MIRKA

MIRKA®
Random Orbital Sander

125 mm (5 in.) & 150 mm (6 in.)



Operating Instructions

MIRKA

MIRKA 12,000 RPM
125 mm (5 in.) & 150 mm (6 in.)
RANDOM ORBITAL SANDERS

Warranty

The warranty terms are as follows:
- 12 months on KWH MIRKA air tools.
- 3 months on tool parts repaired by KWH MIRKA.

The warranty period commences at the date of purchase. The warranty only covers imputable material and manufacturing defects.

Parts replacement or repair during the warranty period is free of charge if carried out by an official KWH MIRKA service center.

Freight costs are always to be paid by the purchaser.

The warranty does not include normal wear and tear, overloading or improper use. The warranty only covers the local repair, not the tool replacement.

Compensation for downtime and loss of production are explicitly not included in the warranty.

Repair claims under warranty will only be honored if the tool is returned in its original assembled state. Any disassembly will void the warranty.

The warranty can only be submitted to the dealers where the tool was purchased.

Please Read and Comply with

1) General Industry Safety & Health Regulations, Part 1910, OSHA 2206, available from: Superintendent of Documents; Government Printing Office; Washington DC 20402
2) Safety Code for Portable Air Tools, ANSI B186.1 available from: American National Standards Institute, Inc.; 1430 Broadway; New York, New York 10018
3) State and Local Regulations.

Proper Use of Tool

This sander is designed for sanding all types of materials i.e. metals, wood, stone, plastics, etc. using abrasive designed for this purpose. Do not use this sander for any other purpose than that specified without consulting the manufacturer or the manufacturer's authorized supplier. Do not use back-up pads that have a working speed less than 12,000 RPM free speed.

Work Stations

The tool is intended to be operated as a hand held tool. It is always recommended that the tool be used when standing on a solid floor. It can be in any position but before any such use, the operator must be in a secure position having a firm grip and footing and be aware that the sander can develop a torque reaction. See the section "Operating Instructions".

Putting the Tool into Service

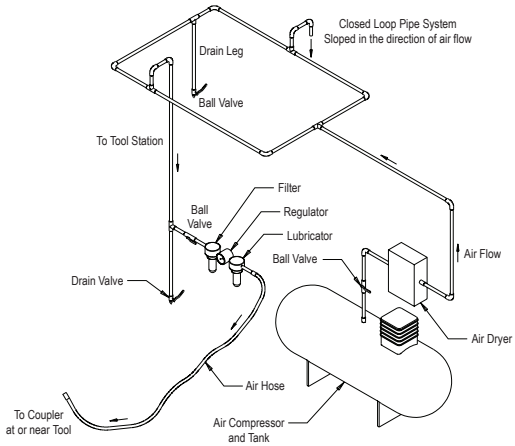
Use a clean lubricated air supply that will give a measured air pressure at the tool of 6.2 bar (90 psig) bar when the tool is running with the lever fully depressed. It is recommended to use an approved 10 mm (3/8 in.) x 8 m (25 ft) maximum length airline. It is recommended that the tool be connected to the air supply as shown in Figure 1.

Do not connect the tool to the airline system without incorporating an easy to reach and operate air shut off valve. The air supply should be lubricated. It is strongly recommended that an air filter, regulator and lubricator (FRL) be used as shown in Figure 1 as this will supply clean, lubricated air at the correct pressure to the tool. Details of such equipment can be obtained from your supplier. If such equipment is not used then the tool should be manually lubricated

To manually lubricate the tool, disconnect the airline and put 2 to 3 drops of suitable pneumatic motor lubricating oil such as Fuji Kosan FK-20, Mobil ALMO 525 or Shell TORCULA® 32 into the hose end (inlet) of the machine. Reconnect tool to the air supply and run tool slowly for a few seconds to allow air to circulate the oil. If the tool is used frequently, lubricate it on a daily basis or lubricate it if the tool starts to slow or lose power.
It is recommended that the air pressure at the tool is 6.2 bar (90 psig) while the tool is running. The tool can run at lower pressures but never higher than 6.2 bar (90 psig).

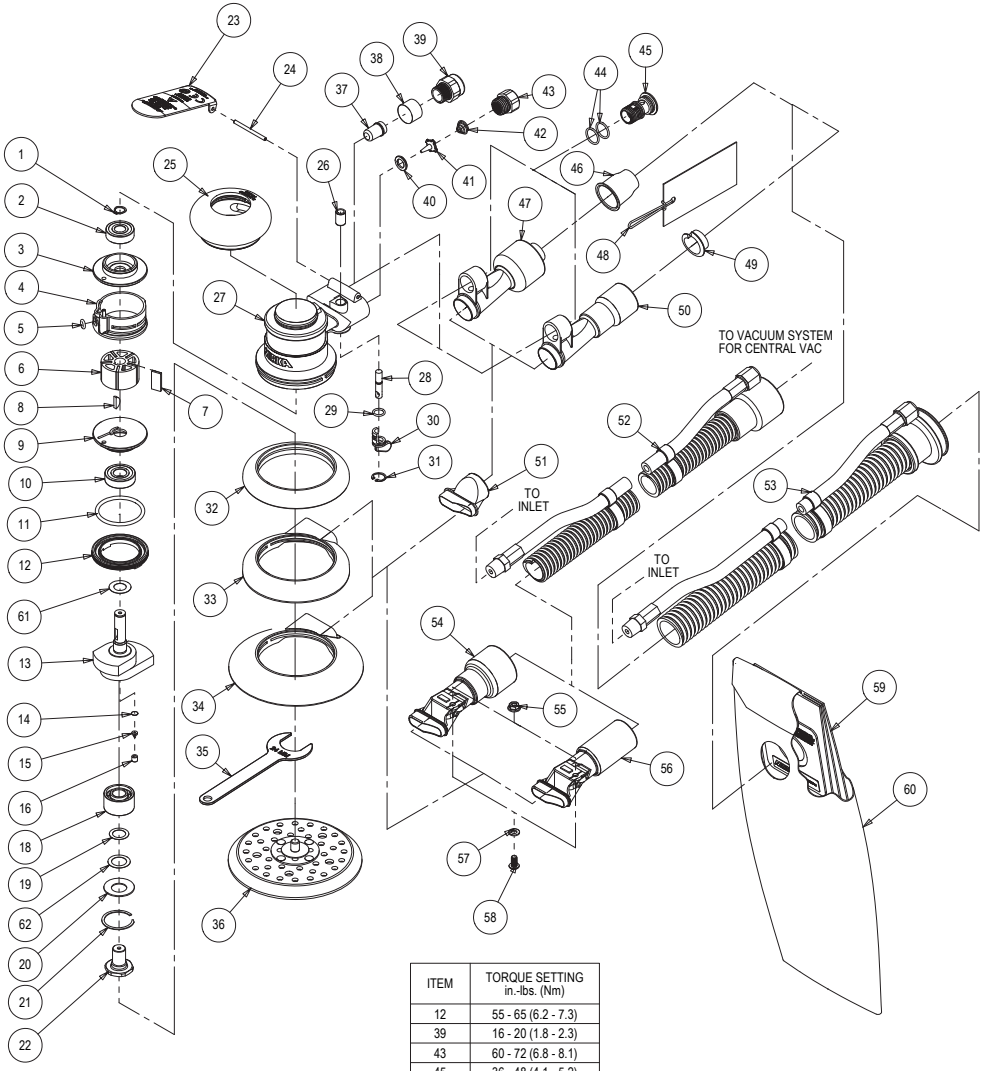
Operating Instructions

1) Read all instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules. All service and repair must be carried out by trained personnel.
2) Make sure the tool is disconnected from the air supply. Select a suitable abrasive and secure it to the back-up pad. Be careful and center the abrasive on the back-up pad.
3) Always wear required safety equipment when using this tool.
4) When sanding always place the tool on the work then start the tool. Always remove the tool from the work before stopping. This will prevent gouging of the work due to excess speed of the abrasive.
5) Always remove the air supply to the sander before fitting, adjusting or removing the abrasive or back-up pad.
6) Always adopt a firm footing and/or position and be aware of torque reaction developed by the sander.
7) Use only correct spare parts.
8) Always ensure that the material to be sanded is firmly fixed to prevent its movement.
9) Check hose and fittings regularly for wear. Do not carry the tool by its hose; always be careful to prevent the tool from being started when carrying the tool with the air supply connected.
10) Dust can be highly combustible. Vacuum dust collection bag should be cleaned or replaced daily. Cleaning or replacing of bag also assures optimum performance.
11) Do not exceed maximum recommended air pressure. Use safety equipment as recommended.
12) The tool is not electrically insulated. Do not use where there is a possibility of coming into contact with live electricity, gas pipes, water pipes, etc. Check the area of operation before operation.



13) Take care to avoid entanglement with the moving parts of the tool with clothing, ties, hair, cleaning rags, etc. If entangled, it will cause the body to be pulled towards the work and moving parts of the machine and can be very dangerous.
14) Keep hands clear of the spinning pad during use.
15) If the tool appears to malfunction, remove from use immediately and arrange for service and repair.
16) Do not allow the tool to free speed without taking precautions to protect any persons or objects from the loss of the abrasive or pad.

Parts Page



ITEM	TORQUE SETTING in.-lbs. (Nm)
12	55 - 65 (6.2 - 7.3)
39	16 - 20 (1.8 - 2.3)
43	60 - 72 (6.8 - 8.1)
45	36 - 48 (4.1 - 5.2)
58	30 - 35 (3.4 - 3.9)

Parts List

Item	P/N	Description	Qty.
1	MPA0040	RETAINING RING	1
2	MPA0021	BEARING	1
3	MPB0017	REAR ENDPLATE	1
4	MPA0005	CYLINDER ASSEMBLY	1
5	MPA0042	O-RING	1
6	MPB0005	ROTOR	1
7	MPA0010	VANE	5
8	MPA0041	KEY	1
9	MPB0016	FRONT ENDPLATE	1
10	MPA0019	BEARING	1
11	MPA0045	O-RING	1
12	MPA0001	LOCK RING	1
13	MPB0348	8 mm (5/16 in.) ORBIT AirSHIELD™ SHAFT BALANCER FOR 125 mm (5 in.) PADS	1
	MPB0334	8 mm (5/16 in.) ORBIT AirSHIELD™ SHAFT BALANCER FOR 150 mm (6 in.) PADS	1
14	MPA0122	FILTER	1
15	MPA0121	CHECK VALVE	1
16	MPA0120	RETAINER	1
18	MPA0938	DOUBLE ROW BEARING	1
19	MPA0016	SPACER	1
20	MPA0017	WASHER	1
21	MPA0018	RETAINING RING	1
22	MPB0018	SPINDLE	1
23	MPA2123	LEVER FOR 12,000 RPM, 125 mm (5 in.) / 150 mm (6 in.) PADS 8 mm (5/16 in.) ORBIT MACHINES	1
24	MPA0031	PIN	1
25	MPA0288	65 mm (2 1/2 in.) GRIP (Optional)	OPTIONAL
	MPA0289	70 mm (2 3/4 in.) GRIP (Optional)	OPTIONAL
	MPA0290	75 mm (3 in.) GRIP (Standard))	1
26	MPA0015	SLEEVE	1
27	MPA0244	HOUSING	1
28	MPA0008	VALVE STEM ASSEMBLY	1
29	MPA0043	O-RING	1
30	MPB0014	SPEED CONTROL	1
31	MPA0039	RETAINING RING	1
32	MPB0012	125/150 mm (5/6 in.) NON-VACUUM SHROUD	1
33	MPC0012	SuperVAC™ SHROUD for 125 mm (5 in.) Delta, TE, LP and Screen Abrasive pads	1
34	MPC0073	SuperVAC™ SHROUD for 150 mm (6 in.) Screen Abrasive and LP Pads	1
35	MPA0022	24 mm PAD WRENCH (supplied with each tool)	1
36	NA	SEE LITERATURE FOR PADS (type/size determined by model)	1
37	MPA0062	INTERNAL MUFFLER (for 12,000 RPM Machines)	1
38	MPA0068	MUFFLER INSERT(for 12,000 RPM Machines)	1
39	MPA0166	MUFFLER HOUSING	1
40	MPA0009	SEAT	1
41	MPA0007	VALVE	1
42	MPA0014	VALVE SPRING	1
43	MPA0013	INLET BUSHING	1
44	MPA0044	O-RING	2
45	MPA0006	SGV RETAINER	1
46	MPA0778	28mm (1 in.) HOSE SEAL	1
47	MPA0410	28 mm (1 in.) HOSE SuperVAC™ SGV SWIVEL EXHAUST ASSEMBLY (Standard for SGV))	1
48	MPA0856	19mm (3/4 in.) HOSE SEAL TAG	OPTIONAL
	MPA0931	28mm (1 in.) HOSE SEAL TAG	1
49	MPA0854	19mm (3/4 in.) HOSE SEAL	OPTIONAL
50	MPA0409	19 mm (¾ in.) HOSE SuperVAC™ SGV SWIVEL EXHAUST ASSEMBLY (Optional for SGV)	OPTIONAL
51	MPC0108	SuperVAC™ SGV EXHAUST ADAPTER (for use with SuperVAC™ Shroud)	1
52	MPA0300	Ø 19 mm (¾ in.) VAC HOSE TO Ø 19 mm (¾ in.) x Ø 28 mm (1 in.) HOSE ADAPTER COUPLING AND AIRLINE ASSEMBLY INCLUDES: MPA0200 Ø 19 mm (¾ in.) x 1.5 m (5 ft.) Vacuum Hose, MPB0088 19 mm (¾ in.) Hose x 28 mm (1 in.) Hose Adapter, MPA0302 Ø 6.3 mm (¼ in.) x 1.5 m (5 ft.) Airline with Fittings, MPA0301 Bungee for Ø 6.3 mm (¼ in.) Airline & Ø 19 mm (¾ in.) Vacuum Hose (5)	OPTIONAL
	MPA0392	Ø 28 mm (1 in.) VAC HOSE TO Ø 28 mm (1 in.) x Ø 38 mm (1 ½ in.) FRICTION FIT ADAPTER AND AIRLINE ASSY. (Optional) INCLUDES: MPA0034 Ø 28 mm (1 in.) x 1.8 m (6 ft.) Vacuum Hose, MPB0092 Ø 28 mm (1 in.) Hose Thread x Ø 38 mm (1 ½ in.) Friction Fit Adapter, MPA0033 Ø 6.3 mm (¼ in.) x 1.8 m (6 ft.) Airline with Fittings, MPA0027 Bungee for Ø 6.3 mm (¼ in.) Airline & Ø 28 mm (1 in.) Vacuum Hose (5)	OPTIONAL
53	MPA0412	Ø 28 mm (1 in.) VAC HOSE TO Ø 28 mm (1 in.) DOUBLE BAG FITTING AND AIRLINE ASSY. (Standard for SGV) INCLUDES: MPA0034 Ø 28 mm (1 in.) x 1.8 m (6 ft.) Vacuum Hose, MPB0123 Ø 28 mm (1 in.) Hose to Double Bag Vacuum Fitting, MPA0033 Ø 6.3 mm (¼ in.) x 1.8 m (6 ft.) Airline with Fittings, MPA0027 Bungee for Ø 6.3 mm (¼ in.) Airline & Ø 28 mm (1 in.) Vacuum Hose (5)	1
	MPA0411	Ø 19 mm (¾ in.) VAC HOSE TO Ø 19 mm (¾ in.) DOUBLE BAG FITTING AND AIRLINE ASSEMBLY (Optional for SGV) INCLUDES: MPA0200 Ø 19 mm (¾ in.) x 1.5 m (5 ft.) Vacuum Hose, MPB0133 Ø 19 mm (¾ in.) Hose To Double Bag Vacuum Fitting, MPA0302 Ø 6.3 mm (¼ in.) x 1.5 m (5 ft.) Airline with Fittings, MPA0301 Bungee for Ø 6.3 mm (¼ in.) Airline & Ø 19 mm (¾ in.) Vacuum Hose (5)	OPTIONAL
54	MPA0099	SuperVAC™ CV 28 mm (1 in.) SWIVEL EXHAUST ASSEMBLY (Standard for CV)	1
55	MPA0048	NUT	1
56	MPA0205	SuperVAC™ CV 19 mm (¾ in.) SWIVEL EXHAUST ASSEMBLY (Optional for CV)	OPTIONAL
57	MPA0047	WASHER	1
58	MPA0769	SCREW	1
59	MPA0465	10 PACK OF VACUUM BAG INSERTS	1
60	MPA0658	VACUUM BAG	1
61	MPA2541	FRONT BEARING DUST SHIELD	1
62	MPA2542	SPINDLE BEARING DUST SHIELD	1

Product Configuration/Specifications: 12,000 RPM Random Orbital Sander

Orbit	Vacuum Type	Pad Size mm (inch)	Model Number	Product Net Weight kg (pounds)	Height mm (inch)	Length mm (inch)	*Noise Level dBA	Power watts (HP)	Air Consumption LPM (scfm)	*Vibration Level m/s2	*Uncertainty K m/s^2
8.0 mm (5/16 in.)	Non-Vacuum	125 (5)	MR-5	0.76 (1.68)	82.9 (3.26)	150.37 (5.92)	74	209 (.28)	481 (17)	2.0	1.0
		150 (6)	MR-6	0.79 (1.74)	82.9 (3.26)	163.42 (6.45)	77	209 (.28)	481 (17)	3.3	1.7
	Central Vacuum	125 (5)	MR-5V	0.82 (1.81)	82.9 (3.26)	212.08 (8.35)	77	209 (.28)	481 (17)	2.4	1.2
		150 (6)	MR-6V	0.87 (1.92)	82.9 (3.26)	224.8 (8.85)	75	209 (.28)	481 (17)	3.5	1.8
	Self-Gen. Vacuum	125 (5)	MR-5SGV	0.84 (1.85)	82.9 (3.26)	220.66 (8.68)	91	209 (.28)	481 (17)	2.5	1.3
		150 (6)	MR-6SGV	0.90 (1.98)	82.9 (3.26)	233.4 (9.18)	82	209 (.28)	481 (17)	3.4	1.7

The noise test is carried out in accordance with EN ISO 15744:2008 - Hand-held non-electric power tools -- Noise measurement code -- Engineering method (grade 2).

The vibration test is carried out in accordance with EN 28662-1 Hand-held portable power tools – Measurement of vibration at the handle. Part 1: General and EN 8662-8, 1997 Hand-held portable power tools – Measurement of vibration at the handle. Part 8: Polishers and rotary, orbital and random orbital sanders.

Specifications subject to change without prior notice.

*The values stated in the table are from laboratory testing in conformity with stated codes and standards and are not sufficient for risk evaluation. Values measured in a particular work place may be higher than the declared values. 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. KWH Mirka, Ltd. cannot be held responsible for the consequences of using declared values instead of actual exposure values for any individual risk assessment.

Further occupational health and safety information can be obtained from the following websites:
http://europe.osha.eu.int (Europe)
http://www.osha.gov (USA)

Troubleshooting Guiide

Symptom	Possible Cause	Solution
Low Power and/or Low Free Speed	Insufficient Air Pressure	Check air line pressure at the Inlet of the Sander while the tool is running at free speed. It must be 6.2 Bar (90 psig/620 kPa).
	Clogged Muffler(s)	The Muffler can be back flushed with a clean, suitable cleaning solution until all contaminates and obstructions have been removed. If the Muffler can not be properly cleaned then replace it.
	Plugged Inlet Screen	Clean the Inlet Screen with a clean, suitable cleaning solution. If Screen does not come clean replace it.
	One or more Worn or Broken Vanes	Install a complete set of new Vanes (all vanes must be replaced for proper operation). Coat all vanes with quality pneumatic tool oil..
	Internal air leakage in the Motor Housing indicated by higher than normal air consumption and lower than normal speed.	Check for proper Motor alignment and Lock Ring engagement. Check for damaged O-Ring in Lock Ring groove. Remove Motor Assembly and Re-Install the Motor Assembly.
	Motor Parts Worn	Overhaul Motor. Contact authorized Mirka Service Center.
	Worn or broken Spindle Bearings	Replace the worn or broken Bearings.
Air leakage through the Speed Control and/or Valve Stem.	Dirty, broken or bent Valve Spring, Valve or Valve Seat.	Disassemble, inspect and replace wore or damaged parts.
Vibration/Rough Operation	Incorrect Pad	Only use Pad Sizes and Weights designed for the machine.
	Addition of interface pad or other material	Only use abrasive and/or interface designed for the machine. Do not attach anything to the Sanders Pad face that was not specifically designed to be used with the Pad and Sander.
	Improper lubrication or buildup of foreign debris.	Disassemble the Sander and clean in a suitable cleaning solution. Assemble the Sander.
	Worn or broken Rear or Front Motor Bearing(s)	Replace the worn or broken Bearings.
	For vacuum machines it is possible to have too much vacuum while sanding on a flat surface causing the pad to stick to the sanding surface.	For SGV machines add extra washer(s) to the pad spindle to increase the gap between the pad and shroud. For CV machines reduce vacuum through the vacuum system and/or add extra washer(s) to the pad.

Note: All Sections referred to under “Solution” are located at the end of the manual in “Service Instructions”

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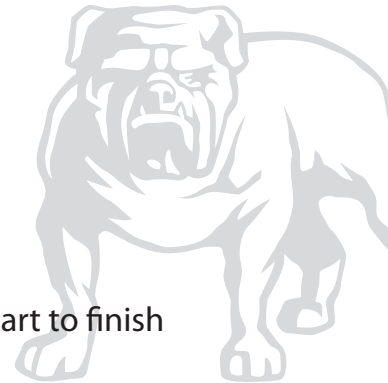
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