

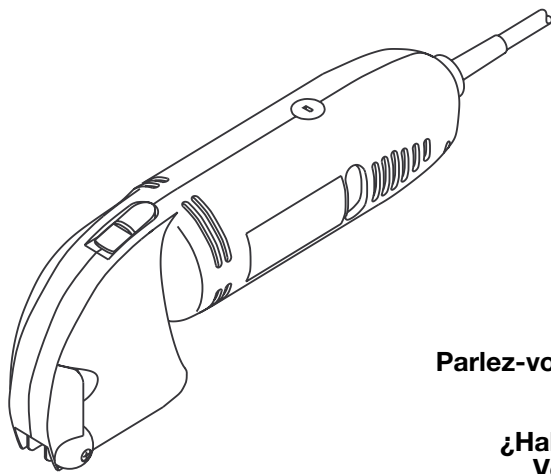
DREMEL®

Contour Sander

Owner's Manual

Model 6000

HONESTLY NOW ... Have you read
this OWNER'S MANUAL?



**Parlez-vous français?
Voir page 12**

**¿Habla español?
Vea página 23**

- Safety
- Assembly
- Operation
- Maintenance
- Accessory Information
- Warranty
- Service Parts

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Racine, Wisconsin 53401
1-800-437-3635
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Power Tool Safety Rules

⚠ WARNING **Read and understand all instructions.** Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

Work Area

Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.

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.

Keep by-standers, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

Double Insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double Insulation eliminates the need for the three wire grounded power cord and grounded power supply system. *Before plugging in the tool, be certain the outlet voltage supplied is within the voltage marked on the nameplate. Do not use "AC only" rated tools with a DC power supply.*

Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded. If operating the power tool in damp locations is unavoidable, a Ground Fault Circuit Interrupter must be used to supply the power to your tool. Electrician's rubber gloves and footwear will further enhance your personal safety.

Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.

Damaged cords increase the risk of electric shock.

When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W." These cords are rated for outdoor use and reduce the risk of electric shock. Refer to "Recommended sizes of Extension Cords" in the Accessory section of this manual.

Personal Safety

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

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Keep handles dry, clean and free from oil and grease.

Avoid accidental starting. Be sure switch is "OFF" before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch "ON" invites accidents.

Remove adjusting keys or wrenches before turning the tool "ON". A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand

or against your body is unstable and may lead to loss of control.

Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.

Do not use tool if switch does not turn it "ON" or "OFF". Any tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control. Any alteration or modification is a misuse and may result in a dangerous condition.

Check for misalignment or binding of moving parts, breakage of parts, and any

other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. Develop a periodic maintenance schedule for your tool.

Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool, may become hazardous when used on another tool.

Service

Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury. For example: internal wires may be misplaced or pinched, safety guard return springs may be improperly mounted.

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. Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.

Contour Sander Safety Rules

Unplug the sander before changing accessories. Accidental start-ups may occur if sander is plugged in while changing an accessory.

If your tool is equipped with a dust bag, empty it frequently and after completion of sanding. Be extremely careful of dust disposal, materials in fine particle form may be explosive. Do not throw sanding dust on an open fire. Spontaneous combustion, may in time, result from mixture of oil or water with dust particles.

Always wear eye protection and a dust mask for dusty applications and when sanding overhead. Sanding particles can be absorbed by your eyes and inhaled easily and may cause health complications.

Use special precautions when sanding chemically pressure treated lumber, paint that may be lead based, or any other materials that may contain carcinogens. A suitable breathing respirator and protective

clothing must be worn by all persons entering the work area. Work area should be sealed by plastic sheeting and persons not protected should be kept out until work area is thoroughly cleaned.

Do not wet sand with this sander. Liquids entering the motor housing is an electrical shock hazard.

Do not use sandpaper intended for larger sanding pads. Larger sandpaper will extend beyond the sanding pad causing snagging, tearing of the paper or kick-back. Extra paper extending beyond the sanding pad can also cause serious lacerations.

Clamp or secure workpiece when sanding. Clamping the workpiece prevents it from being ejected from under the sander and leaves both hands free to control the tool.

Keep the cord away from the accessory. The cord can become entangled with the pad or contour.

⚠ 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-based paints,
- Crystalline silica from bricks and cement and other masonry products, and


- Arsenic and chromium 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.

Symbols

IMPORTANT: Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.


Symbol	Name	Designation/Explanation
V	Volts	Voltage (potential)
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
kg	Kilograms	Weight
min	Minutes	Time
s	Seconds	Time
∅	Diameter	Size of drill bits, grinding wheels, etc.
n_0	No load speed	Rotational speed, at no load
.../min	Revolutions or reciprocation per minute	Revolutions, strokes, surface speed, orbits etc. per minute
0	Off position	Zero speed, zero torque...
1, 2, 3, ... I, II, III,	Selector settings	Speed, torque or position settings. Higher number means greater speed
0 ▲	Infinitely variable selector with off	Speed is increasing from 0 setting
→	Arrow	Action in the direction of arrow
~	Alternating current	Type or a characteristic of current
≡	Direct current	Type or a characteristic of current
⎓	Alternating or direct current	Type or a characteristic of current
□	Class II construction	Designates Double Insulated Construction tools.
⊕	Earthing terminal	Grounding terminal
⚠	Warning symbol	Alerts user to warning messages
	Ni-Cad RBRC seal	Designates Ni-Cad battery recycling program


 This symbol designates that this tool is listed by Underwriters Laboratories.

 This symbol designates that this tool is listed to Canadian Standards by Underwriters Laboratories.



This symbol designates that this tool complies to NOM Mexican Standards.

 This symbol designates that this tool is listed by the Canadian Standards Association.

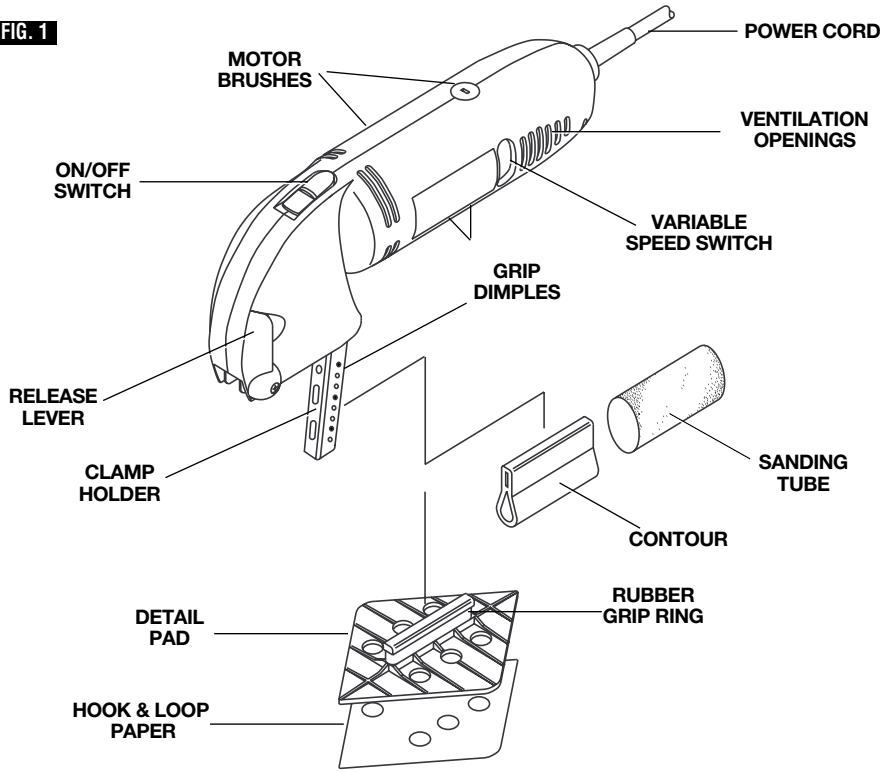
 This symbol designates that this tool is listed by Underwriters Laboratories, and listed to Canadian Standards by Underwriters Laboratories.

Functional Description and Specifications

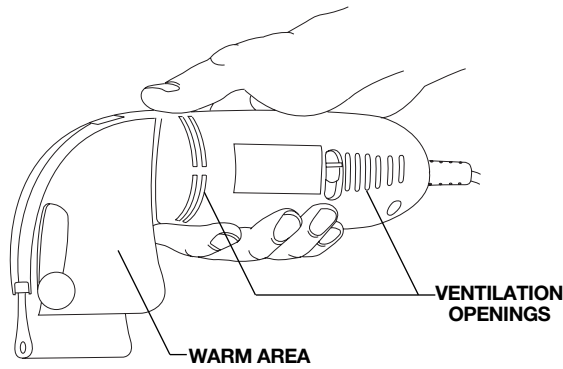
⚠ WARNING Disconnect the plug from the power source before making any assembly, adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.

Contour Sander

FIG. 1



See diagram for proper way to hold tool. The head of sander will get warm as it is being used. Please use care to make sure ventilation openings are not covered during use.



NOTE: For tool specifications refer to the nameplate on your tool.

Operating Instructions

ON/OFF AND VARIABLE SPEED SWITCHES

Your Sander is equipped with a variable speed switch and a separate on/off switch. The speed can be controlled from minimum to maximum speed by moving the switch lever to desired setting.

TO TURN TOOL "ON": Slide switch to the "ON" position (I) on symbol.

TO TURN TOOL "OFF" Slide switch to the "OFF" position (O) off symbol.

TO INCREASE SPEED: Move variable speed control lever toward the + sign.

TO DECREASE SPEED: Move variable speed control lever toward the - sign.

Setting	Material/Application
Low	Delicate surfaces, veneers, or light surface finishing & polishing
Low	Plastics or other soft surfaces
Medium	Solid wood, fast stock removal, paint removal
High	General use, metal sanding & finishing, chipboard, coarse sanding on rough surfaces, & polishing

SELECTING A CONTOUR SHAPE

Individual contour shapes are available in three basic styles. A variety of radiuses are available in each style:

Convex shapes: 1/8", 3/16", 1/4", 3/8", 1/2", 5/8"

Concave shapes: 1/8", 3/16", 1/4", 3/8", 1/2", 5/8"

Angled shapes: Flat, 30°, 60°, 45°, 90°, -90°

The contour shapes are available in a variety of different radiuses to match common configurations. Additionally, each contour can be modified or customized by trimming or shaping the material to the desired form.

INSTALLING AND REMOVING DETAIL PAD & OPTIONAL SHUTTER PAD

Your sander is equipped with a quick change clamping mechanism that allows you to easily change accessories without additional tools.

To attach detail pad or optional shutter pad to the sander:

1. Disconnect sander from power source.
2. Rotate red release lever to lower the accessory clamp holder.
3. Apply hook and loop backed sandpaper to pad.
4. Insert pad completely into the top and back of the holder until it reaches the rear "stop".

HINT: Make sure the small grip dimples have firmly secured the rubber grip ring (Fig. 1).

5. Press holder firmly back up into place until the pad "snaps" into position.

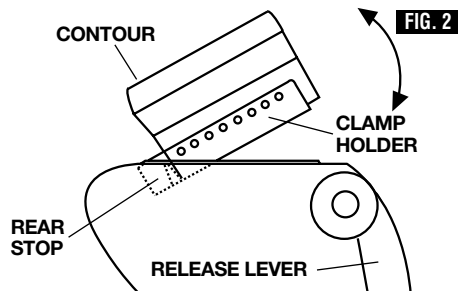
To remove pad, rotate lever to release and lower the clamp holder. Remove the pad from the holder. You are now ready to install another pad or contour shape.

When using detail sanding pads, regularly rotate the pad 180 degrees to maximize all surfaces for longer, more efficient use.

INSTALLING AND REMOVING CONTOURS

To attach a contour shape to the sander:

1. Disconnect sander from power source.
2. Rotate red release lever to lower the accessory clamp holder.
3. Apply either a sanding tube or pressure sensitive adhesive directly to contour shape.
4. Insert contour completely into the top and back of the holder until it reaches the rear "stop" (Fig. 2).



Operating Instructions (cont.)

Hint: make sure the small grip dimples have firmly secured the sandpaper surface.

5. Press holder firmly back up into place until the contour "snaps" in place.

To remove contour, rotate lever to release and lower the clamp holder. You are now ready to install another contour shape or detail pad.

When using sanding tubes, rotate them regularly to maximize all surfaces for longer, more efficient use.

HINT: When reaching into extremely tight places, the contour can be extended beyond the front of the tool.

NOTE: DO NOT APPLY EXCESSIVE PRESSURE TO THE TOOL WHILE IN USE. ALLOW THE SPEED OF THE TOOL AND THE ACCESSORY TO DO THE WORK. APPLYING UNNECESSARY PRESSURE WILL CAUSE THE ACCESSORY TO WEAR UNEVENLY - IT WILL NOT SERVE TO PERFORM THE WORK MORE QUICKLY.

"Accessory Tips"

Contours: Use sanding tubes that are long lasting, reusable and easy to install. To install, slide tube completely over desired contour, and shape paper to contour. Contour abrasive tubes can also be rotated on the contour, to maximize the use of the abrasive surface.

PSA Rolls: Rolls with pressure sensitive adhesive can also be used with individual contours. Unroll a strip of abrasive to fit the particular contour, and cut to length with scissors. When using pressure sensitive adhesive, optimal clamping can be obtained if the entire contour surface is wrapped with paper. Firmly press the abrasive in place on the contour. To remove abrasive, lift a corner of the sheet with your fingernail and peel it off. Dispose of the used abrasives, they are not reusable.

HINT: When using 1/8" and 3/16" concave contours with sanding tubes, it will be easier to conform the abrasive to the workpiece if a finer grit paper is used.

NOTE: The contour shapes have been extruded to the dimension indicated on the shape. When doing exacting work, it will be necessary to provide an allowance for the sandpaper being used. Heavier/coarser grit papers require a greater allowance.

PSA Adhesives work best at temperatures above 25 degrees F. If PSA abrasives and pads are stored at lower temperatures, it may be necessary to allow them to come to room temperature before use.

PSA Rolls must be stored in a dust-free environment to prevent contamination of adhesive.

After considerable use, the detail pad backing surface may become worn. The backing pad must be replaced when it no longer offers a firm grip. If you are experiencing premature wearout of the backing pad facing, decrease the amount of pressure you are applying during operation of the tool.

"Tool Tips"

This machine is particularly suitable for access to corners and edges that are otherwise difficult to reach or require hand sanding. Profiles and grooves may be finished using the tip or edge of the selected accessory, which should occasionally be rotated during use to distribute the wear on the accessory or backing pad surface.

Always be certain that smaller workpieces are securely fastened to a bench or other support. Larger panels may be held in place by hand on a bench or sawhorse.

SANDING: Open-coat aluminum oxide sanding sheets are recommended for most wood or metal sanding applications, as this synthetic material cuts quickly and wears well.

SELECTING ABRASIVES

The following suggestions may be used as a general guide for abrasive selection, but the best results will be obtained by sanding a test sample of the workpiece first.

Grit	Application
Coarse 80 grit	For rough wood, metal sanding, rust, paint, or old material removal.
Medium 120 grit	For general wood or metal sanding.
Extra fine 220 grit	For final sanding of bare wood, smoothing old paint, or preparing a finished surface for recoating.

With the workpiece firmly secured, turn tool "ON". Contact the work with the tool after the sander has reached the selected speed, and remove it from the work before switching the tool "OFF". Operating your sander in this manner will prolong switch and motor life, and greatly increase the quality of your work.

Your contour sander uses an in-line sanding motion. The best surface finish will be

achieved while operating the sander in-line with the wood grain. Faster stock removal can be achieved by operating the sander across the grain when working out rough areas, then finishing by sanding with the grain.

DO NOT APPLY EXCESSIVE PRESSURE — LET THE TOOL DO THE WORK. EXCESSIVE PRESSURE WILL RESULT IN POOR HANDLING, VIBRATION, AND UNWANTED SANDING MARKS.

If the surface is rough, begin with coarser grits and then complete the surfacing with medium and fine abrasives. To avoid uneven results, do not skip more than one grit size when going from coarser to finer, and do not sand in one area for too long. When the job is completed, gently lift the tool from the work surface and slide switch to the "OFF" position.

To ensure longer life and even wear, lightly brush any residue or clogged materials from sandpaper surface prior to each use.

⚠ WARNING Do not wet sand with this sander.

Maintenance

Service

⚠ WARNING Preventive maintenance performed by unauthorized personnel may result in misplacing of internal wires and components which could cause serious hazard. We recommend that all tool service be performed by a Dremel Service Facility.

CARBON BRUSHES

The brushes and commutator in your tool have been engineered for many hours of dependable service. To maintain peak efficiency of the motor, we recommend every two to six months the brushes be examined. Only genuine Dremel replacement brushes specially designed for your tool should be used.

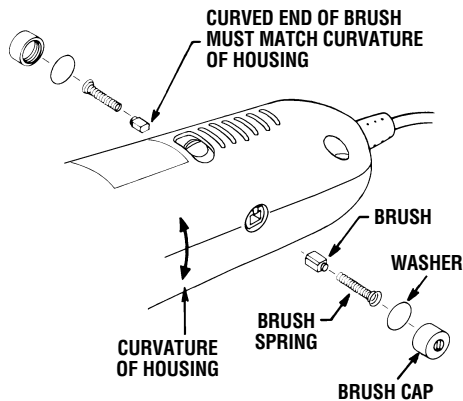
MAINTENANCE OF REPLACEABLE BRUSHES #5090930

The brushes should be inspected frequently when tools are used continuously. If your tool runs sporadically, loses power, makes unusual noises or runs at a reduced speed, check the brushes. To continue using the tool in this condition will permanently damage your tool.

With the cord unplugged, remove the brush

caps one at a time with a small screwdriver by rotating cap counter-clockwise and check each brush.

If the brush is less than 1/8" long and the end surface of the brush that contacts the commutator is rough and/or pitted, they should be replaced. Check both brushes. Usually the brushes will not wear out simultaneously. If one brush is worn out, replace both brushes. Make sure the brushes are installed as illustrated. The curved surface of the brush must match the curvature of the commutator.



After replacing brushes the tool should be run at no-load; place on a clean surface and run freely for 5 minutes before loading (or using) the tool. This will allow the brushes to "seat" properly and will give you more hours of life from each set of brushes. This will also extend the total life of your tool since the commutator surface will "wear" longer.

TOOL LUBRICATION

Your Dremel tool has been properly lubricated and is ready to use. Under normal use no additional lubrication is required.

Cleaning

WARNING To avoid accidents always disconnect the tool from the

power supply before cleaning or performing any maintenance. The tool may be cleaned most effectively with compressed dry air. **Always wear safety goggles when cleaning tools with compressed air.**

Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.

CAUTION Certain cleaning agents and solvents damage plastic parts. Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

WARNING If an extension cord is necessary, a cord with adequate size conductors that is capable of carrying the current necessary for your tool must be used. This will prevent excessive voltage drop, loss of power or overheating. Grounded tools must use 3-wire extension cords that have 3-prong plugs and receptacles.

NOTE: The smaller the gauge number, the heavier the cord.

**RECOMMENDED SIZES OF EXTENSION CORDS
120 VOLT ALTERNATING CURRENT TOOLS**

Tool's Ampere Rating	Cord Size in A.W.G.				Wire Sizes in mm ²			
	Cord Length in Feet				Cord Length in Meters			
	25	50	100	150	15	30	60	120
3-6	18	16	16	14	.75	.75	1.5	2.5
6-8	18	16	14	12	.75	1.0	2.5	4.0
8-10	18	16	14	12	.75	1.0	2.5	4.0
10-12	16	16	14	12	1.0	2.5	4.0	—
12-16	14	12	—	—	—	—	—	—

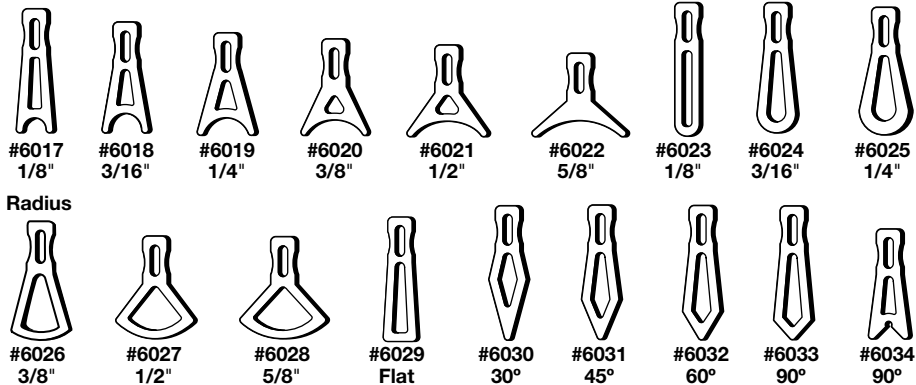
Your Contour Sander can be equipped with an optional dust collection wand. This device is effective in sanding pad dust collection when used with a shop vacuum with hose dimensions of ID 1-1/2" or OD 1-3/8" or an appropriate adapter to fit (see diagram on page 31). When using the wand, be sure to align the sanding sheet holes with the holes in the sanding pad to allow the dust wand to function properly.

The detail pad (and optional shutter pad) can be used with hook/loop sandpaper with or without holes for dust collection. If you've

purchased sandpaper without holes, holes can be punched manually for use with the dust wand.

Using sandpaper with holes - while not using the dust wand - will not harm or damage your work. This sander will operate effectively with or without the dust collection system.

To order individual contours (below), or for additional information about the dust collection feature, call Dremel Customer Service @ 1-800-437-3635.



Dremel Limited Warranty

Your Dremel product is warranted against defective material or workmanship for a period of two years from date of purchase. In the event of a failure of a product to conform to this written warranty, please take the following action:

1. DO NOT return your product to the place of purchase.
2. Carefully package the product by itself, with no other items, and return it, freight prepaid, along with:
 - A. A copy of your dated proof of purchase (please keep a copy for yourself).
 - B. A written statement about the nature of the problem.
 - C. Your name, address and phone number to:

UNITED STATES

Dremel Service Center
4915 Twenty-First Street
Racine, Wisconsin 53406

OR

Dremel Service Center
4631 E. Sunny Dunes
Palm Springs, CA 92264

CANADA

Giles Tool Agency
6520 Lawrence Av. East
Scarborough, Ont.
Canada M1C 4A7

OUTSIDE

CONTINENTAL UNITED STATES
See your local distributor or write
to Dremel, 4915 Twenty-First St.
Racine, Wisconsin 53406

We recommend that the package be insured against loss or in transit damage for which we cannot be responsible.

This warranty applies only to the original registered purchaser. DAMAGE TO THE PRODUCT RESULTING FROM TAMPERING, ACCIDENT, ABUSE, NEGLIGENCE, UNAUTHORIZED REPAIRS OR ALTERATIONS, UNAPPROVED ATTACHMENTS OR OTHER CAUSES UNRELATED TO PROBLEMS WITH MATERIAL OR WORKMANSHIP ARE NOT COVERED BY THIS WARRANTY.

No employee, agent, dealer or other person is authorized to give any warranties on behalf of Dremel. If Dremel inspection shows that the problem was caused by problems with material or workmanship within the limitations of the warranty, Dremel will repair or replace the product free of charge and return product prepaid. Repairs made necessary by normal wear or abuse, or repair for product outside the warranty period, if they can be made, will be charged at regular factory prices.

DREMEL MAKES NO OTHER WARRANTY OF ANY KIND WHATEVER, EXPRESSED OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE ABOVE MENTIONED OBLIGATION ARE HEREBY DISCLAIMED BY DREMEL AND EXCLUDED FROM THIS LIMITED WARRANTY.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. The obligation of the warrantor is solely to repair or replace the product. The warrantor is not liable for any incidental or consequential damages due to any such alleged defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

For prices and warranty fulfillment in the continental United States, contact your local Dremel distributor.

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