

ELECTRIC RANDOM ORBITAL SANDER INSTRUCTION MANUAL

127 mm (5 in) and 152 mm (6 in)

7,000/min - 10,000/min (RPM)

POWER SUPPLY Alternating Current (AC) INPUT: 100 - 40 Va.c. 47- 63 Hz.

POWER SUPPLY Direct Current (DC) OUTPUT: 30 Vd.c. 5 A

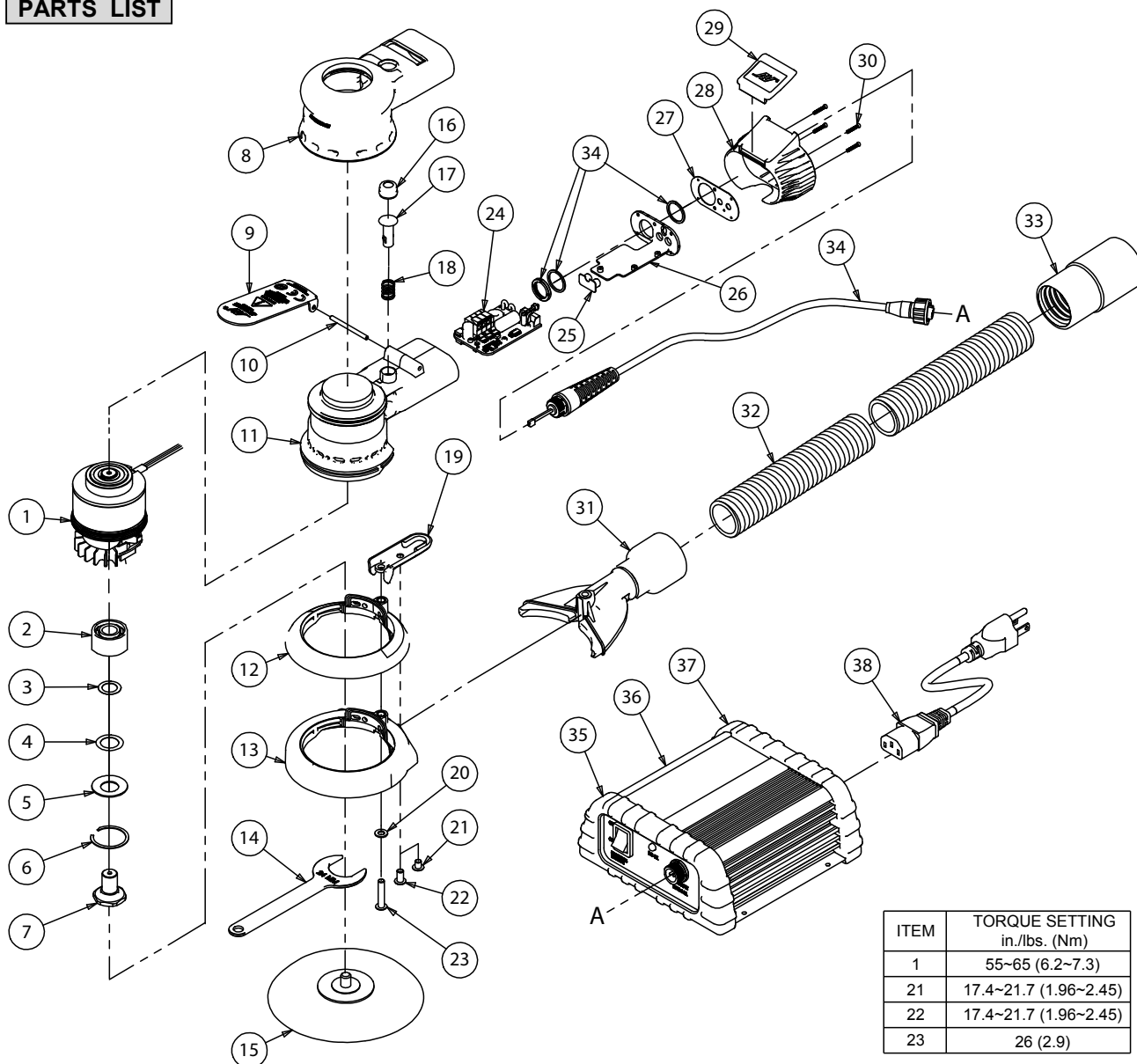
ADDITIONAL SAFETY WARNINGS

Hold power tools by insulated gripping surfaces when performing an operation where the cutting 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.

- To reduce the risk of injury. Operate the Electric power tool with the Power Supply. Other types of power supplies may cause personal injury or damage.

Tool Current	Extension Cord Length ft (m)			
	25(7.6)	50(15.2)	75(22.8)	100(30.4)
0-6A (mm ²)	18 AWG (1.0)	16 AWG (1.5)	16 AWG (1.5)	14 AWG (2.5)

PARTS LIST



ITEM	TORQUE SETTING in./lbs. (Nm)
1	55~65 (6.2~7.3)
21	17.4~21.7 (1.96~2.45)
22	17.4~21.7 (1.96~2.45)
23	26 (2.9)

PARTS LIST

Item	P/N	Description	QTY.
1	AV50090	Motor Assembly 5" (3/32 in.) Orbit	OPT
1	AV50091	Motor Assembly 5" (3/16 in.) Orbit	OPT
1	AV60010	Motor Assembly 6" (3/32 in.) Orbit	OPT
1	AV60011	Motor Assembly 6" (3/16 in.) Orbit	OPT
2	AVA0938	Double Row Angular Contact Bearing - 1 Seal 12mm x 28mm x 16mm	1
3	AVA0016	Spacer 12.1 Inner Diameter (ID) x 18.0 Outer Diameter (OD) x 0.2 Thick	1
4	AVA2542	SPINDLE BEARING DUST SHIELD	1
5	AVA0017	Belleville Washer	1
6	AVA0018	Retaining Ring	1
7	AVB0018	Spindle	1
8	AV52002-AV	Grip 5 in. / 6 in.	1
9	AV50041-AV	Lever for 10,000 RPM 2.5 mm (3/32 in.) Orbit	OPT
9	AV50042-AV	Lever for 10,000 RPM 5.0 mm (3/16 in.) Orbit	OPT
10	AVA0031	Lever Spring Pin	1
11	AV52001	Machined Housing 5 in. / 6 in.	1
12	AV52028-AV	Non-Vacuum Shroud 5 in. / 6 in.	OPT
13	AV52016-AV	Central Vacuum Shroud 5 in.	OPT
13	AV62006-AV	Central Vacuum Shroud 6 in.	OPT
14	AVA0022	Pad Wrench 24 mm	1
15	NA	1 Pad supplied with each tool	OPT
16	AV50060	Dust Cover	1
17	AV50035	Valve Assembly	1
18	AV50019	Spring, 10.3 mm OD x 25 mm (L) x 0.85 mm (DIA.)	1
19	AV51015	GRIP Mounting Plate	1
20	PW1-050D	Plain Washer (M5x10)	1
21	S6-0506A	Hexagon Socket Button Head Screw (M5x6)	1
22	S6-0510A	Hexagon Socket Button Head Screw (M5x10)	1
23	S6-0525A	Hexagon Socket Button Head Screw (M5x25)	1
24	AV50140	Printed Circuit Board Controller Assembly	1
25	AV50021	Speed Button	1
26	AV51039	Base Plate	1
27	AV50069	Dust Gasket	1
28	AV52038-AV	Wrist Rest	1
29	AV50040-AV	Logo Plate	1
30	B2-0212D	Hexagon Socket Head Cap (M2x12)	1
31	AV11-AV	Swivel Exhaust Fitting 5 in.	OPT
31	AV11A-AV	Swivel Exhaust Fitting 6 in.	OPT
32	AVA1485	Vacuum Hose	1
33	AVB0092	Hose End Adaptor - 1 in. / 28 mm Hose Thread x 1 1/2in. OD	1
34	AV50095-I12	Female Connector Cable Assembly (12 feet)	OPT
34	AV50095-I16	Female Connector Cable Assembly (16 feet)	OPT
34	AV50095-I24	Female Connector Cable Assembly (24 feet)	OPT
35	AV52026	Frame-Front End	1
36	AV51061	Power Supply	1
37	AV52058	Frame-Rear End	1
38	AV50047-1	Power Cord	OPT
38	AV50047-2	Power Cord (EU)	OPT

Product Configuration / Specifications : Electric Radom Orbital Sander

Vacuum Type	Orbit mm (in.)	PAD Size mm (in.)	Product Net WT. Kg (lb.)	Height mm (in.)	Length mm (in.)	Noise Level dBA Pressure (Power)	Vibration Level m/s ² (ft/s ²)	Uncertainty K m/s ²
Non Vacuum	2.5 (3/32)	127 (5)	0.875 (1.92)	97.2 (3.82)	173 (6.81)	70 (81)	2.36 (7.67)	1.5
	5.0 (3/16)	127 (5)	0.900 (1.98)	97.2 (3.82)	173 (6.81)	69 (80)	2.73 (8.87)	1.5
	2.5 (3/32)	150 (6)	0.905 (1.99)	97.2 (3.82)	185 (7.28)	70 (81)	2.76 (8.97)	1.5
	5.0 (3/16)	150 (6)	0.930 (2.04)	97.2 (3.82)	185 (7.28)	70 (81)	3.21 (10.4)	1.5
Central Vacuum	2.5 (3/32)	127 (5)	0.945 (2.08)	96.6 (3.8)	214 (8.42)	70 (81)	2.27 (7.37)	1.5
	5.0 (3/16)	127 (5)	0.965 (2.12)	96.6 (3.8)	214 (8.42)	68 (79)	2.48 (8.06)	1.5
	2.5 (3/32)	150 (6)	0.995 (2.19)	96.6 (3.8)	225 (8.85)	70 (81)	3.22 (10.4)	1.5
	5.0 (3/16)	150 (6)	1.020 (2.24)	96.6 (3.8)	225 (8.85)	72 (83)	3.33 (10.8)	1.5

* Declared noise levels; measurements carried out in accordance with standard EN 60745-1 and EN 60745-2-4. (Uncertainty K=3dB).

** Declared vibration levels in accordance with EN 12096; measurements carried out in accordance with standard EN 60745-1 and EN 60745-2-4.

IMPORTANT NOTE: The noise and vibration values stated in the table are from laboratory testing in conformity with stated codes and standards and are not sufficient risk evaluation for all exposure scenarios. The actual exposure values and amount of risk or harm experienced to an individual is unique to each situation and depends upon the surrounding environment, the way in which the individual works, the particular material being worked, work station design, as well as upon the exposure time and the physical condition of the user. cannot be held responsible for the consequences of using declared values instead of actual exposure values for any individual risk assessment.

POWER SUPPLY SPECIFICATIONS

Mains Input Voltage*	Mains Frequency	Output	Efficiency	Total Output Regulation	Operation Temperature °C (°F)	Operating Humidity
100-240 Va.c.	47-63 Hz	30 Vd.c. 5A	85% Min.	+/- 2%	0-40 (23-105)	10-90% H

* Note: Device evaluated @ 100-120 Va.c. only for U.S. and Canada.

PRIOR TO THE OPERATION

The tool is intended to be operated as a hand held tool. It is always recommended that while using the tool, operators stand on a solid floor, in a secure position with a firm grip and footing. Be aware that the sander can develop a torque reaction.

"STAND-BY" MODE AND "RUN" MODE

The tool has a safety function that reduces the chance of unintended operation. When the tool is connected to the Power Supply, it is in "Stand-By" Mode. This mode prevents tool from running if the lever is pushed accidentally. "Run" Mode is the normal function of the tool while it is being used.

To switch the tool from "Stand-By" to "Run" Mode:

1. Ensure the tool is connected to the Power Supply and the Power Supply is in the "I" (ON) position. The LED on the back of the Sander will show flashing green color. This shows that the Sander is in "Stand-By" Mode.
2. Press either the "+" or "-" button one time, on the back of the Sander. The LED on the back of the Sander will show solid green color. This shows that the Sander is in "Run" Mode. The tool can now be used normally. While in "Run" Mode, the "+" and "-" buttons will operate to raise and lower the speed of the tool.
3. The Sander will automatically switch back to "Stand-By" Mode anytime it is left un-used for 5 minutes. It can be put back into "Run" Mode by repeating Step 2 above.

STARTING AND STOPPING SANDER

CAUTION: Make certain the Switch on the Power Supply is in the "O" (OFF) position, and the AC power source is the same as specified range on the Power Supply nameplate.

1. Connect the AC power cord to the Power Supply.
2. Connect the 12 ft (3.6 m) or 24 ft (7.4 m) DC cable the tool and to the Power. Ensure both ends of the DC cable are connected and screwed in completely.
3. Turn the Switch on the Power Supply is in the "I" (ON) position. The "DC OK" LED on the Power Supply will show green color. The LED on the back of the Sander will show flashing green color. This shows that the sander is in "Stand-By" Mode.
4. Press either the "+" or "-" button one time, on the back of the Sander. The LED on the back of the Sander will show solid green color. This shows that the sander is in "Run" Mode.
5. Press the lever to start the tool. Release the Lever to stop the tool.
6. When the tool is left un-used in "Run" Mode for 5 minutes, it will go back into "Stand-By" Mode. To return to "Run" Mode, press either the "+" or "-" button on the back of the Sander.



100-240 Va.c. Socket on Power Supply



30 Vd.c. Socket

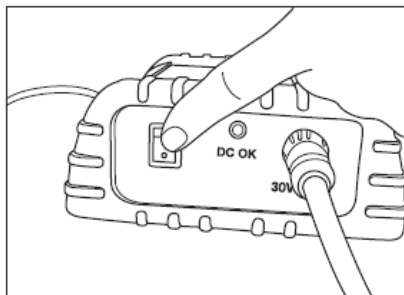


Figure 1

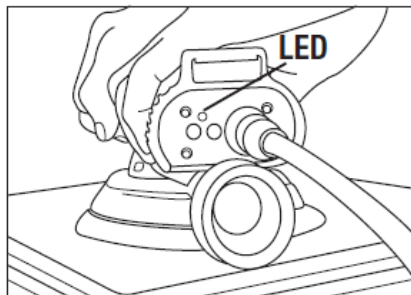


Figure 2

MAXIMUM SPEED FUNCTION

The Electric Random Orbital Sander has three preset Maximum Speeds (7,000, 9,000 and 10,000/min (RPM))

When the Sander is started after the Power Supply is turned "ON", the Maximum Speed will be 9,000/min (RPM). The Maximum Speed can be changed at any time while the Sander is running or when it is stopped and still in "Run" Mode, as long as the Power Supply is turned "ON".

Any setting for the Maximum Speed will be stored while the Power Supply is turned "ON". When the Power Supply is turned "OFF", the setting will return to 9,000/min (RPM) when the Power Supply is turned "ON" again.

MAXIMUM SPEED AND INTERMEDIATE SPEED CONTROL

1. Maximum Speed is adjusted by pressing the "+" or "-" buttons on the back of the Sander. While the Sander is in "Run" Mode, each touch will raise or lower the speed to the next setting.
2. Intermediate speeds between Zero (0)/min (RPM) and the set Maximum Speed can be used with intermediate Lever positions.

OVERLOAD PROTECTION SYSTEMS

The Electric Random Orbital Sander has two systems to protect the motor and circuit board from overloading and overheating.

Downforce Overload System

The Sander has the ability to monitor and maintain the preset Maximum Speed as user downforce increases or decreases during use.

During periods of overly high user downforce, the Sander will flash the LED on the back of the tool from Green to Red and cause the motor to slow slightly as a warning to the user. Continuous downforce should be no greater than approximately 7 lbs (30 N).

If the user continues with overly high downforce, the Sander will change the LED to solid Red and stop. To restart the sander immediately, released the lever and pressed down again and continue sanding.

Repeated overloading will result in frequent motor stops and increased tool temperature.

Temperature Overheat System

The Sander has the ability to monitor temperature of the internal electronic systems, and can shut the tool down when temperature reach damaging levels.

During periods that result in high internal temperature, the Sander will shut down if the temperature reaches a damaging level. The Sander will not be able to be restarted until the internal temperature cools to a level safe for the electronic systems.

Cooling time depends on local conditions. An initial waiting period of 5 minutes is recommended. Repeated overheating will result in longer cool down times.

ATTACHING DISC PADS

1. Secure the Spindle with the flat wrench provided with the tool, and screw the Disc pad on. Tighten to firm hand-tightness. Do not over tighten.
2. To remove the Disc Pad, insert the flat wrench between the Disc Pad and shroud. Secure the Spindle with the flat wrench and unscrew the Disc pad.

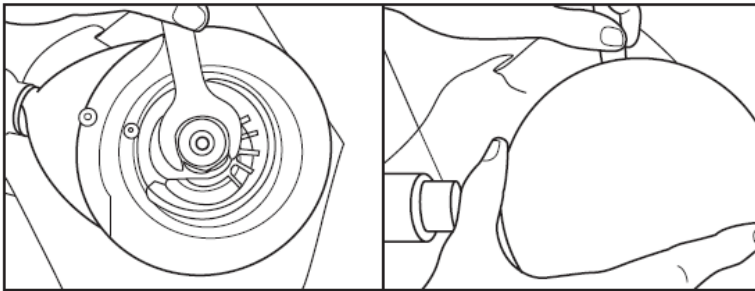


Figure 3

CLEANING

1. Periodically blow out all air passages and area above Disk Pad and under shroud with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts.
2. Wear safety glasses while using compressed air.

HEALTH AND SAFETY INFORMATION

RoHS Compliant

This product and the associated component parts are "RoHS Compliant" and do not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC and other amendments issued as of the date code marked on the product.



Waste Electrical & Electronic Equipment (WEEE) Compliant

- Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.
- Contact your local government for information regarding the collection systems available.
- If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.
- When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

Federal Communications Commission (FCC) Compliance Statement

IMPORTANT NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide a reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

NOTICE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.