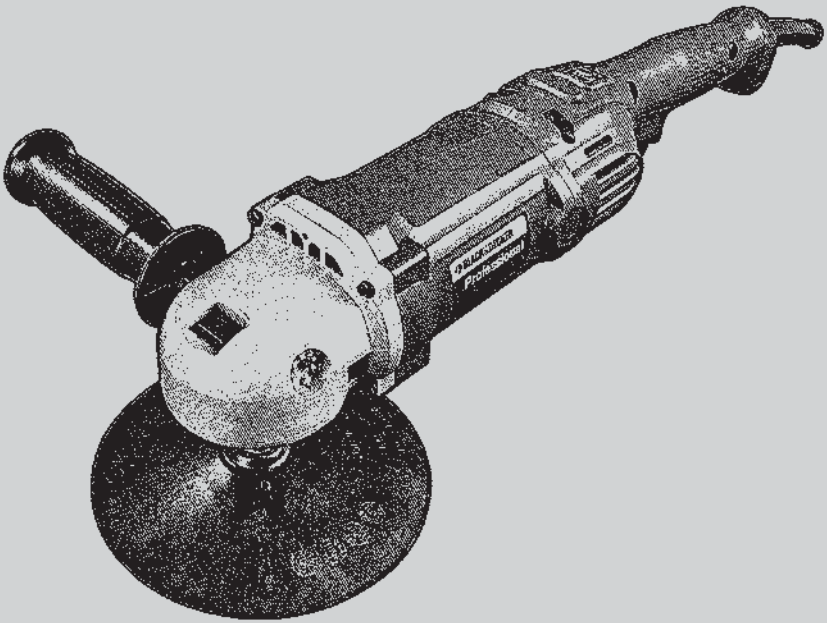
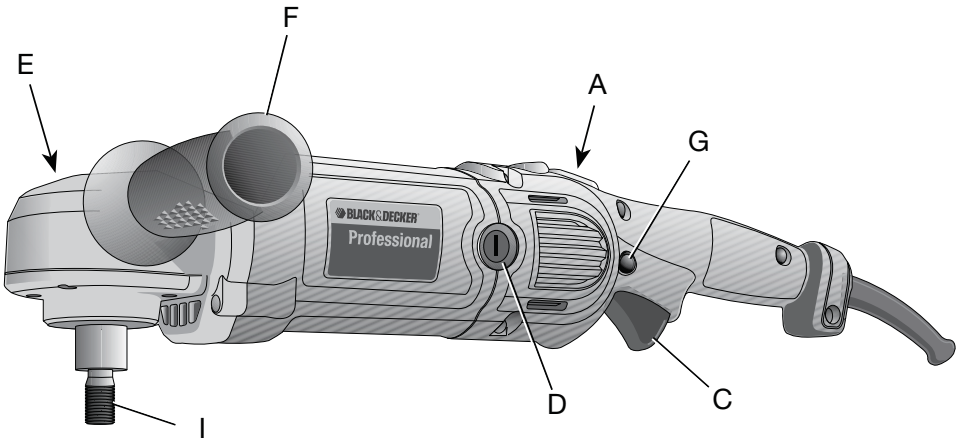
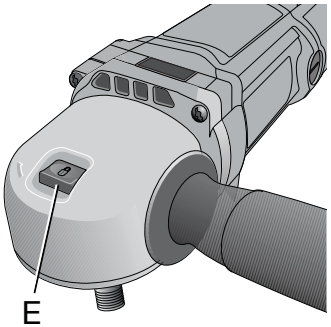
BLACK&DECKER®



D6138

FIG. 1
图. 1





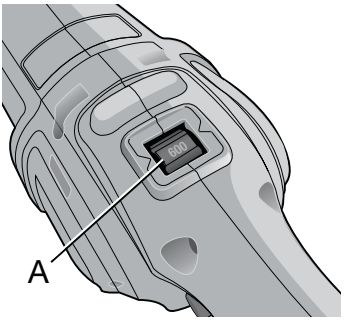


FIG. 3A
图. 3A

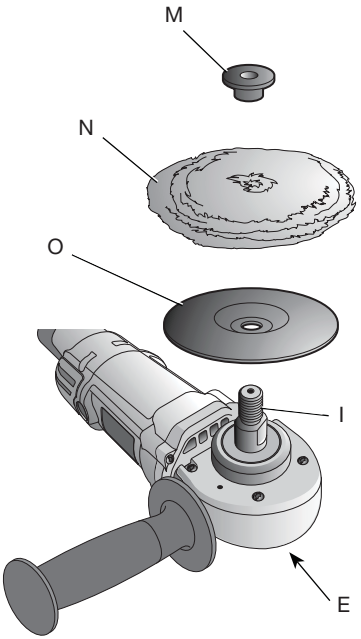
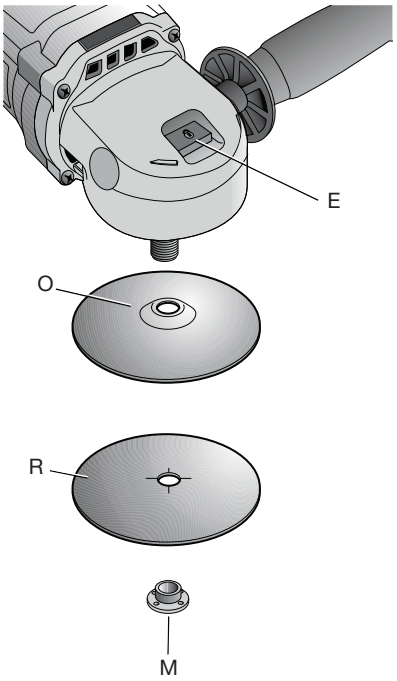


FIG. 4
图. 4



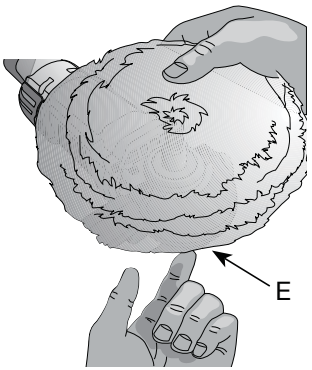


FIG. 5
图. 5

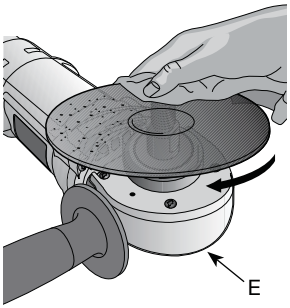


FIG. 6
图. 6

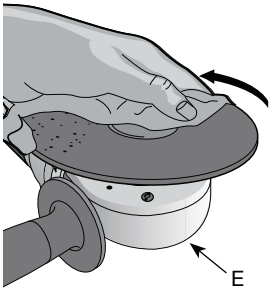
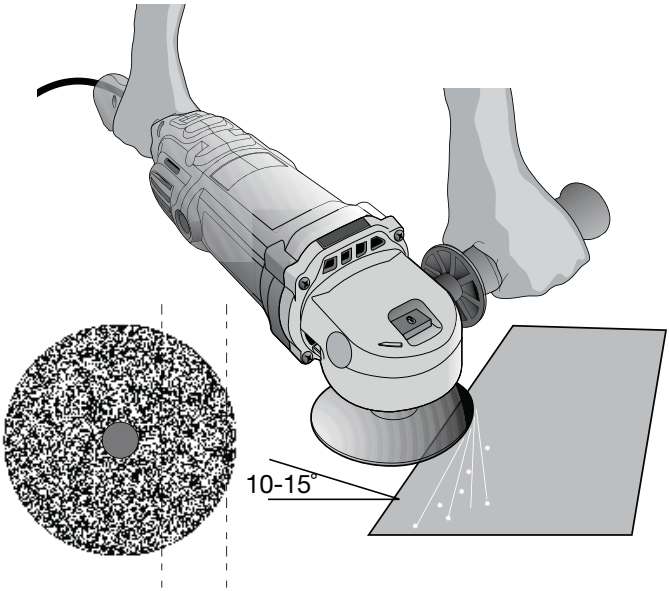


FIG. 7
图. 7



POLISHERS
D6138

Congratulations!

You have chosen a Black&Decker power tool. Years of experience, thorough product development and innovation make Black&Decker one of the most reliable partners for professional power tool users.

Technical data

		D6138
Rated voltage	V_{AC}	220-240
Rated frequency	Hz	50/60
Power input	W	1100
No-load speed	r/min	0-600/0-3500
Pop-off brushes		NO
Spindle		M14
Side handle		Auxiliary
Weight	kg	2.85

Definitions: Safety Guidelines

The definitions below describe the level of severity for each signal word. Please read the manual and pay attention to these symbols.

DANGER: *Indicates an imminently hazardous situation which, if not avoided,* ***will*** *result in* ***death or serious injury****.*

WARNING: *Indicates a potentially hazardous situation which, if not avoided,* ***could*** *result in* ***death or serious injury****.*

CAUTION: *Indicates a potentially hazardous situation which, if not avoided,* ***may*** *result in* ***minor or moderate injury****.*

CAUTION: *Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided,* ***may*** *result in* ***property damage****.*

Denotes risk of electric shock.

Denotes risk of fire.

WARNING: *To reduce the risk of injury, read the instruction manual.*

General Power Tool Safety Warnings

WARNING! Read all safety warnings and all instructions *Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.*

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) WORK AREA SAFETY

a) ***Keep work area clean and well lit.*** *Cluttered or dark areas invite accidents.*

b) ***Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.*** *Power tools create sparks which may ignite the dust or fumes.*

c) ***Keep children and bystanders away while operating a power tool.*** *Distractions can cause you to lose control.*

2) ELECTRICAL SAFETY

a) ***Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed***

(grounded) power tools. *Unmodified plugs and matching outlets will reduce risk of electric shock.*

b) ***Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.*** *There is an increased risk of electric shock if your body is earthed or grounded.*

c) ***Do not expose power tools to rain or wet conditions.*** *Water entering a power tool will increase the risk of electric shock.*

d) ***Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.*** *Damaged or entangled cords increase the risk of electric shock.*

e) ***When operating a power tool outdoors, use an extension cord suitable for outdoor use.*** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*

f) ***If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.*** *Use of an RCD reduces the risk of electric shock.*

3) PERSONAL SAFETY

a) ***Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.*** *A moment of inattention while operating power tools may result in serious personal injury.*

b) ***Use personal protective equipment. Always wear eye protection.*** *Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*

c) ***Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.*** *Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.*

d) ***Remove any adjusting key or wrench before turning the power tool on.*** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*

e) ***Do not overreach. Keep proper footing and balance at all times.*** *This enables better control of the power tool in unexpected situations.*

f) ***Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.*** *Loose clothes, jewellery or long hair can be caught in moving parts.*

g) ***If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.*** *Use of dust collection can reduce dust-related hazards.*

4) POWER TOOL USE AND CARE

a) ***Do not force the power tool. Use the correct power tool for your application.*** *The correct power tool will do the job better and safer at the rate for which it was designed.*

b) ***Do not use the power tool if the switch does not turn it on and off.*** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*

c) ***Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.*** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*

d) ***Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.*** *Power tools are dangerous in the hands of untrained users.*

e) ***Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.*** *Many accidents are caused by poorly maintained power tools.*

f) ***Keep cutting tools sharp and clean.*** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g) ***Use the power tool, accessories and tool bits etc., in accordance with these instructions taking into account the working conditions and the work to be performed.*** *Use of the power tool for operations different from those intended could result in a hazardous situation.*

5) SERVICE

a) ***Have your power tool serviced by a qualified repair person using only identical replacement parts.*** *This will ensure that the safety of the power tool is maintained.*

b) ***When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.*** *Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.*

Safety instructions for All operations

a) ***This power tool is intended to function as a polisher and sander. 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.*

b) ***Operations such as grinding, wire brushing or cutting-off are not recommended to be performed with this power tool.*** *Operations for which the power tool was not designed may create a hazard and cause personal injury.*

c) ***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.*

d) ***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.*

e) ***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.*

f) ***The arbor size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool.*** *Accessories with arbor holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.*

g) ***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.*

h) ***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.*

i) ***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.*

j) ***Hold power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.*** *Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.*

k) ***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.*

l) ***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.*

m) ***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.*

n) ***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.*

o) ***Do not operate the power tool near flammable materials.*** *Sparks could ignite these materials.*

p) ***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 tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

a) ***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 reaction or kickback forces, if proper precautions are taken.*

b) ***Never place your hand near the rotating accessory.*** *Accessory may kickback over your hand.*

c) ***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.*

d) ***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.*

e) ***Do not attach a saw chain woodcarving blade or toothed saw blade.*** *Such blades create frequent kickback and loss of control.*

Safety Warnings Specific for Polishing operations

a) ***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.*

b) ***When adding lubricating oil and changing accessories please follow this manual instruction.***

c) ***The handle must keep dry clean and without oil.***

Safety Warnings Specific for Sanding operations

a) ***Do not use excessively oversized sanding disc paper. Follow manufacturer's recommendations, when selecting sanding paper.*** *Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.*

b) ***When adding lubricating oil and changing accessories please follow this manual instruction.***

c) ***The handle must keep dry clean and without oil.***

Additional Specific Safety instructions for Polishers

- ***Always use eye protection.*** *All users and bystanders must wear eye protection that conforms to ANSI Z87.1.*
- ***Clean out your tool often, especially after heavy use.*** *Dust and grit containing metal particles often accumulate on interior surfaces and could create an electric shock hazard.*
- ***Do not operate this tool for long periods of time.*** *Vibration caused by the operating action of this tool may cause permanent injury to fingers, hands and arms. Use gloves to provide extra cushion, take frequent rest periods and limit daily time of use.*
- ***Air vents often cover moving parts and should be avoided.*** *Loose clothes, jewelry or long hair can be caught in moving parts.*

WARNING: *ALWAYS use safety glasses. Everyday eyeglasses are NOT safety glasses. Also use face or dust mask if cutting operation is dusty. ALWAYS WEAR CERTIFIED SAFETY*

EQUIPMENT.

WARNING: Always wear proper personal hearing protection that conforms to ANSI S12.6 (S3.19) during use. *Under some conditions and duration of use, noise from this product may contribute to hearing loss.*

WARNING: *Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:*

- *lead from lead-base d paints,*
- *crystalline silica from bricks and cement and other masonry products, and*
- *chromiu arsenicand m from chemically-treated lumber.*

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

- ***Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling and other construction activities. Wear protective clothing and wash exposed areas with soap and water.*** *Allowing dust to get into your mouth, eyes, or lay on the skin may promote absorption of harmful chemicals.*

WARNING:*Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury. Always use NIOSH/OSHA approved respiratory protectionappropriate for the dust exposure. Direct particles away from face and body.*

CAUTION: *Use extra care when working into a corner because a sudden, sharp movement of the polisher may be experienced when the wheel or other accessory contacts a secondary surface or a surface edge.*

- *The label on your tool may include the following symbols. The symbols and their definitionsareas follows:*

Save These Instructions

Motor

Your Black&Decker tool is powered by a DEWALT-built motor. Be sure your power supply agrees with the nameplate marking. Voltage decrease of more than 10% will cause loss of power and overheating. Black&Decker tools are factory tested; if this tool does not operate, check power supply.

Components (fig. 1)

WARNING: Never modify the power tool or any part of it. Damage or personal injury could result.

A. Speed control wheel

C. Variable speed trigger switch

D. Brush inspection cap

E. Spindle lock button

F. Auxiliary handle

G. Trigger locking button

I. Spindle

M. Clamp washer

O. Backing pad

N. Polishing pad

R. Sanding disc

INTENDED USE

The D6138 heavy-duty polishers are designed for professional use at various work sites (i.e., construction sites). Do not use under humid conditions or in presence of flammable liquids or gases.

The D6138 heavy-duty polishers are professional power tools. Do not let children come into contact with the tool. Supervision is required when inexperienced operators use this tool.

Auxiliary handle (fig. 1)

An auxiliary handle (F) is furnished with your tool and can be installed on either side of the gear case. This handle should be used at all times to maintain complete control of the tool.

Variable Speed Trigger Switch (fig. 1)

These tools are equipped with a variable speed trigger switch that permits speed control from 0 to 3500 RPM. To turn the tool on, squeeze the trigger switch (C) shown in Figure 1 until the tool starts to run. The farther you depress the trigger, the faster it will operate. Releasing the trigger turns the tool off.

Use lower speeds for applying liquid waxes and polishes and higher speeds for removing dried liquid. Use the highest speed (fully depress trigger) for buffing the car to a final lustre.The tool can be locked on for continuous use by squeezing the trigger switch fully and depressing the lock button (G) shown in Figure 1. Hold the lock button in as you gently release the trigger switch. The tool will continue to run. To turn the tool off from a locked-on position, squeeze and release the trigger switch once. Do not unplug the tool with the switch in the locked-on condition. Make sure the tool is not locked on when plugging in. If the tool is plugged back in with the switch in the locked-on position, the tool will not run until the lock button (G) is depressed (no-volt release).

NOTE: The trigger switch can only be locked on with the tool running at the maximum RPM designated by the speed control wheel (A).

Speed control Wheel (fig. 1)

The maximum speed of your tool can be changed by rotating the speed control wheel (A) to the desired setting. The wheel incorporates detents to prevent inadvertent wheel movement and to facilitate speed selection. For added versatility, the trigger switch may be locked in its full on position and tool speed changed by means of the speed control wheel (A) alone.The electronic speed control not only lets you select the speed to suit the job, but also helps to maintain that speed as you load the tool by pressing down. It's this feature, coupled with the variable speed trigger switch, that make this tool such a value.

The speed control wheel (A) can be set for any speed between 600 and 3500 RPM and the variable speed switch will then control tool speed from zero to the wheel setting. For example: A control wheel setting of 2200 RPM will allow the variable speed switch to operate the tool between zero and 2200 RPM, depending on how far the trigger switch is depressed. A wheel setting of 600 RPM would allow the switch to operate the tool from zero to 600 RPM.

The electronic speed control feature comes into play whenever the trigger switch is fully depressed and the tool is running at the selected speed determined by the setting of the control wheel. As you load the tool by pushing it down on the work surface, (with the trigger fully depressed) the electronic circuit inside the tool will compensate for the loading and maintain the selected speed. If the speed selected by the control wheel is 2200 RPM, as in the example above, the tool will maintain 2200 RPM, as it is loaded.

It is important to remember two things about electronic speed control:

1. The electronic speed control operates only when the trigger switch (C) is fully depressed.
2. The effect of electronic speed control is much easier to observe at lower speed settings (2600 RPM and below), than at high speeds. As the tool approaches 3000 RPM, the effect is considerably less dramatic.

Keep in mind that, with a conventional polisher running at a typical no-load speed of 2400 RPM, the tool slows down to about 2000 RPM under a polishing load. Your D6138 will continue to run at 2400 RPM (or any speed you select with the control wheel) as a load is applied. Since it doesn't slow down, the speed may be greater than you're used to, so some extra caution should be observed until you get the "feel" of your polisher. If you feel the speed is too great, you can, of course, slow the tool down with either the trigger switch or the control wheel.

Spindle Lock Button (fig. 1)

WARNING: To reduce the risk of serious personal injury, turn tool off and disconnect tool from power source before making any adjustments or removing/installing attachments or accessories. Before reconnecting the tool, depress and release the trigger switch to ensure that the tool is off.

In order to prevent the spindle of the tool from rotating while installing or removing accessories, a spindle lock button (E) has been provided in the gear head of the machine. To lock the spindle, depress and hold the lock button. NEVER DEPRESS THE SPINDLE LOCK BUTTON WITH THE TOOL RUNNING OR COASTING.

Operation

WARNING: To reduce the risk of serious personal injury, turn tool off

and disconnect tool from power source before making any adjustments or removing/installing attachments or accessories. Before reconnecting the tool, depress and release the trigger switch to ensure that the tool is off.

Polishing and sanding pads with a diameter of 6", 7" or 9" (15.2, 17.8 or 22.9 cm) may be used with the D6138.

Attaching And Removing Polishing Pads (fig. 3)

WARNING: *To reduce the risk of serious personal injury, 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.*

NOTE: *Both the D6138 may use either type of polishing pad assembly described below.*

TO ATTACH POLISHING PAD WITH RUBBER BACKING PAD (FIG. 3A)

1. To attach polishing pad (N), push the hub of the clamp washer (M) through the hole in the center of the polishing pad as far as it will go.

2. Engage the hexagonal hole in the backing pad (O). Holding the three pieces firmly together, place the assembly on the tool spindle (I).

3. Hold the spindle lock button (E) while turning the pads clockwise to thread them completely on the spindle.

TO ATTACH POLISHING PAD WITH HOOK AND LOOP BACKING PAD (FIG. 3B)

1. Attach hook and loop foam or wool pad (P) to hook and loop backing pad (Q), being careful to center the backing pad with the foam or wool pad.

2. Screw backing pad (Q) onto spindle (I), while depressing spindle lock button (E).

TO REMOVE PADS

Turn them by hand in the opposite direction from normal rotation to allow lock button to engage spindle, then unscrew pads in normal direction for right-hand thread.

Polishing

These instructions and suggestions are intended to familiarize new operators in overall general operation of power polishing. You will develop your own techniques which will make the job easier and faster as you learn power polishing.

- You should use utmost care when power polishing around or over sharp objects and contours of the car body. It is very important to use the correct pressure while polishing various sections of an automobile body. For example, light pressure should be applied when polishing over sharp edges of body panels, or over edges of the rain gutter along the top.
- Since everyone does not use the same type of power polish, we recommend you clean and polish a test section on a flat area of the car first. From this *test section, you can judge* the strength or cleaning action of your power polish.
- Remember, all power polish is not the same. Different brands will react differently on various painted surfaces. Also, you are now using a power polisher with power polish. This is entirely different from any hand application which you may have done before. Wash the car before power polishing it. Washing will remove loose dirt, scum, road salt, etc. which could act as an abrasive and damage paint. Loose dirt, etc. will also clog the polishing pad and you will have to clean it more often.
- Without turning the tool on, grasp the handles of the tool and pick it up. Keep the tool away from your body and depress the trigger switch. Make sure you have a firm grip on the handles and operate the tool freely without forced effort or unnecessary pressure. The side handle can be easily changed to either side of the tool for left-handed or right-handed operation.

NOTE: *The high speed rubbing action of the polishing bonnet upon the surface of an automobile can build a static charge on the metal portions of this tool. This can result in a sensation of a very short mild electric shock when the metal area of the tool is touched, and will be more noticeable on days when the humidity is low. This is a harmless phenomenon but you are invited to bring the tool to a Blacker&Decker service center where it can be checked to assure that no electrical malfunction is present.*

Sanding (fig. 4–7)

WARNING:

- *Do not sand metal of any kind with your polisher. Sparks may be generated by sanding screws,nails or other metals which may ignite dust particles.*
- *Do not wet sand with this polisher. Liquids may enter the motor housing and cause electricshock.*
- *Clean out your tool often, especially after heavy use. Dust and grit containing metal particlesoften accumulate on interior surfaces and could create a risk of serious injury, electric shock or electrocution. Wear proper ANSI Z87.1 (CAN/CSA Z94.3) eye protection.*
- *When attaching or removing abrasive disc, use a cloth or glove to protect your hand.*

TO ATTACH AN ABRASIVE DISC (FIG. 4, 5)

1. Hold the spindle from rotating by depressing the spindle lock button (E).
2. Push the hub of the clamp washer (M) through the center of the sanding (R) and also through the backing pad (O).
3. Engage the clamp washer threads on the tool spindle and thread assembly clockwise, completely down on the spindle.

TO REMOVE AN ABRASIVE DISC (FIG. 6)

Depress the spindle lock button (E) to keep the spindle from rotating. Turn the disc assembly counterclockwise to remove the disc.

Sanding (fig. 7)

When using an abrasive disc, hold the tool so that an angle of 10° to 15° exists between the disc and the work. If only the outer edge of the sanding disc is used, a rough cut will result. If the sanding disc is pressed flat against the work, the sanding action will be irregular and bumpy, and the tool will be difficult to control.

Maintenance

Your Black&Decker power tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning.

WARNING: ***To reduce the risk of serious personal injury, turn tool off and disconnect tool from power source before making any adjustments or removing/installing attachments or accessories. Before reconnecting the tool, depress and release the trigger switch to ensure that the tool is off.***

Cleaning

WARNING: *Blow dirt and dust out of all air vents with dry air at least once a week. Wear proper ANSI Z87.1 (CAN/CSA Z94.3) eye protection and proper NIOSH/ OSHA/MSHA respiratory protection when performing this.*

WARNING: *Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the plastic materials used in these parts. Use a cloth dampened only with water and mild soap. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.*

Lubrication

Black&Decker tools are properly lubricated at the factory and are ready for use. Tools should be relubricated regularly every sixty days to six months, depending on usage. (Tools used constantly on production or heavy-duty jobs and tools exposed to heat may require more frequent lubrication.) This lubrication should only be attempted by trained power tool repairpersons such as those at Black&Decker service centers or other authorized service locations.

Motor Brushes

Be sure tool is unplugged before inspecting brushes. Carbon brushes should be regularly inspected for wear. To inspect brushes, unscrew the plastic brush inspection caps (located in the sides of the motor housing) and the spring and brush assemblies may be withdrawn from the tool. Keep brushes clean and sliding freely in their guides.

CAUTION: *Only use the* Black&Decker *qualified carbon brush designed for*

this tool, consult your local dealer or authorized service cener for correct carbon brush. Use of carbon brush not designed for this tool or not qualified by Black&Decker *may damage the tool and may result serious injury!*

ACCESSORIES

WARNING: *Since accessories, other than those offered by* Black&Decker, *have not been tested with this product, use of such accessories with this tool could be hazardous. To reduce the risk of injury, only* Black&Decker *recommended accessories should be used with this product.*

Recommended accessories for use with your tool are available at extra cost from your local dealer or authorized service center. If you need assistance in locating any accessory. Use only accessories having a maximum operating speed at least as high as the highest “RATED RPM” marked on the tool’s nameplate. This precaution applies to any accessory on any tool.

- Rubber backing pads: 7” (18.0 cm) Quick Change Super Flexible Rubber Backing Pad (includes clamp washer)
- 7” (18.0 cm) hook and loop backing pads
- Auxiliary handle

Repairs

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustments (including brush inspection and replacement) should be performed by a Black&Decker factory service center, a Black&Decker authorized service center or other qualified service personnel. Always use identical replacement parts.

Optional accessories

WARNING: *Since accessories, other than those offered by* Black&Decker, *have not been tested with this product, use of such accessories with this tool could be hazardous. To reduce the risk of injury, only* Black&Decker *recommended accessories should be used with this product.*

Consult your dealer for further information on the appropriate accessories.

Accessory maintenance

Accessory maintenance at the right time guarantees optimal results in application and a long and efficient accessory life.

Protecting the environment

Separate collection. This product must not be disposed of with normal household waste.

Should you find one day that your Black&Decker product needs replacement, or if it is of no further use to you, do not dispose of it with household waste. Make this product available for separate collection.

Separate collection of used products and packaging allows materials to be recycled and used again. Re-use of recycled materials helps prevent environmental pollution and reduces the demand for raw materials.

Local regulations may provide for separate collection of electrical products from the household, at municipal waste sites or by the retailer when you purchase a new product.

抛光机
D6138

祝贺您！

感谢您选购 Black&Decker 电功工具。凭借多年的产品开发和创新经验，Black&Decker 已经成为专业电动工具用户最可靠的合作伙伴之一。

技术参数

		D6138
额定电压	伏特	220
额定频率	赫兹	50
输入功率	瓦	1100
空载转速	转/分钟	0-600/0-3500
自停式碳刷		无
主轴		M14
侧手柄		副手柄
重量	千克	2.85

定义：安全守则

下列定义描述了各标志术语的严重程度。请仔细阅读本手册，并注意这些标志。

危险：表示紧急危险情况，如果不加以避免，**将**导致**死亡或严重伤害**。

警告：表示存在潜在的危险情况，如果不加以避免，**可能**导致**死亡或严重伤害**。

警示：表示存在潜在危险情况，如果不加以避免，**可能**导致**轻度或中度伤害**。

警示：（不带安全警示标志）：表示潜在的危险情形，如不加以阻止，**可能**导致**财产损坏**。

表示存在触电风险。

表示存在火灾风险。

警告：为降低伤害风险，请阅读使用手册。

电动工具通用安全警告

警告！阅读所有警告和所有说明。不遵照以下警告和说明会导致电击、着火和 / 或严重伤害。

保存所有警告和说明书以备查阅。

在所有下列的警告中术语“电动工具”指市电驱动（有线）电动工具或电池驱动（无线）电动工具。

a) 工作场地的安全

1) **保持工作场地清洁和明亮。**混乱和黑暗的场地会引发事故。
2) **不要在易爆环境，如有易燃液体、气体或粉尘的环境下操作电动工具。**电动工具产生的火花会点燃粉尘或气体。
3) **让儿童和旁观者离开后操作电动工具。**注意力不集中会使你失去对工具的控制。

b) 电气安全

1) **电动工具插头必须与插座相配。绝不能以任何方式改装插头。需接地的电动工具不能使用任何转换插头。**未经改装的插头和相配的插座将减少电击危险。

2) **避免人体接触接地表面，如管道、散热片和冰箱。**如果你身体接地会增加电击危险。
3) **不得将电动工具暴露在雨中或潮湿环境中。**水进入电动工具将增加电击危险。
4) **不得滥用电线。绝不能用电线搬运、拉动电动工具或拔出其插头。使电线远离热源、油、锐边或运动部件。**受损或缠绕的软线会增加电击危险。
5) **当在户外使用电动工具时，使用适合户外使用的外接软线。**适合户外使用的软线将减少电击危险。
6) **如果在潮湿环境下操作电动工具是不可避免的，应使用剩余电流动作保护器（RCD）。**使用RCD可减小电击危险。

C) 人身安全

1) **保持警觉，当操作电动工具时关注所从事的操作并保持清醒。当你感到疲倦，或在有药物、酒精或治疗反应时，不要操作电动工具。**在操作电动工具时瞬间的疏忽会导致严重人身伤害。
2) **使用个人防护装置。始终佩戴护目镜。**安全装置，诸如适当条件下使用防尘面具、防滑安全鞋、安全帽、听力防护等装置能减少人身伤害。
3) **防止意外起动。确保开关在连接电源和/或电池盒、拿起或搬运工具时处于关断位置。**手指放在已接通电源的开关上或开关处于接通时插入插头可能会导致危险。
4) **在电动工具接通之前，拿掉所有调节钥匙或扳手。**遗留在电动工具旋转零件上的扳手或钥匙会导致人身伤害。
5) **手不要伸展得太长。时刻注意立足点和身体平衡。**这样在意外情况下能很好地控制电动工具。
6) **着装适当。不要穿宽松衣服或佩戴饰品。让你的衣服、手套和头发远离运动部件。**宽松衣服、佩饰或长发可能会卷入运动部件中。
7) **如果提供了与排屑、集尘设备连接用的装置，要确保他们连接完好且使用得当。**使用这些装置可减少尘屑引起的危险。

d) 电动工具使用和注意事项

1) **不要滥用电动工具，根据用途使用适当的电动工具。**选用适当设计的电动工具会使你工作更有效、更安全。
2) **如果开关不能接通或关断工具电源，则不能使用该电动工具。**不能用开关来控制的电动工具是危险的且必须进行修理。
3) **在进行任何调节、更换附件或贮存电动工具之前，必须从电源上拔掉插头和／或使电池盒与工具脱开。**这种防护性措施将减少工具意外起动的危险。
4) **将闲置不用的电动工具贮存在儿童所及范围之外，并且不要让不熟悉电动工具或对这些说明不了解的人操作电动工具。**电动工具在未经培训的用户手中是危险的。
5) **保养电动工具。检查运动件是否调整到位或卡住，检查零件破损情况和影响电动工具运行的其他状况。如有损坏，电动工具应在使用前修理好。**许多事故由维护不良的电动工具引发。
6) **保持切削刀具锋利和清洁。**保养良好的有锋利切削刃的刀具不易卡住而且容易控制。
7) **按照使用说明书，考虑作业条件和进行的作业来使用电动工具、附件和工具的刀头等。**将电动工具用于那些与其用途不符的操作可能会导致危险。

e) 维修

1) 将你的电动工具送交专业维修人员，使用同样的备件进行修理。这样将确保所维修的电动工具的安全性。

所有操作的安全指示

a) **本电动工具设计用作抛光和砂光机。阅读随该电动工具提供的所有安全警告、指示、图解和规定。**不了解以下所列所有指示可能会导致电击、着火和/或严重伤害。
b) **不建议使用该电动工具来执行磨光、刷光或切割等操作。**电动工具不按指定的功能去操作，可能会发生危险和引起人身伤害。

c) **不要使用非工具制造商推荐和专门设计的附件。**该附件即使能安装到工具上但也无法确保安全操作。

d) **附件的额定转速必须至少达到电动工具上标示的最大转速。**附件以比其额定转速大的转速运转会发生爆裂和飞溅。

e) **附件的外径和厚度必须在电动工具的额定能力范围内。**不正确的附件尺寸不能得到充分防护或控制。

f) **砂轮片、法兰、靠背垫或任何其他附件的轴孔尺寸必须适合安装到电动工具的主轴上。**与电动工具安装件不相配的带轴孔附件会失稳、过度震动并且可能会引起失控。

g) **不要使用破损的附件。每次使用之前都要检查附件，例如，砂轮是否有碎片和裂痕、靠背垫是否有裂痕、撕裂或过度磨损，钢丝刷是否松动或金属丝是否断裂。如果电动工具或附件跌落，请检查其是否受损，或者安装未受损的附件。检查并安装附件后，让自己和旁观者的位置远离旋转附件的平面，并以电动工具最大空载速度运转 1 分钟。**受损附件通常会在此测试期间碎裂。

h) **佩戴个人防护装备。根据适用情况，使用面罩、安全护目镜或防护眼镜。适用时，戴上防尘面罩、听力保护器、手套和能挡小磨料或工件碎片的工作围裙。护目装备必须能够挡住各种操作产生的飞屑。**防尘面具或口罩必须能够过滤操作产生的颗粒。长期暴露在高强度噪声中会引起失聪。

i) **让旁观者与工作区域保持一定安全距离。任何进入工作区域的人必须戴上防护用品。**工件或破损附件的碎片可能会飞出并导致紧邻操作区域的旁观者受伤。

j) **若切割附件在进行操作时可能会接触到暗线或自身电源线，则操作人员只能通过绝缘握持面来握住电动工具。**切割附件碰到一根带电导线会使电动工具外露金属零件带电并使操作者发生电击危险。

k) **使电线远离旋转的附件。**如果控制不当，电线可能被切断或缠绕，并使得您的手或手臂可能被卷入旋转附件中。

l) **切勿在附件完全停止之前放下电动工具。**旋转的附件可能会抓住表面并拉动电动工具而让您失去对工具的控制。

m) **不要在携带电动工具时开动它。**意外接触旋转附件可能会缠绕您的衣服而伤害身体。

n) **经常清理电动工具的通风口。**电动机风扇会将灰尘吸进机壳，过多的金属粉尘沉积可能会导致电气危险。

o) **不要在易燃材料附近操作电动工具。**火星可能会点燃这些材料。

p) **不要使用需用冷却液的附件。**用水或其他冷却液可能会导致触电或电击。

所有操作的进一步安全指示

反弹和相关警告

反弹是因卡住或缠绕住的旋转抛光盘或其他附件而产生的突然反作用力。卡住或缠绕会引起转动附件的迅速堵转，随之使失控的电动工具在卡住点产生与附件转动方向相反的运动。

例如，如果抛光盘被工件缠绕或卡住，伸入卡住点的抛光盘边缘可能会进入材料表面而引起砂轮爬出或反弹。抛光盘可能会飞向或飞离操作员，这取决于抛光盘在卡住点的运动方向。在这些条件下抛光盘也可能会碎裂。

反弹是电动工具误用和/或不正确的操作工序或条件的结果。可以通过采取下列适当预防措施得以避免：

a) **保持紧握电动工具，使您的身体和手臂处于正确状态以抵抗反冲力。如有辅助手柄，则要一直使用，以便最大限度地控制启动时的反弹力或反力矩。**如果采取合适的预防措施，操作员就可以控制反力矩或反弹力。

b) **双手切勿靠近转动附件。**附件可能会反弹碰到手。

c) **不要站在电动工具发生反弹后可能移动到的区域。**反冲将在缠绕点驱使工具逆砂轮运动方向运动。

d) **处理尖角、锐边等时请格外小心。避免附件跳弹和被缠绕住。**尖角、锐边或弹跳可能会缠绕旋转附件并引起失控或反冲。

e) **不要安装锯链、木雕锯片或带齿锯片。**此类锯片会产生频繁的反弹和失控。

专门针对抛光操作的安全警告：

a) **不允许抛光帽或其附带绳索有任何松动部分随意旋转。收拢或调整松动的附带绳索。**松动和旋转的附带绳索可能会缠住您的手指或缠绕在工件上。

b) **添加润滑油和更换附件时请遵守本用户指南。**

c) **手柄必须保持干燥清洁，并不含任何油脂。**

专门针对砂光操作的安全警告：

a) **不要使用尺寸过大的砂盘纸。请遵循制造商的建议选择砂盘纸。**超出砂光盘的大规格砂纸会构成割伤危害并可能会导致圆盘缠绕、撕裂或反弹。

b) **添加润滑油和更换附件时请遵守本用户指南。**

c) **手柄必须保持干燥清洁，并不含任何油脂。**

抛光机附加安全指示

- **始终佩戴护目镜。**所有用户和旁观者必须配戴符合 ANSI Z87.1 标准的护目镜。
- **经常清洁工具，尤其是在长时间使用后。**带有金属屑的粉尘和磨粒常常会在外表面聚积，并且可能会引起触电危险。
- **不要长时间操作此工具。**本工具运行引起的震动可能对手指、手部和手臂造成永久伤害。使用手套提供额外缓冲，经常停下休息，并限制使用时间。
- **通风口通常会盖住运动部件，应加以避免。**宽松衣服、佩饰或长发可能会卷入运动部件。

警告：请始终佩戴安全眼镜。日常佩戴的眼镜不是防护眼镜。如果切割作业粉尘较多，另请使用面罩或防尘罩。请始终配备获得认证的安全设备。

警告：使用期间必须佩戴符合ANSI S12.6 (S3.19) 标准适当的个人听力保护装置。在某些情况下、以及长时间使用时，本产品的噪音可能导致听力损伤。

警告：电动砂光、锯切、磨削、钻孔及其他建筑活动会产生一些包含化学物质的灰尘，这些化学物质已知会导致癌症、出生缺陷或其他生殖损伤。这些化学物质包括：

- 含铅油漆中的铅，
- 砖块、水泥和其他砖石产品中的石英，以及
- 经过化学处理的木材中的砷和铬。

暴露在这些化学物质下给您带来的风险可能有所不同，这取决于您做这类工作的频繁程度。为减少您对这些化学物质的接触：请在通风良好的区域工作，并穿戴经批准的防护装备，例如专为过滤微粒而设计的防尘面具。

- **避免长时间接触与电动砂光、锯切、磨削、钻孔及其他建筑活动产生的粉尘。身穿防护服，用肥皂和水清洗暴露在粉尘下的区域。**粉尘进入嘴巴、眼睛或接触皮肤可能会导致人体吸收有害的化学物质。

警告：使用本工具可产生和/或激起灰尘，由此导致严重的永久性呼吸系统损伤或其他伤害。始终使用 NIOSH/OSHA 认可的、与所暴露的灰尘类型相适的呼吸保护装置。避免颗粒直接接触面部和身体。

警示：处理角落的地方时需格外小心，因为砂轮或其他附件接触次表面或表面边缘时，抛光机可能会出现突然、猛烈的动作。

- 您的工具上可能包含下列符号。这些符号和定义如下所示：

请妥善保管好这些说明

电机

Black&Decker 工具由 DEWALT 的内置电机提供电力。确保您的电源与铭牌标记相符。超过 10% 的电压下降会导致功率损失和过热。Black&Decker 工具已经过出厂测试；如果工具无法运行，请检查电源。

组件（图 1）

警告：切勿改装本电动工具或其任何部件，否则可能会导致损坏或人身伤害。

A. 调速轮
C. 变速触发开关
D. 碳刷检查口盖
E. 主轴锁按钮
F. 副手柄
G. 触发开关锁定按钮
I. 主轴
M. 夹头垫圈
O. 靠背垫
N. 抛光垫
R. 砂轮

工具上的标签

您的工具上可能包含下列符号：


参阅说明手册


使用护目设备


II级结构

设计用途

D6138 重型抛光机设计用于不同工作场所（例如建筑工地）的专业抛光应用。请勿在潮湿环境中或在有易燃液体或气体的环境中使用。

D6138 重型抛光机是专业型电动工具。不得让儿童接触本工具。缺乏经验的操作员需要在监督下使用本工具。

副手柄（图 1）

副手柄 (F) 随工具提供，可以安装在齿轮箱的任意一侧。应始终使用侧手柄，以保持对工具的完全控制。

变速触发开关（图 1）

这些工具配有一个变速触发开关，允许从 0 到 3500 转/分钟的速度控制。要启动工具，请如图 1 所示挤压触发开关 (C)，直至工具开始运转。您越用力挤压触发器，工具便会以越快的速度运转。松开触发开关会关闭工具。

涂抹液体蜡时请使用低速，清除风干的液体物质时请使用高速。对汽车进行上光处理时请使用最高速（完全按下触发开关）。如图 1 所示，通过完全挤压触发开发并按下锁定按钮 (G)，可以将工具锁定在持续操作的状态。按住锁定按钮，同时轻轻释放触发开关。工具将持续运转。要从锁定位置关闭工具，请再次挤压并释放触发开发。开关锁定时不要拔下工具的插头。插入插头时确保工具没有锁定。如果再次插入插头时开关处于锁定位置，工具将无法运行，直至按下锁定按钮 (G)（零压释放）。

注：触发开关仅可在工具以调速轮 (A) 指定的最高转速运行的情况下才可以进行锁定。

调速轮（图 1）

您可以通过将调速轮 (A) 旋转到所需设置，更改工具的最大速度。调速轮整合了制动器，可以防止调速轮意外移动，同时方便选择速度。为了提供更多功能性，可以单独通过调速轮 (A) 将触发开关锁定在完全按下的位置，改变工具转速。电子变速控制器不但能让您选择符合工作需要的速度，还可以维

持按下触发开发启动工具时的速度。此功能和变速触发开关搭配是本工具的特色所在。

调速轮 (A) 可以设置为介于 600 和 3500 转/分钟之间的任何速度，设置好后，变速开关可控制工具在 0 至调速轮设置之间的速度运行。例如：调速轮设置为 2200 转/分钟，则允许变速开关在 0 至 2200 转/分钟之间的速度运行工具，具体视触发开关按下的程度而定。调速轮设置为 600 转/分钟，则允许变速开关在 0 至 600 转/分钟之间的速度运行工具。

无论何时，当完全按下触发开关时，电子变速控制功能立即开始发挥作用，工具将以调速轮设置决定的选定速度运行。随着通过将工具下推到工件表面来加载工具，（完全按下触发开关后）工具内部的电路会进行加载补偿，并维持选定的速度。如上例所述，如果调速轮选定的速度为 2200 转/分钟，那么工具在加载时会维持在 2200 转/分钟。

请谨记以下有关电子变速控制器的两大重要事项：

1. 只有完全按下触发开关 (C) 完全时，电子变速控制器才会运转。
2. 低速设置（2600 转/分钟及以下）比高速设置下更容易观察到电子变速控制器的作用。如果工具转速接近 3000 转/分钟，作用会较不明显。

请记住，传统的抛光机通常以 2400 转/分钟的空载转速运行，在有抛光负载的情况下工具会降速至 2000 转/分钟。但在有负载应用的情况下，您的 D6138 会持续以 2400 转/分钟的转速运行（或使用调速轮选择的任何速度）。由于工具不会减速，速度可能会高于您习惯使用的速度，因此操作时应格外谨慎，直至您已对抛光机“熟练上手”。如果您感觉转速太高，当然可以使用触发开关或调速轮来降低工具速度。

主轴锁按钮（图 1）

警告：为降低严重的人身伤害风险，在进行任何调整或移除/安装附件或附件之前，请关闭工具电源和断开工具电源连接。重新连接工具之前，请按下并松开触发开关以确保工具已关闭。

为了防止在安装或拆除附件时工具主轴旋转，工具的齿轮头设有一个主轴锁按钮 (E)。要锁定主轴，请按住主轴锁按钮。工具运行或依靠惯性运转时，切勿按下主轴锁按钮。

操作

警告：为降低严重的人身伤害风险，在进行任何调整或移除/安装附件或附件之前，请关闭工具电源和断开工具电源连接。重新连接工具之前，请按下并松开触发开关以确保工具已关闭。

D6138 可使用直径为 6”、7” 或 9”（15.2、17.8 或 22.9 cm）的抛光或砂光垫。

组装和拆下抛光垫（图 3）

警告：为降低严重的人身伤害风险，不允许抛光气囊或附带绳索有任何松动部分而随意旋转。收拢或调整松动的附带绳索。松动和旋转的附带绳索可能会缠住您的手指或缠绕在工件上。

注：D6138 可以使用下述任一类型的抛光垫组装。

组装抛光垫与橡胶靠背垫（图3A）

1.要组装抛光垫 (N)，将夹紧垫圈 (M) 中心推入抛光垫中心的孔中，直至推到尽头。

2.扣入靠背垫 (O) 的六边形孔中。将这三个附件紧紧合在一起，然后将组装件放入工具主轴 (I) 中。

3.按住主轴锁按钮 (E)，同时顺时针转动靠背垫，以使其完全穿过主轴。

组装抛光垫与粘钩靠背垫（图3B）

1.将粘钩泡沫垫或绒毛垫 (P) 组装到粘钩靠背垫 (Q) 中时，泡沫或绒毛垫要小心对齐靠背垫的中心。

2.将靠背垫 (Q) 旋入主轴 (I) 中，同时按下主轴锁按钮 (E)。

拆下衬垫

用手按正常旋转方向的反方向转动衬垫，以使锁定按钮啮合主轴，然后按右旋螺纹的正常方向旋出衬垫。

抛光

这些说明和建议旨在让新手操作员整体上熟悉电动抛光机的操作。随着随来越熟悉电动抛光操作，您会发展形成自己的技巧，使工作变得更加轻松。

- 当在尖锐物体或车身轮廓线周围或上方执行电动抛光作业时，您应格外小心。在车身不同部位执行抛光作业时施加适当的压力非常重要。例如，当在车体外板的锐边或车顶的雨水槽边缘上抛光作业时，应施加轻度压力。
- 由于用户使用的电动抛光剂类型各有不同，我们建议您首先在汽车的平面区域上执行清洁和抛光测试。从这个测试环节中，您可以判断电动抛光机的力度或清洁作用。
- 请记住，所有电动抛光剂都是不同的。不同品牌的抛光剂在不同的涂漆面上会有不同的反应。同时应记住，您现在搭配使用电动抛光机和电动抛光剂。这完全不同于以往执行的任何手动操作。执行电动抛光作业之前，请清洗汽车。清洗将会清除松动的浮土、浮渣、铺路盐等，这些物质可能会作为研磨剂损坏漆面。浮土等物质还可能会堵塞抛光垫，导致您必须经常清洁它。
- 在工具未启动的状态下，紧握工具手柄提起来。保持工具远离身体，按下触发开关。确保紧握手柄，可自由操作工具且没有施加强力或额外的压力。侧手柄可轻松变换到工具任意一侧，以适应左右或右手操作的需要。

注： 抛光罩在汽车漆面上的高速摩擦动作可能会使静电在工具的金属部位上累积。这可能会导致触碰工具的金属部位时感到非常短暂轻微的触电，在湿度低的天气中，触电的感觉会更加明显。这是一种无害的现象，但您也可以将工具送回 Blacker&Decker 服务中心，服务中心会对工具进行检测，确保不存在任何电气故障。

砂光（图 4-7）

警告：

- 请勿使用抛光机对任何类型的金属执行抛光作业。对螺丝、钉子或其他金属物进行砂光可能会产生火花，并可能会点燃尘粒。
- 请勿使用砂光机执行湿法砂光作业。液体可能会进入电机外壳并引发触电危险。
- 经常清洁工具，尤其是在长时间使用后。带有金属屑的粉尘和磨粒常常会在外表面聚积，并且可能会引起严重人身伤害、触电或触电致死危险。佩戴适当的 ANSI Z87.1 (CAN/CSA Z94.3) 认证护目镜。
- 安装或拆下砂轮时，请使用布块或手套来保护双手。

安装砂轮（图4, 5)

1. 握住主轴，并按下主轴锁按钮 (E) 以防止主轴旋转。
2. 将夹紧垫圈 (M) 的中心部位压入穿过砂轮 (R) 以及靠背垫 (O) 的中心。
3. 使夹紧垫圈的螺纹对准工具主轴，并顺时针拧入，将组装件完全压下到主轴上。

拆下砂轮（图6)

按下主轴锁按钮 (E) 以防止主轴旋转。逆时针旋转砂轮组装件，拆下砂轮。

砂光（图 7）

使用砂轮时，请握住工具，使砂轮和工件呈 10° 至 15° 的夹角。如果仅使用砂光盘的外边缘，会导致出现粗切口。如果使用砂光盘将工件压平，不但砂光效果凹凸不平，而且也难以控制工具。

维护

您的 Black&Decker 电动工具设计精良，可以长时间使用，而且只需极少的维护。要连续获得令人满意的工作效果，需要进行合适的工具维护和定期清洁。

警告：为降低严重的人身伤害风险，在进行任何调整或移除/安装附件或附件之前，请关闭工具电源和断开工具电源连接。重新连接工具之前，请按下并松开触发开关以确保工具已关闭。

清洁

警告：请使用干燥的空气吹走所有通风口的灰尘和尘屑，至少每周一次。佩戴适当的 ANSI Z87.1 (CAN/CSA Z94.3) 认证护目镜以及适当的 NIOSH/OSHA/MSHA 认证呼吸防护装置。

警告：请勿使用溶剂或其它刺激性化学制品来清洁工具的非金属部件。这些化学物质可能会削弱这些部位使用的塑料材料。请用布蘸温和的肥皂水擦拭。切勿让任何液体渗入工具，切勿让工具的任何部件浸在液体中。

润滑

Black&Decker 电动工具在出厂前已经过充分润滑，可立即使用。应定期（每六十天至六个月）对本工具重新进行润滑，具体间隔视使用情况而定。（如果工具持续用于生产或重型作业，且暴露在热源中，则可能需要更频繁的润滑。）润滑操作只能由经过培训的电动工具维修人员（例如 Black&Decker 维修中心人员）或在其他授权维修点执行。

马达电刷

检查碳刷前务必确保已拔除电源插头。应定期检查碳刷是否磨损。要检查电刷，请拧开塑料电刷检查口盖（位于电机外壳的两侧），并从工具取出弹簧和电刷组装件。保持刷子清洁、可在其导轨内自由滑动。

警示：仅可使用 Black&Decker 的工具专用合格碳刷，请咨询当地的经销商或授权维修中心以了解正确的碳刷。使用非本工具专用或未经 Black&Decker 合格认证的碳刷可能会损坏工具，并导致严重人身伤害！

附件

警告：除了 Black&Decker 提供的附件之外，其他附件都未经此产品兼容性测试，若将此类附件与本工具一起使用将存在安全隐患。为降低伤害风险，本产品只可使用 Black&Decker 推荐的附件。

建议与本工具配套使用的附件可从当地经销商处或授权维修中心另行购买。如果您需要我们协助您找到任何附件。请仅使用最大运行速度至少达到工具铭牌上所标示的“RATED RPM”（额定转速）的附件。该预防措施也适用于工具上的任何附件。

- 橡胶靠背垫：7” (18.0 cm) 快速更换超强灵活性橡胶靠背垫（包括夹紧垫圈）
- 7” (18.0 cm) 粘钩靠背垫
- 副手柄

维修

为了确保产品的安全和可靠性，任何维修、维护和调整（包括碳刷检查和更换）均应由 Black&Decker 原厂维修中心、Black&Decker 授权维修中心或其他合格维修人员执行。请务必使用相同的备件。

自选配件

警告：除了 Black&Decker 提供的附件之外，其他附件都未经此产品兼容性测试，若将此类附件与本工具一起使用将存在安全隐患。为降低伤害风险，本产品只可使用 Black&Decker 推荐的附件。

请向您的经销商咨询更多关于合适附件的信息。

附件保养

在正确时间进行附件保养，可确保应用的最佳结果以及长而有效的附件寿命。

保护环境

分类回收。本产品不得与普通家庭垃圾一起处理。

如果您发现您的 Black&Decker 产品需要进行替换，或您已经不再需要使用这些产品，请勿将它们与家庭废物一起处理。请将它们单独分类回收。

分类回收使用过的产品和包装能够让材料得以再循环和再利用。再生材料的再利用有助于防止环境污染，并降低对原材料的需求。

当地法规可能要求由市政废物处理点或向您出售新产品的零售商提供从家庭中分类回收电气产品的服务。

制造商：百得（苏州）科技有限公司
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