Clarke®

X-PRO

PALM SANDER

MODEL NO: CAT160

PART NO: 3120174

OPERATING & MAINTENANCE INSTRUCTIONS

UK CA | CE

ORIGINAL INSTRUCTIONS

DL0225 Rev 2

INTRODUCTION

Thank you for purchasing this CLARKE Palm Sander. Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

SPECIFICATION

Model Numbers	**CAT160**
Operating Pressure	90 psi (6.2 bar)
Air Consumption @ 6.3 bar	4.5 cfm (2.1L/sec) rated average 14.8 cfm (7.0L/sec) maximum
Air Inlet Size	1/4" BSP female thread
Vibration Level	8.5 m/s^2
Uncertainty Factor (K)	1.5
Sound Power Level	98 dB LWA
Sound Pressure Level	87 dBA
Uncertainty Factor (K)	3.0
Dimensions (L x D x H)	220 x 150 x 110 mm (with backing pad 200 x 105 x 98 mm (without backing pad)
Weight	1.1 kg
Max Speed	10,000 rpm
Speed Control	Variable
Dust extract hose	1335 long x 21 dia
Sanding pad	Hook & Loop 150 mm dia Thread type M8 x 24TPI

Please keep these instructions in a safe place for future reference.

GENERAL SAFETY RULES

CAUTION: FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN PERSONAL INJURY, AND/OR DAMAGE TO PROPERTY.

WORK ENVIRONMENT

1. Keep the work area clean and tidy.
2. Dress appropriately - **DO NOT** wear loose clothing or jewellery. Tie long hair out of the way.
3. Keep children and visitors away - **DO NOT** let children handle the tool.

USE OF AIR POWERED TOOLS

1. Stay alert and use common sense - **DO NOT** operate this tool when you are tired or under the influence of alcohol, drugs or medication.
2. **ALWAYS** wear eye protectors when using air tools. Eye protectors must provide protection from flying particles from the front and the side.
3. **DO NOT** overreach - keep proper footing and balance at all times.
4. **NEVER** use oxygen, CO_2, combustible gases, or any bottled gas, as a source of power for an air tool. This product should only be used with a suitably rated compressed air supply.
5. **DO NOT** connect the air hose with your finger on the trigger of the tool.
6. **DO NOT** fit the air tool to any stand or clamping device that may damage it.
7. **DO NOT** exceed the maximum pressure for the tool.
8. Keep the air hose away from heat, oil and sharp edges.
9. Check hoses for leaks or excessive wear before use, and ensure that all connections are secure.
10. **DO NOT** use the tool for any other purpose than described in this manual.
11. **DO NOT** carry out any alterations or modifications to the tool.
12. **ALWAYS** disconnect from the air supply when:
    - Performing any maintenance.
    - The tool is not in use.
    - The tool will be left unattended.
13. **NEVER** use the tool if it is defective or operating abnormally.

14. This air tool should be serviced at regular intervals by qualified service personnel.
15. **AVOID** damaging the air tool by applying excessive force of any kind.
16. **ALWAYS** maintain the air tool with care. Keep it clean for the best and safest performance.
17. **ALWAYS** ensure the workpiece is firmly secured leaving both hands free to control the tool.
18. **ALWAYS** ensure the tool has stopped before putting it down after use.
19. **ALWAYS** ensure that any attachments are correctly fastened before connecting the tool to the power supply
20. **DO NOT** force or misuse the air tool. It will do a better and safer job at the rate for which it was designed.
21. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
22. **DO NOT** remove any labels. Damaged labels should be replaced.
23. This tool vibrates with use. Vibration may be harmful to your hands or arms. Stop using the tool if discomfort, a tingling feeling or pain occurs. Seek medical advice before resuming use.

SANDER-SPECIFIC SAFETY RULES

1. Inspect the sanding pad before use. **DO NOT** use if cracked or broken. Check that the rated speed of the backing pad is at least as high as that of the machine.
2. **AVOID** contact with the moving sanding pad and wear suitable gloves to protect the hands.
3. **NEVER** start the tool unless the abrasive pad is applied to the workpiece.
4. Beware of potentially explosive atmospheres being caused by dust / fumes resulting from sanding and use dust extraction systems where possible.
5. **ALWAYS** wear a face mask when using the sander as protection from airborne particles of sanded material. **AVOID** disturbing existing dust and minimise the scattering of dust in the workplace environment. Take steps to control the dust at the point of emission.

DUST EXTRACTION

The sander is provided with a dust extraction facility. Please note however, that this does not preclude the user from wearing a face mask to prevent the inhalation of dust particles.

It is an EEC requirement that a dust extraction facility be provided on power tools, however, due to the nature of the tool, some of the dust produced will be forced into the surrounding atmosphere and will not be collected.

TRANSPORTATION

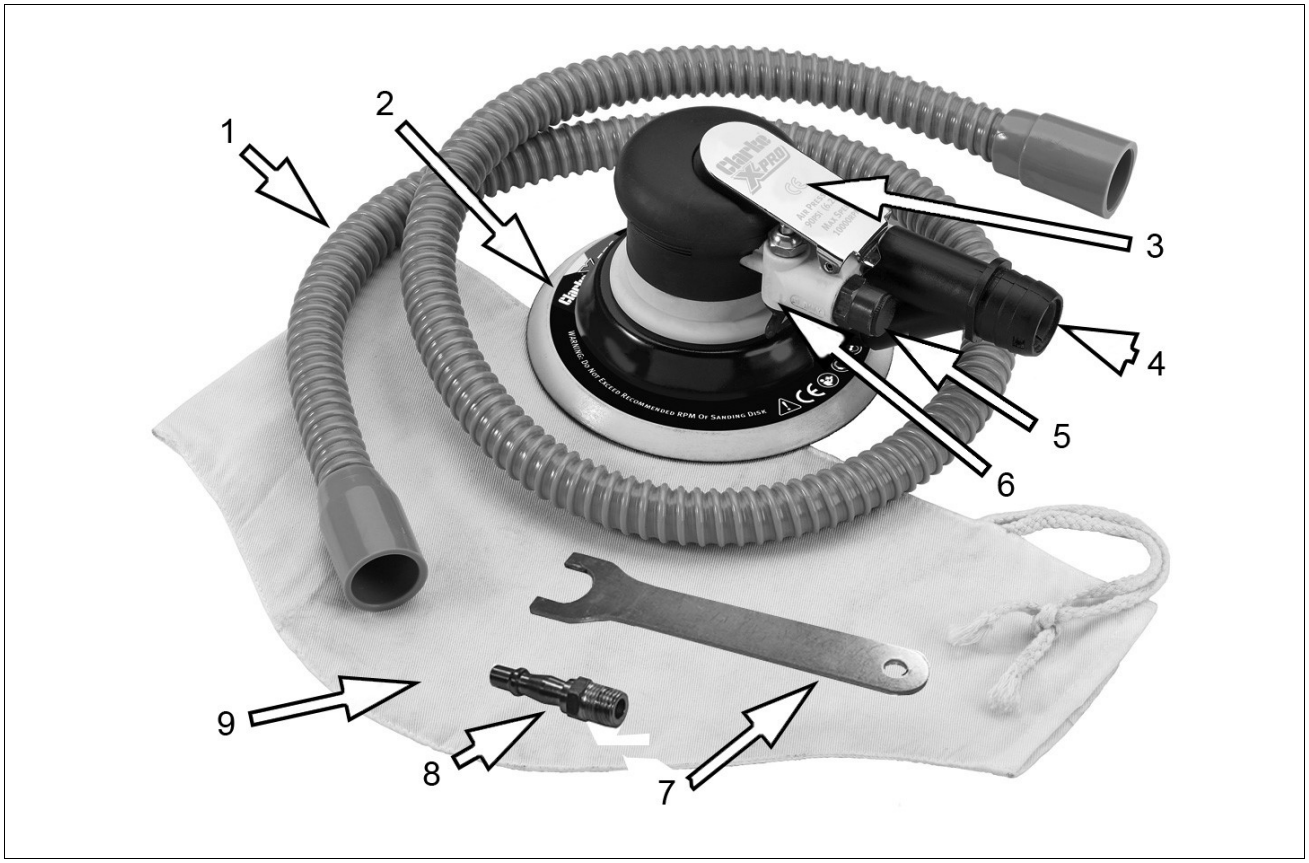
1. Never carry the tool by the air hose or with your finger on the trigger.
2. When not in use the tool should be disconnected from the air supply and stored in a dry place out of the reach of children.

IMPORTANT

Please read all of the safety and operating instructions carefully before using this product. The following safety symbols are to be found on the machine.

	Read this instruction booklet carefully before use.		Wear ear protection.
	Wear eye protection.		Wear dust mask.

OVERVIEW



NO	DESCRIPTION	NO	DESCRIPTION
1	Dust collection tube	6	Speed Control Regulator
2	Sanding Pad	7	Spanner
3	Trigger	8	1/4” BSP male connector
4	Waste Outlet	9	Dust Bag
5	1/4” BSP Air Inlet Connection		

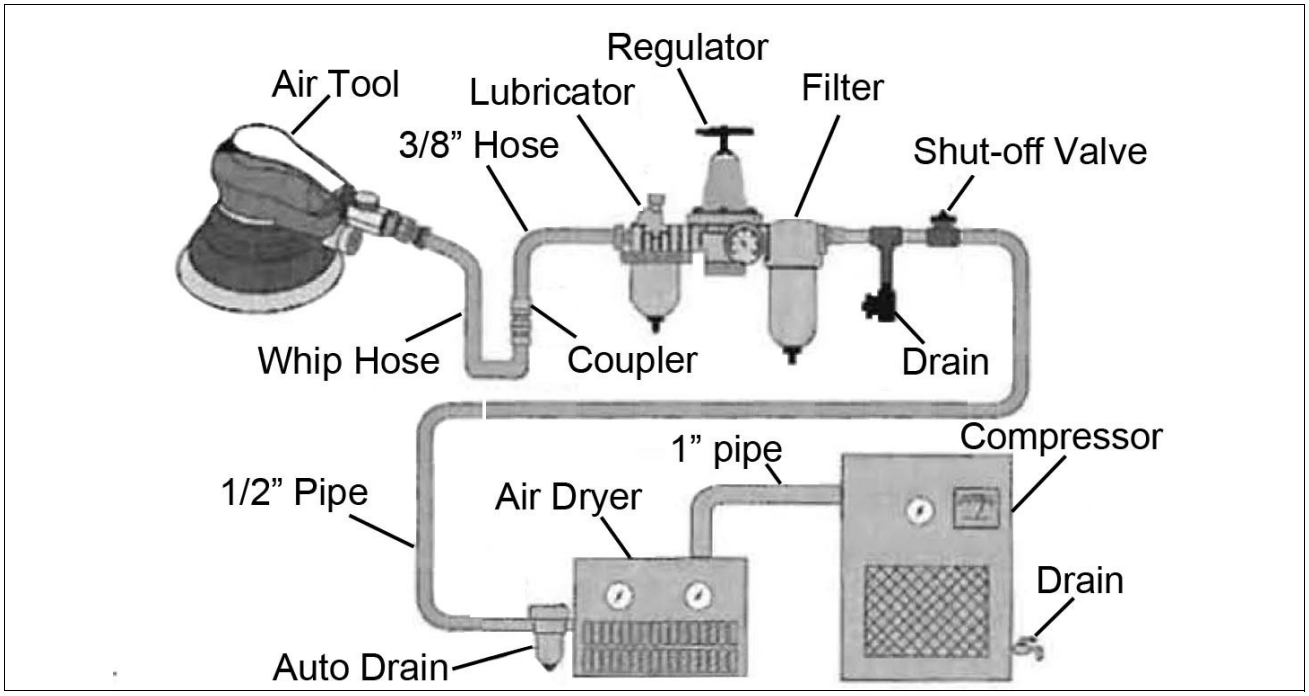
The CAT160 Sander is ideal for use in garages and workshops. Random orbit sanders give a virtually scratch - free finish on various surfaces prior to painting or varnishing the finished surface.

Your sander should include the items above. Any damage or deficiency should be reported to your CLARKE dealer immediately.

COMPRESSED AIR REQUIREMENTS

WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF COMPRESSORS AND A COMPRESSED AIR SUPPLY.

- Use only clean, dry, regulated compressed air as a power source.
- Air compressors used with the tool must comply with the appropriate European Community Safety Directives.
- A build-up of moisture or oil in the air compressor will accelerate wear and corrosion in the tool. Ensure any moisture is drained from the compressor daily and the inlet filter is kept clean.
- If an unusually long air hose is required, (over 8 metres), the line pressure or the hose inside diameter may need to be increased.
- The air hose must be rated at least 150% of the maximum operating pressure of the tool.



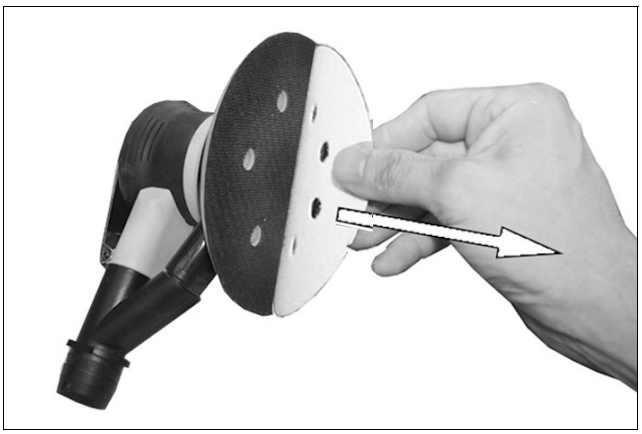
- A typical air line layout is shown above. If an automatic in-line filter/ regulator is used, it will keep the tool in good condition but should be regularly checked & topped up with oil. CLARKE air-line oil should be used, and the lubricator adjusted to approx 2 drops per minute.
- **NEVER** exceed the maximum operating pressure for the tool. Higher pressures and unclean air will shorten the life of the tool due to faster wear and is a possible safety hazard.

BEFORE USE

WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF AIR COMPRESSORS AND A COMPRESSED AIR SUPPLY.

FITTING A SANDING DISC

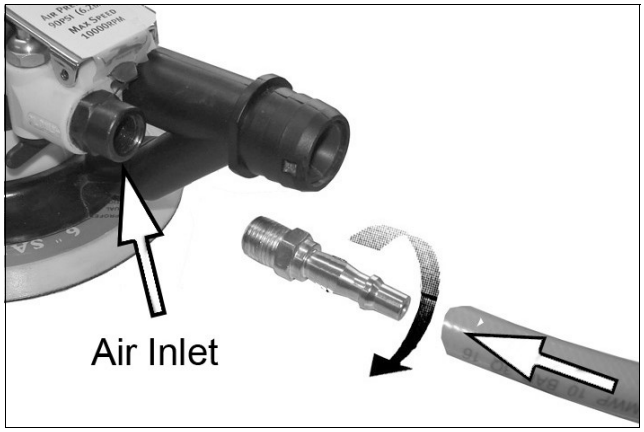
1. Select the disc to be used which MUST be 150mm diameter with hook and loop backing.
2. Line up the holes in the disc with those on the sanding pad. (This is necessary for dust extraction purposes). Press the disc firmly onto the pad to secure it.



CONNECTING THE AIR SUPPLY

Ensure the compressor is turned off and that the trigger is NOT depressed when connecting the air line to avoid inadvertent starting of the sander.

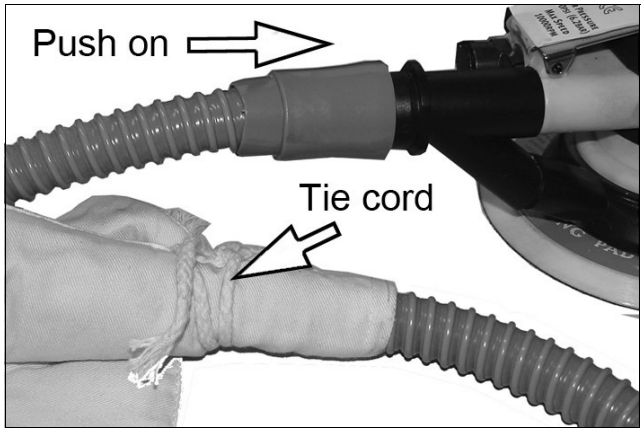
1. Remove the protective plug from the air inlet and connect a suitable hose with a male end fitting or use the adaptor supplied to connect a suitable hose.
2. Connect the other end of the hose to the compressed air supply.
3. Turn on the air supply and check for air leaks. Rectify any found before proceeding.



   - PTFE tape may be useful for sealing threaded connections.
4. If required, connect an in-line mini oiler to the tool. A mini oiler helps to prolong the life of the air tool.
5. If a mini-oiler is not being used, run a few drops of oil through the tool before use. It can be entered through the air inlet or via the hose at the nearest connection to the air supply.
6. A gauze filter is fitted within the air inlet. Ensure this filter is always kept clean. An airline can be connected to the adapter, via a quick release coupling (not supplied).

CONNECTING THE DUST COLLECTION TUBE & BAG

1. Push the dust collection tube onto the waste outlet.
2. Use the string to tie the dust collecting bag onto the smaller end of the tube.
3. The dust bag should be emptied regularly:- do not wait until it is completely full. Gently pull open the hook and loop flap across the end of the bag to empty the contents into your bin.

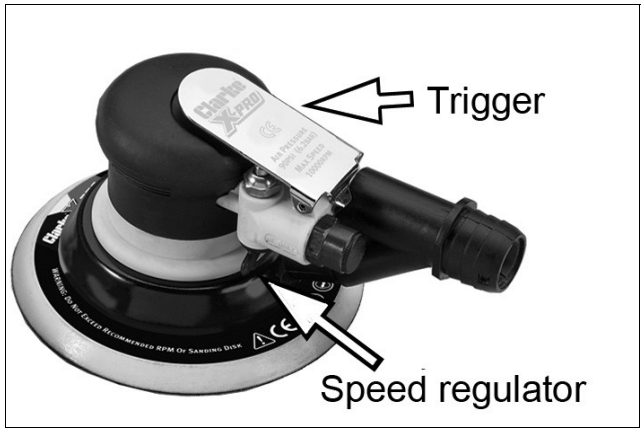


Your sander is now ready for use. Alternatively, vacuum extract can be used.

OPERATION

IMPORTANT: Only use abrasive sanding pads designed for use with this type of 150mm dia sanding pad (rated at over 10000rpm).

1. Squeeze the trigger against the body of the tool to start.
   - Use the speed regulator to set the speed.
   - Move the regulator lever forwards for maximum speed and back to slow down.
2. Rest the sander on the workpiece before starting it. Let the sander do the work.



   - The actual weight of the sander is normally sufficient for efficient sanding. Do not put additional pressure on the sander which would only slow down the speed of the pad, reducing efficiency and placing an additional burden on the motor.
3. Pass the sander back and forth in wide, overlapping areas, taking care to keep the sander moving around at all times. Avoid dwelling in one place for more than a moment.
4. Release the trigger to stop the sander.
5. Always ensure the sander has stopped before putting it down.

DISCONNECTING THE AIR SUPPLY

1. Do not disconnect the air supply hose until the compressor has been shut down and the compressed air released.
2. Squeeze the trigger to discharge any compressed air from the sander and air hose.
3. Once the pressure has been released, disconnect the air supply hose from the sander.

MAINTENANCE

WARNING: MAKE SURE THAT THE AIR TOOL IS DISCONNECTED FROM THE AIR SUPPLY BEFORE STARTING ANY CLEANING OR MAINTENANCE PROCEDURES.

Please note that factors other than the tools condition may effect its operation and efficiency, such as reduced compressor output, excessive drain on the airline, moisture or restrictions in the air-line, or the use of connectors of improper size or poor condition which will reduce air supply.

DAILY

1. Before use, drain water from the air-line and compressor.
2. Lubricate the air tool daily for optimum performance, using a high quality airline oil either via a lubricator in the air supply system or by placing a few drops into the air inlet immediately before use. This should be carried out regardless of whether or not an in-line lubricator is used.

CLEANING

1. Keep the sander clean and free from debris.
2. Grit or gum deposits in the mechanism may eventually reduce efficiency. This condition can be corrected by cleaning the air inlet filter and flushing out the tool with gum solvent oil or an equal mixture of SAE No10 oil and paraffin.
3. Failing this, the tool should be disassembled, thoroughly cleaned, dried and reassembled. You may prefer to take the tool to your CLARKE dealer if internal maintenance is required.
4. If the sander becomes sluggish and the air supply is of good quality, it may be necessary to replace worn or damaged parts. You may prefer to take the tool to your CLARKE dealer if internal maintenance is required.

5. If the surface of the sanding pad becomes damaged and unable to grip the disc, so requiring replacement, or if the sander needs to be dismantled, a spanner is supplied to unlock the sanding pad from the sander. Engage it with the drive nut after lifting up the rubber skirt and twist off the sanding pad.

TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	1. Piston parts worn. 2. Worn or sticking mechanism due to lack of lubricant.	1. Return to CLARKE dealer for repair. 2. Drip lubricating oil into the air inlet. Allow oil to soak moving parts before using
Tool runs slowly. Air flows weakly from exhaust.	1. Moving parts jammed with gum/ dirt. 2. Air-line regulator in closed position. 3. General airflow blocked by dirt.	1. Examine inlet air filter for blockage. Drip a few drops of air tool lubricating oil into air inlet. 2. Adjust in-line regulator to open position. 3. Operate tool in short bursts.
Tool will not run. Air flows freely from exhaust.	1. Piston stuck due to build up of foreign material.	1. Disconnect air supply and rotate tool assembly manually. 2. Try operating tool in short bursts. 3. Tap motor housing gently with a rubber mallet. 4. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts.
Tool will not shut off.	1. Throttle O-rings damaged or ill-fitting.	1. Return to CLARKE dealer for repair.

Your CLARKE air tool has been designed to give long and trouble free service. If, however, having followed the instructions in this booklet carefully, you encounter problems, take the tool to your local CLARKE dealer.

STORAGE

If the tool is to be stored, or is idle for longer than 24 hours, run a few drops of CLARKE air-line oil into the air inlet and depress the trigger in order to lubricate the internal parts.

When not in use, the sander should be disconnected from the air supply and stored in a dry place out of the reach of children. Avoid storing in a damp environment.

ABRASIVE DISCS

Replacement hook and eye backed abrasive discs (6”/150mm) diameter are available from your CLARKE dealer:

ACCESSORIES AND CONSUMABLES

A wide range of airline accessories is available including filter/regulators, lubricators, high-pressure hoses (5 to 50 metres) etc. Contact your CLARKE dealer or CLARKE International Service Department for further information.

CLARKE Air-lne Oil (Part no. 3050825) is available from your CLARKE dealer.

ENVIRONMENTAL PROTECTION

Do not dispose of redundant or damaged airline components with general household waste. All tools, accessories and packaging should be sorted, taken to a re-cycling centre and disposed of appropriately.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

DECLARATION OF CONFORMITY

UK CA

Clarke® INTERNATIONAL

Hemnall Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following statuary requirement(s):

Supply of Machinery (Safety) Regulations 2008

The following standards have been applied to the product(s):

EN ISO 11148-8:2011

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

The UKCA mark was first applied in: 2022

Product Description:	Pro 6" Dual Action Random Orbital Palm Sander
Model number(s):	CAT160
Serial / batch Number:	N/A
Date of Issue:	24/05/2022

Signed:

J.A. Clarke
Director

CE

Clarke® INTERNATIONAL

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

2006/42/EC *Machinery Directive*

The following standards have been applied to the product(s):

EN ISO 11148-8:2011

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2013

Product Description:	Pro 6" Dual Action Random Orbital Palm Sander
Model number(s):	CAT160
Serial / batch Number:	N/A
Date of Issue:	24/05/2022

Signed:

J.A. Clarke
Director

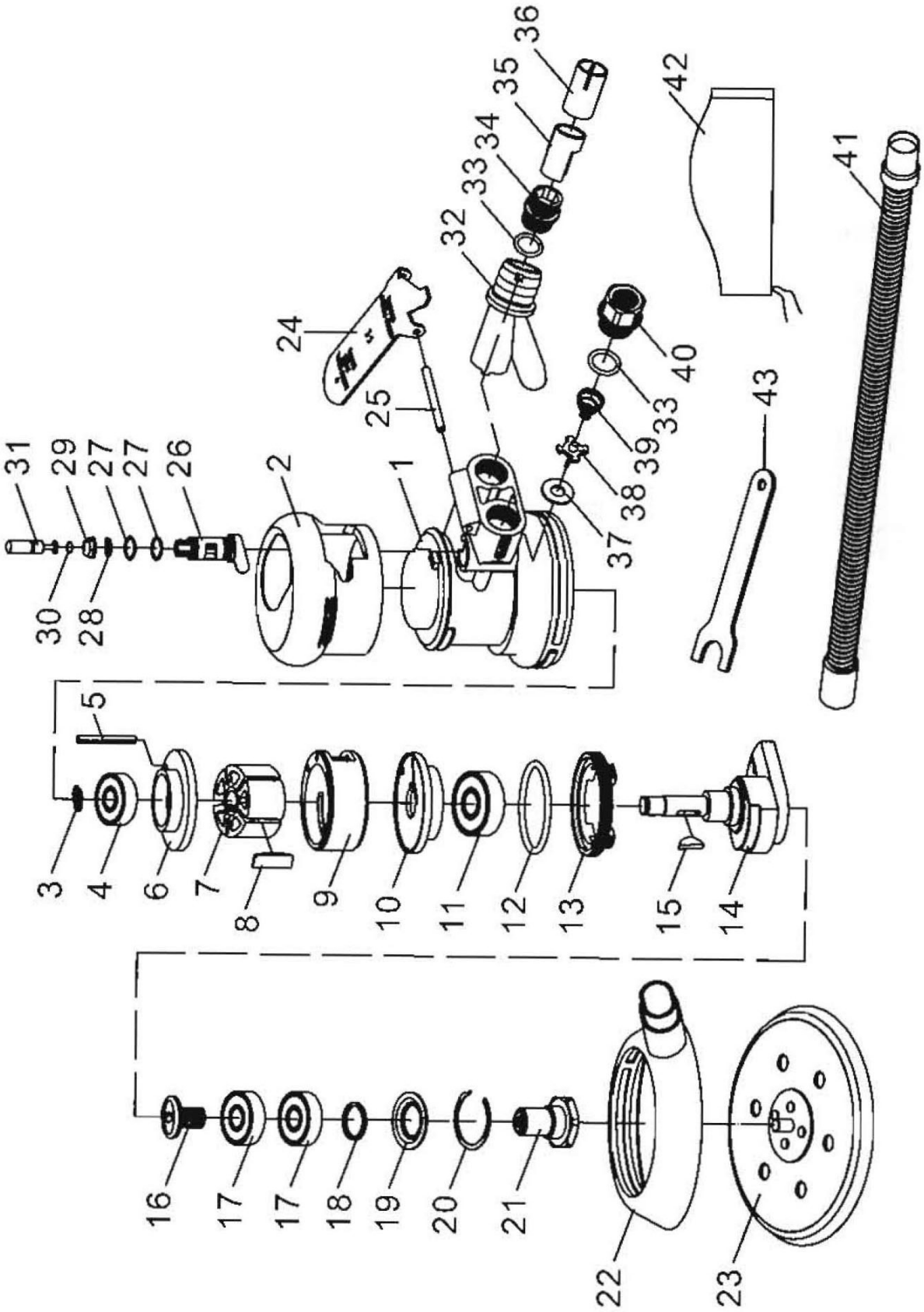
Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

PARTS LIST

No	Description
1	Main Housing
2	Head Cover
3	Washer
4	Bearing
5	Bolt
6	Rear Plate
7	Rotor
8	Rotor Blade
9	Cylinder
10	Front Plate
11	Bearing
12	O-Ring
13	Mounting Ring
14	Spindle
15	Woodruff Key
16	Screw
17	Bearing
18	Fibre Ring
19	Washer
20	Circlip
21	Bearing Support
22	Dust Cover

No	Description
23	Sanding Pad
24	Trigger
25	Trigger Hinge Pin
26	Trigger Valve
27	O-Ring
28	Cushion
29	Nut
30	O-Ring
31	Plunger
32	Dust Tube Connector
33	O-Ring
34	Muffler
35	Dust Connector item 1
36	Dust Connector item 2
37	Lubricating Ring
38	Tilting Valve
39	Spring
40	Air Inlet Connector
41	Dust Collecting Tube
42	Dust Collecting Bag
43	Wrench

PARTS DIAGRAM



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