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Electric Dynafile® II

Tool Manual - Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

Models:

40590 - 120 V/60 Hz 40591 - Versatility Kit

(Contains Model 40590, Accessories and Carrying Case)





▲ WARNING

Read and understand this tool manual before operating your tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. For safety information, refer to Code of Federal Regulation – CFR 29 Part 1910, – Safety Requirements and applicable State and Local Regulations.

SAFETY LEGEND



A WARNING

Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.



▲ WARNING

Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.



A WARNING

Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.

A WARNING

Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.



A WARNING

Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statues, ordinances and/or regulations.



A WARNING

Electric shock hazard. Avoid bodily contact with grounded objects, bodies of water.

Do not damage cord set.



A WARNING

Some dust created by sanding, grinding, drilling, and other construction activities contain 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
- 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.

Caution: Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibration.

Tool Intent: Dynabrade Electric Dynafile® II used to sand, debur, blend and polish; metal, wood, stone, fiberglass or plastic surfaces.

GENERAL 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

- 1. Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- 2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which ignite the dust or fumes
- 3. Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

- 1. Double Insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in 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 leliminates the need for the three wire grounded power cord and grounded power supply system.
- 2. 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.
- 3. Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- 4. 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.

(continued on next page)

Electrical Safety (Continued)

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.

Personal Safety

- 1. 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.
- 2. 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.
- 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.
- 4. Remove adjusting keys or switches 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.
- 5. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- 6. 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

- 1. 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.
- 2. 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.
- 3. 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.
- 4. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventative safety measures reduce the risk of starting the tool accidentally.
- 5. Store idle tools in a high, dry place, locked up out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- 6. 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.
- 7. 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.
- 8. 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.
- 9. Use the right tool. Do not force small tools or attachments to do the job of a heavy duty tool.

Sarvice

- 1. Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- 2. 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.

SPECIFIC SAFETY RULES

- Accessories must be rated for at least the speed recommended on the tool warning label. Wheels and other accessories running over rated speed can fly
 apart and cause injury.
- 2. Hold tool by insulated gripping surfaces when performing an operation where the tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

(See Definitions for label symbols on pg. 4)

TOOL DESCRIPTION

Dynafile II - Is a electric hand tool with a moving narrow belt. Tool is equipped as shown on page 4.

ASSEMBLY and OPERATION INSTRUCTIONS

- 1. With power source disconnected from tool rotate head to desired position and tighten set screw with hex wrench provided to clamp.
- Connect power source to tool. Be careful not to depress switch in the process.
- 3. Hold tool by the motor housing only. One or two hands may be used. Do Not hold tool by head/housing assembly. Keep hands away from all grinding/sanding edges and moving parts. A side handle is included for two hand operation of tool. (See "Installing Side Handle" Instructions, pg. 3.)
- 4. Slide switch forward to start tool. Touch rear of switch to release.
- 5. Adjust belt tracking by turning 95218 Adjustment Knob to the left or right accordingly, so as abrasive belt rides evenly over contact arm.
- 6. Working off the return path of the abrasive belt will ensure superior tracking.

MAINTENANCE and ACCESSORY CARE INSTRUCTIONS

Important: A preventative maintenance program is recommended whenever portable power tools are used.

Use only genuine Dynabrade replacement parts to insure quality. To order replacement parts, specify Model #, Serial # and RPM of your tool.

Routine Preventative Maintenance:

- Mineral spirits are recommended when cleaning the sanding heads. Do not use on electrical components or clean tool or parts with any solvents or oils containing acids, esters, ketones, chlorinated hydrocarbons or nitro carbons. Compressed air may be used to remove dirt from electrical components.
- DO NOT clean or maintain tools with chemicals that have a low flash point (example: WD-40[®]).
- Tool labels must be kept legible at all times, if not, reorder label(s) and replace. User is responsible for maintaining specification information i.e.: Model #, S/N, and RPM. (See Assembly Breakdown)
- · Visually inspect plugs and cords for frays, visible damage and signs of deterioration. Damaged or worn components must be replaced by qualified service personnel.
- Brush Changing Unplug tool and remove rear cover. Bend brass tab on brush holders up and remove brushes. Install new brushes, bend tabs down and replace rear
 cover. Brush changing Change brushes every 100 hrs. to ensure proper tool function. After changing brushes, it is recommended to replace the right
 angle gear grease with 95542 Grease.
- After maintenance is performed on tool check for excessive tool vibration.
- Check for excessive current leakage at 550 volts with a current leakage checker on all screws and the gear case, if the electrical components have been disturbed during repair.

Handling and Storage of Tool and Accessories:

- Use of tool rests, hangers and/or balancers is recommended.
- <u>DO NOT</u> carry tool by cord.
- · Protect abrasive accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.
- · Store accessories in protective racks or compartments to prevent damage.

Abrasive Belt/Contact Arm Change Instructions (Ref pg. 4)

To Change Belt:

- 1. Disconnect tool from the power source.
- 2. Loosen the 15329 Screw and remove the 15312 Belt Guard.
- 3. Pull back the 15306 Tension Arm and remove the abrasive belt.
- 4. Install a new abrasive belt, and the 15312 Belt Guard.
- Adjust belt tracking by turning 95218 Adjustment Knob to the left or right accordingly, so as abrasive belt rides evenly over contact arm.
- 6. Connect tool to power source.

To Change Contact Arm Assembly:

- 1. Disconnect the tool from the power source.
- 2. Loosen the 15329 Screw and remove the 15312 Belt Guard.
- 3. Pull back the 15306 Tension Arm and remove the abrasive belt.
- 4. Loosen the 95218 Adjustment Knob to remove the contact arm assembly.
- Install the desired contact arm assembly (Ref pg. 6) so that the tab on the end of the arm faces toward the 15306 Tension Arm.
- **6.** Fasten the contact arm assembly in place with the 95218 Adjustment Knob.
- 7. Install a new abrasive belt, and the 15312 Belt Guard.
- 8. Adjust the belt tracking by turning the 95218 Knob.

Housing Angle Adjustment: To pivot the 15372 Belt Housing Assembly, use a 9/64" hex key to loosen the 95311 Screw. Pivot the belt housing assembly to the desired position and retighten screw.

Installing Side Handle: The 89351 Side Handle may be installed on either side of the gearbox housing, for right or left hand operation. To install, thread side handle into socket and tighten securely.







Abrasive Types and Cloth Polishing Belts

Aluminum Oxide

The most widely used abrasive grain. This tough durable synthetic is used for grinding and deburring high carbon steels, general metalworking and for sanding certain hardwoods.

Ceramic Aluminum Oxide

Synthetic grain two-to-three times tougher than conventional aluminum oxide.

Silicon Carbide

Excellent for sanding primer and sealer. This sharp, fast-penetrating grain is used for sanding soft materials such as plastics and fibrous wood.

Alumina Zirconia

Effective for coarse stock removal of metal and wood. This synthetic grain has self-sharpening characteristics and provides continuous new cutting edges for longer life and greater efficiency.

Abrasive Impregnated Non-Woven Nylon

A non-woven synthetic fiber and an abrasive mineral are bonded together to form a tough, open web that is chemically resistant and long-lasting. This web design allows controlled conformable contact to workpiece contours, corners and edges. The product wears away slowly, exposing new abrasive leaving a uniform, consistent surface. It also conditions surfaces without removing or damaging the base material and is excellent for deburring, cleaning, blending and final finishing of metal, wood and plastics. It is available in many forms such as belts, discs and wheels. Various mineral grades are available ranging from very coarse to ultra-fine.

Cloth Polishing Belts

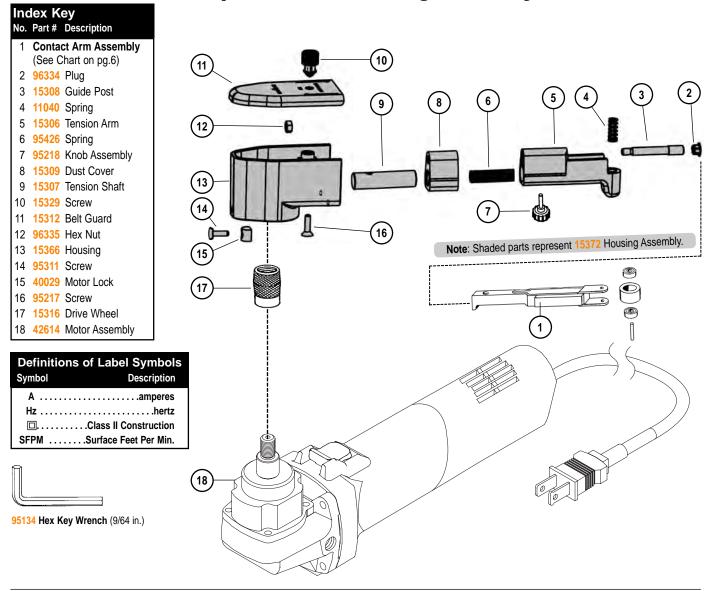
Used on power tools in conjunction with Dynuba® polishing compounds. The result is brilliant cut, color and luster on metals such as stainless steel, aluminum, copper and brass.

All abrasive accessories may be found in the most current Dynabrade® Catalog and abrasive literature.

One Year Warranty

Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair or replace at our factory, any equipment or part thereof which shall, within one year after delivery to the original purchaser, indicate upon our examination to have been defective. Our obligation is contingent upon proper use of Dynabrade tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment which has been subject to misuse, negligence, accident or tampering in any way so as to affect its normal performance. Normally wearable parts such as bearings, contact wheels, brushes, gears, etc., are not covered under this warranty.

Complete 15372 Housing Assembly



Extension Cords

Double insulated tools can use either a two or three wire extension cord. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage resulting in loss of power and possible tool damage. Refer to the table below to determine the required minimum wire size.

Nameplate	Extension Cord Length							
Ampere	25'	50'	75'	100'	150'	200'		
0-5.0	16	16	16	14	12	12		
5.1-8.0	16	16	14	12	10	-		
8.1-12.0	14	14	12	10	-	-		
12.1–15.0	12	12	10	10	-	-		
15.1–20.0	10	10	10	-	-	-		

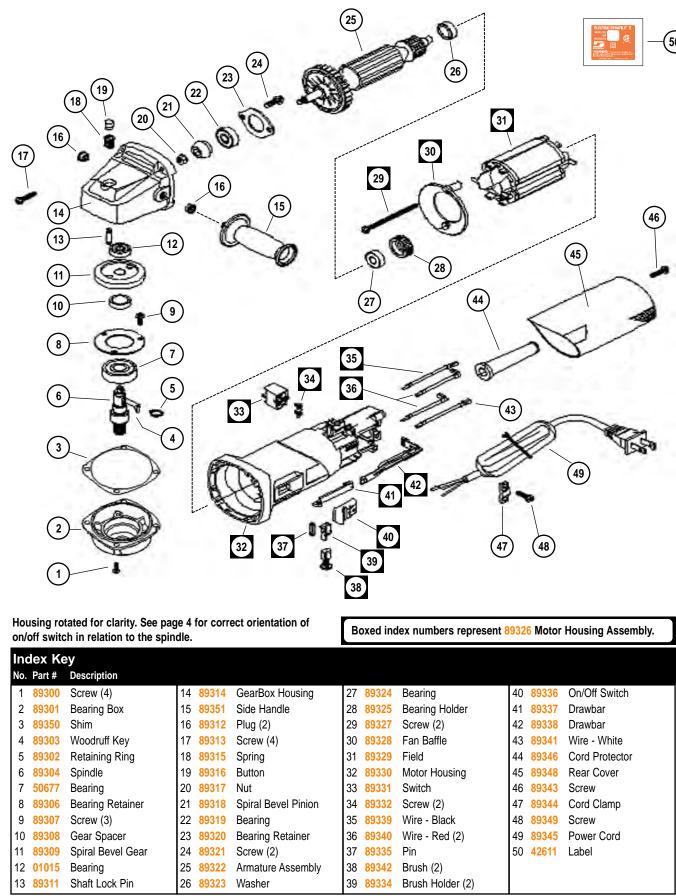
*Based on limiting the line voltage drop to live volts at 150% of the rated ampere.

The smaller the gauge number of the wire the greater the capacity of the cord. For example a 14 gauge cord can carry a higher current than a 16 gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate ampere and use the sum to determine the required minimum wire size.

Guidelines For Using Extension Cords

- If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- · Protect your extension cords sharp objects, excessive heat and damp or wet areas.

Complete 42614 Electric Assembly



To order replacement parts, specify model number and serial number of your machine.

45 PSI maximum.

Enter channels as small as 7/16".

Grind over contact

wheel or platen.

Electric Dynafile® II Contact Arms Arms for 4" to 17" workable reach.

Aillis 101 4 to 17 Workable reach.

* Note: For belt widths greater than 1/2" use drive wheel 15336 to eliminate slippage.



Platen: 1/2" wide.

11201

Belt Size: 1/2" W x 18" L. **Contact Wheel:** 5/16" dia. x 3/8" W, steel.

Platen: 1/2" wide.



Belt Size: 1/4" W x 18" L.

Contact Wheel: 5/8" dia. x 1/8" W, rubber.

Platen: 1/4" wide.

11203* Order 11312 for heavy-duty version.



Belt Size: 1/2" W x 18" L.

Contact Wheel: 5/8" dia. x 3/8" W, rubber. Platen: 1/2" wide.

11204 – "Unique Offset Design"



Belt Size: 1/4" or 1/2" W x 18" L.

Contact Wheel: 1" dia. x 3/8" W, rubber. Platen: None due to offset design.

11206 * Order 11326 for Heavy Duty/Steel Construction version.



Belt Size: 5/8" or 3/4" W x 18" L.

Contact Wheel: 3/4" dia. x 5/8" wide, rubber. Platen: 3/4" wide.

Strap polish here tapered grooves, strap polish.

Belt Size: 1/4" W x 18" L.

Contact Wheel: 1" dia. x 3/8" wide, urethane, tapered.

Platen: No platen due to offset design.

*Standard Contact Arm for Electric Dynafile® II

11286

11024 steel platen available.
6-3/4" workable reach.

Optional 40078 Adapter allows use of 24" long belts; extends reach to

7" when used with contact arm.

Belt Size: 1/2" W x 24" L.

Contact Wheel: 5/8" dia. x 3/8" W, rubber. Platen: 1/2" wide.

11287* Uses 20-1/2" Belts

Grind on contact wheel or platen; has 5-1/4" workable reach.

Belt Size: 5/8" or 3/4" W x 20-1/2" L

Contact Wheel: 3/4" dia. x 5/8" W, rubber. Platen: 3/4" wide.



Contact Wheel: 5/8" dia. x 3/8" wide, rubber. Platen: 1/2" wide.

Removes raised material within .020" or less without undercutting.

Guide Wheels
Prevent Undercutting

Belt Size: 1/2" W x 18" L. 60 to 80 grit. **Contact Wheel:** 5/8" dia. x 3/8" W, rubber.

11329 Extra Length Arm

17" workable reach.

Belt Size: 1/2" W x 44" L.

Contact Wheel: 5/8" dia. x 3/8" W, rubber. Platen: 1/2" wide.

11350 * "Bus Bar"

Excellent for cleaning oxide off electrical bus bars. Arm has a 12" workable reach.

Belt Size: 3/4" W x 34" L.

Contact Wheel: 5/16" dia. x 5/8" W, steel. Platen: 3/4" wide, optional.

11220*, 11300*, 11301*, 11341*

Polish Turbine Blades

Offset design and miniature contact wheels. 2" strap polish in offset area; polish turbine blades and other contours.

. . .

Belt Sizes: 11220 uses 5/8" or 3/4" W x 18" L.

All others use 1/2" W x 18" L.

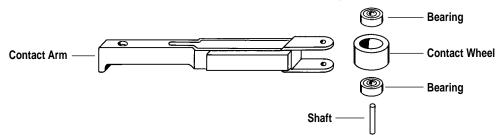
Contact wheels description for each above arm:

11220: 5/16" dia. x 5/8" W, steel. **11300**: 1/4" dia. x 3/8" W, steel. **11301**: 5/16" dia. x 3/8" W, steel. **11341**: 5/16" dia. x 3/8" W, rubber.



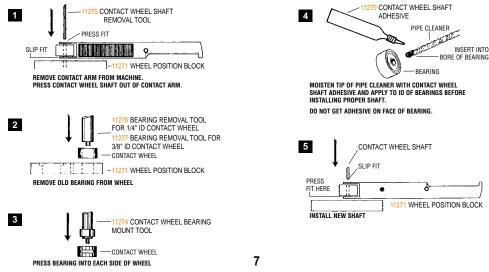
Electric Dynafile® II Contact Arm Assembly Parts List

Contact Wheel Assembly - Includes wheel, bearings and shaft.



Part Number	Abrasive Belt Size	Contact Wheel Description	Comments	Contact Wheel Assembly	Contact Wheel Only	Bearing (2) Req.	Shaft	
11200	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	"Stroke-Sander Arm" 1/2" W Platen	11088 (2)	11077 (2)	11052 (4)	11059 (2)	
11201	1/2" x 18"	5/16" Dia. x 3/8" W Steel	1/2" W Platen	11068	11067	11051	11054	
11202	1/4" x 18"	5/8" Dia. x 1/8" W Rubber	1/4" W Platen	11074	11073	11052	11053	
11203	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	1/2" W Platen	11078	11077	11052	11054	
11204	1/4" or 1/2" x 18"	1" Dia. x 3/8" Wide Radiused Rubber	Loose Belt Application	11080	11079	11052	11054	
11206	5/8" or 3/4" x 18"	3/4" Dia. x 5/8" W Rubber	3/4" W Platen	11282	11281	11052	11285	
11220	5/8" or 3/4" x 18"	5/16" Dia. x 5/8" W Steel	Polishing Turbine Blades	11352	11353	11051	11285	
11280	1/4" x 18"	1" Dia. x 3/8" Wide Tapered Urethane	No Platen/Offset Design	11086	11085	11052	11054	
11286	1/2" x 24"	5/8" Dia. x 3/8" W Rubber	1/2" W Platen	11078	11077	11052	11054	
11287	5/8" or 3/4" x 20-1/2"	3/4" Dia. x 5/8" W Rubber	3/4" W Platen	11282	11281	11052	11285	
11300	1/2" x 18"	1/4" Dia. x 3/8" W Steel	Polishing Turbine Blades	11332	11333	11334	11335	
11301	1/2" x 18"	5/16" Dia. x 3/8" W Steel	Polishing Turbine Blades	11068	11067	11051	11054	
11304	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	"Stroke-Sander Arm"-1/2" W Platen	11078	11077	11052	11054	
11312	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	H.D. Version of 11203 Arm	11078	11077	11052	11054	
11320	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	"Offset Arm" To Prevent Gouging.	11078	11077	11052	11054	
11322	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	Contains two 11395 Guide Wheels To Prevent Undercutting	11090	11077	11052	95610	
11325	1/2" x 18"	5/8" Dia. x 3/8" W Rubber	1/2" W Steel Platen	11078	11077	11052	11054	
11326	5/8" or 3/4" x 18"	3/4" Dia. x 5/8" W Rubber	H.D. Version of 11206 Arm	11282	11281	11052	11285	
11329	1/2" x 44"	5/8" Dia. x 3/8" W Rubber	1/2" W Platen/17" Reach	11078	11077	11052	11054	
11341	1/2" x 18"	5/16" Dia. x 3/8" W Rubber	Polishing Turbine Blades	11342	11343	11334	11335	
11350	3/4" x 34"	5/16" Dia. x 5/8" W Steel	Bus Bar Arm/12" Reach	11352	11353	11051	11285	

Contact Arm Assembly/Disassembly Instructions



Optional Accessories

FIND THE MOST CURRENT OFFERING OF ACCESSORIES AND SUPPORT DOCUMENTS @ WWW.DYNABRADE.COM

11288 Dynafile Contact Arm and Idler Wheel Repair Kit

 Contains special tools to assist in the replacement of contact wheels and bearings.



Dynapad® Platen Pads

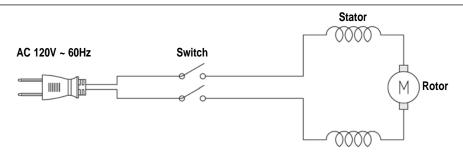
Part Number	Size	Material	Pkg. Qty.
11024	1/2" W x 3" L (bolts on)	Steel	1
11025	1/2" W x 7" L x 1/8" Thk	Soft/Sponge	5
11026	1/2" W x 7" L x 1/8" Thk	Hard/ Cork	5
11027	1/2" W x 7" L x 1/32" Thk	Thin	5
11109	3/4" W x 7" L x 1/8" Thk	Hard/ Cork	5
11119	3/4" W x 7" L x 1/8" Thk	Soft/ Sponge	5
11129	3/4" W x 7" L x 1/32" Thk	Thin	5

Note: Dynapad Platen Pads are PSA mounted and easily trimmed to size.

Exceptions: 11024 Steel Platen fastened with included hardware.

Unit = 10 packages each.

Wiring Diagram



Machine Specifications

Model Number	Motor RPM	Max. Watt Out	Abrasive Belt Size Inch (mm)	Voltage	Current	Phase	Frequency	Max. SFPM (SMPM)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
40590	11,600	600	1/4-3/4 (6-19) W x 18-24 (457-610) L	120 V (AC)	6.7 Amps	1	60 Hz	2,500 (762)	4.6 (2.1)	17-1/2 (445)	4-3/4 (121)

Reference Contact Information

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