regulations is available from your local HSS Hire Shop.

Warning

Abrasive wheels operate at very high speeds. If they should break in use, the fragments that fly off can be extremely dangerous. So, always treat them with respect and follow the safety rules.

ELECTRICAL SAFETY



To reduce the risk of electric shock, use a suitable RCD (Residual Current-Operated Device) available from your local HSS Hire Shop, or power the equipment from a mains circuit with a built-in RCD.

MACHINE SAFETY

Make sure you know how to operate your particular grinding or cut-off machine safety and correctly.

If using an HSS MACHINE...

Read the Operating & Safety Guide supplied with it. If you have any queries, contact your local HSS Hire Shop for advice.

If using your OWN MACHINE have it professionally serviced regularly and tested for electrical safety. In particular, check the tension of any drive belts, and double check that any built-in speed control governor is working correctly.

Have its spindle speed checked regularly. Always have the speed checked if the machine has just been serviced or repaired.

WHATEVER you are using...

Make sure the machine is fitted with an adequate, securely fitted safety guard.

Make sure the safety guard is correctly positioned before switching the machine ON. It should cover at least half the wheel and protect the user if the wheel should accidentally break up in use.

Check the machine's general condition before use, paying special attention to the state of the wheel flange plates. If it shows signs of damage or excessive wear, do not use it! If you have any doubts about the condition of an HSS machine, return it to local HSS Hire Shop.

WHEEL SAFETY

Use the correct wheel for your grinding/cut-off machine. In particular, check that the machine's

spindle speed does not exceed the maximum at which the wheel can safely run (see the wheel's label).

Use the right abrasives wheel for the job. If in doubt, contact your local HSS Hire Shop for advice.

Handle abrasive wheels with care. They are easily cracked if knocked or dropped – cracked wheels are potentially dangerous.

Always check the wheels for damage before use. Brush off any dust and tap gently with a non metallic object. If the wheel sounds 'dead' assume it is cracked.

Never fit or use a wheel you think may be damaged.

WHEEL STORAGE

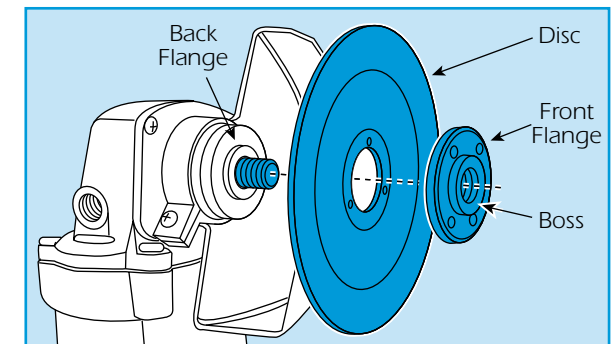
Stack flat cut-off wheels one on top of the other, ideally on a flat, level, steel base-plate. Wheels with a depressed centre should either be carefully stacked one on top of the other or, better still, left in their original protective packaging.

Never store abrasive wheels where they will be exposed to extreme temperatures or damp. Improper storage damages the wheels.

RULES AND REGULATIONS

Note that the use of abrasives wheels in certain (mainly trade) situations is regulated by law. Both the wheels themselves, and the way in which they are fitted and used, must conform to BS4481 and BS4581. If in doubt, contact your local HSS Hire Shop for advice.

WHEEL FITTING



Abrasive wheels should be fitted only by authorised, trained personnel.

Before fitting a wheel, switch OFF the grinding/cut-off machine and unplug it if electric.

Use the proper tools to change/fit wheels. There are supplied with machines hired from HSS. If using your own machine, consult the manufacturer's instructions.

Note that some machines have reversible front flanges to take thick and thin abrasives wheels. Make sure such flanges are the right way round for the chosen wheel.