

CLARK®

X-PRO



1/4" RIGHT ANGLE DIE GRINDER

MODEL NO: CAT206

PART NO: 3120523

OPERATING & MAINTENANCE INSTRUCTIONS

UK
CA | CE

ORIGINAL INSTRUCTIONS

DL0522 - ISS 3

INTRODUCTION

Thank you for purchasing this CLARKE Die Grinder which is ideal for light tasks such as automotive porting & polishing applications.

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.

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

SPECIFICATIONS

Model Number	CAT206
Dimensions (L x W x H)	174 x 81 x 31 mm
Weight	0.52 kg
Collet size	1/4"(6 mm)
Air Inlet Size	1/4" BSP (female)
Operating Pressure	90 psi (6.2 bar)
Air Consumption	4 cfm (average)
No Load Speed	20000 rpm @ 90psi
Speed Settings and rpm	Setting 1 - 11,000 rpm Setting 2 - 15,000 rpm Setting 3 - 18,000 rpm Setting 4 - 20,000 rpm
Sound Pressure Level (LpA dB)	88 dB(A)
Sound Power Level (LwA dB)	99 dB(A)
Vibration Levels	2.9 m/s ²

Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice.

GENERAL SAFETY RULES



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

THE WORK ENVIRONMENT

1. ALWAYS keep the work area clean and tidy.
2. ALWAYS dress appropriately - Do not wear loose clothing or jewellery. Tie long hair out of the way.
3. ALWAYS keep children and visitors away - Do not let children handle the tool.
4. DO NOT operate the tool where there are flammable liquids or gases.

USE OF AIR POWERED TOOLS

1. ALWAYS stay alert and use common sense - do not operate the air tool when you are tired or under the influence of alcohol, drugs or medication.
2. ALWAYS wear eye protectors when using the tool - Eye protectors must provide protection from flying particles from the front and the side.
3. ALWAYS wear ear protectors when using the air tool.
4. DO NOT overreach - Keep proper footing and balance at all times.
5. NEVER use oxygen, CO², combustible gases or any type of bottled gas as a source of power for the tool.
6. DO NOT connect the air supply hose with your finger on the trigger.
7. DO NOT exceed the maximum pressure for the tool of 90 psi / 6.2 bar.
8. ALWAYS check hoses for leaks or worn condition before use, and ensure that all connections are secure.
9. DO NOT use the tool for any other purpose than that described in this manual.
10. ALWAYS keep the air supply hose away from heat, oil and sharp edges.
11. DO NOT fit the tool to any stand or clamping device that may damage it.
12. DO NOT carry out any alterations or modifications to the tool.
13. ALWAYS disconnect from the air supply when:
 - Performing any maintenance.

- The tool is not in use.
- The tool will be left unattended.
- Moving to another work area.

14. NEVER use the tool if it is defective or operating abnormally.

15. Avoid damaging the tool for example by applying excessive force.

16. ALWAYS maintain the tool with care. Keep it clean for the best and safest performance.

17. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.

18. DO NOT force or misuse the tool. It will do a better and safer job at the rate for which it was designed.

19. 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.

20. NEVER carry the tool by the air supply hose.

21. NEVER carry the tool with your finger on the trigger.

22. When not in use disconnect the tool from the air supply and store in a dry place out of the reach of children.

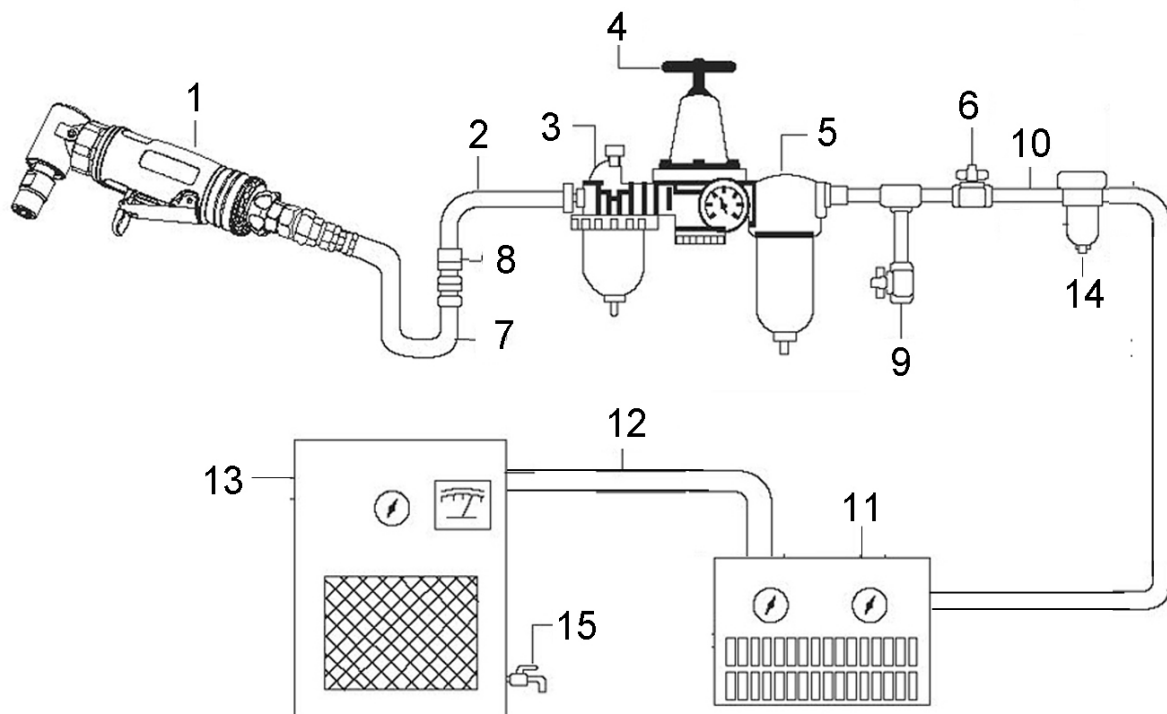
COMPRESSED AIR REQUIREMENTS



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

A typical air line layout is shown below. If an automatic in-line filter/regulator is used it will keep the tool in good condition, but should be regularly checked and topped up with oil. SAE 10 oil should be used and the lubricator adjusted to approx 2 drops per minute.

Use only clean, dry, regulated compressed air as a power source.



AIR SYSTEM LAYOUT :

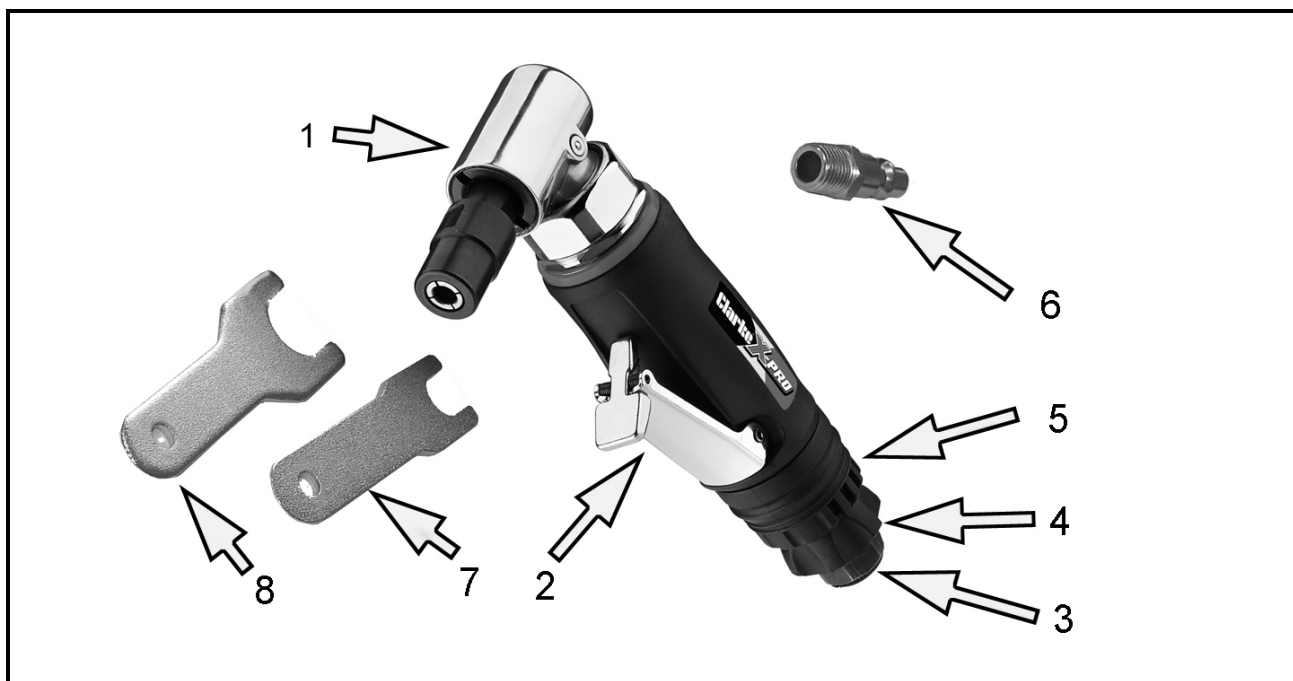
- | | |
|-------------------------------|-------------------------------------|
| 1. Air Tool | 9. Drain Valve |
| 2. Air Hose 3/8" (I.D.) | 10. 1/2" Or Larger Pipe And Fitting |
| 3. Oiler | 11. Air Dryer |
| 4. Pressure Regulator | 12. 1" Or Larger Pipe And Fitting |
| 5. Filter | 13. Air Compressor |
| 6. Shut Off Valve | 14. Auto Drain |
| 7. Whip Hose | 15. Drain Valve |
| 8. Coupler Body And Connector | |

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 air tool.

Never exceed the maximum operating pressure for the tool. It is recommended that air pressure to this tool does not exceed 90 psi at the tool when running. Higher pressures and unclean air will shorten the life of the tool due to faster wear and is a possible safety hazard.

OVERVIEW



When opening the carton for the first time, check that all the items are present. Any damage or deficiency should be reported to your CLARKE dealer immediately.

NO	DESCRIPTION	NO	DESCRIPTION
1	Right Angle Drive	5	Air Exhaust Deflector
2	Trigger	6	Inlet Connector
3	Air Inlet	7	11mm Collet Wrench
4	Speed Control	8	17mm Collet Wrench

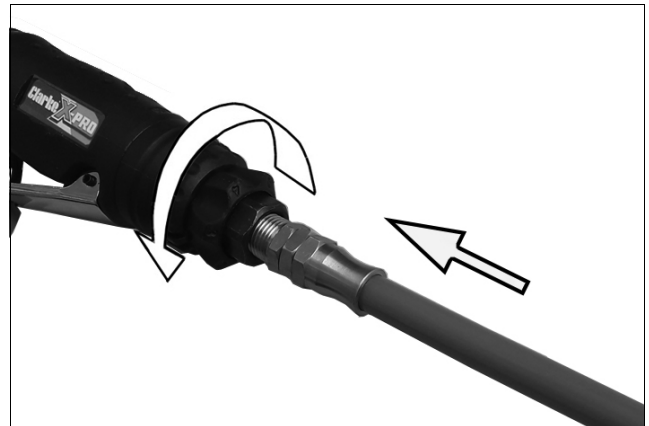
BEFORE USE



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

NOTE: Ensure the compressor is turned off.

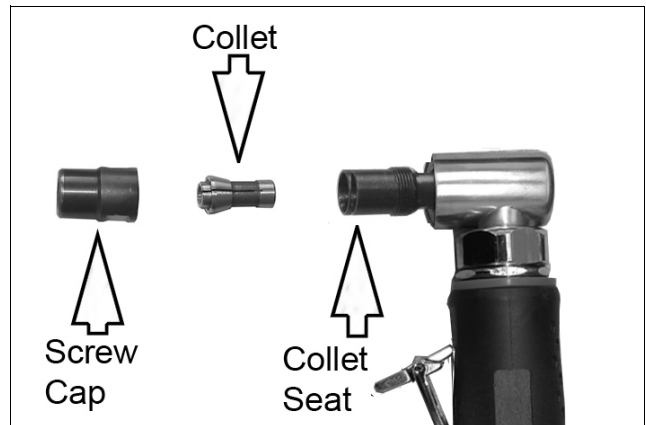
1. Remove the plastic blanking plug from the air inlet connection.
2. Pour 2-3 drops of CLARKE airline oil into the inlet port. This should be done regardless of whether or not a lubricated air supply is to be used.
3. If required, connect an in-line mini oiler to the tool.
 - A mini oiler helps to prolong the life of any air tool.
4. Connect a suitable hose as shown or use the inlet connector supplied to connect directly to the hose.
5. Connect the other end of the hose to the compressor.
 - PTFE tape may be useful for sealing threaded connections.
6. Turn on the air supply and check for air leaks. Rectify any found before proceeding.
7. If using a mini oiler, place a sheet of paper next the exhaust port and squeeze the trigger for approximately 30 seconds. The oil volume is correctly set when a light stain of oil can be seen on the paper. Excessive oil should be avoided.



Your die grinder is now ready for use.

INSTALLING THE COLLET

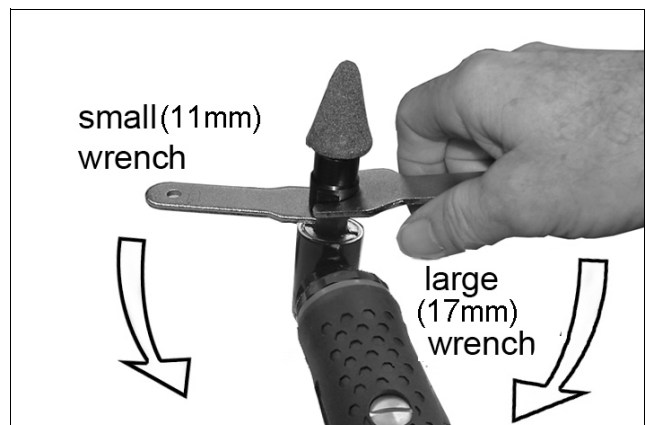
1. Select the grinding stone you require.
2. Two collets of different sizes are provided. Select whichever fits the shank of the stone you have chosen.
 - The larger collet may already be installed in the grinder.
3. If another collet is to be used, undo the screw cap completely and pull out the collet from the collet seat. Replace it with the new collet and screw the cap loosely back on.



FITTING THE GRINDING STONE

IMPORTANT: Never use chipped or cracked grindstones.

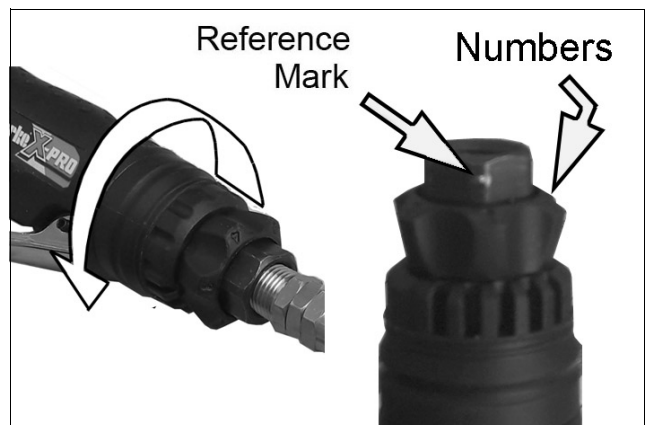
1. Slip the shank of the chosen stone into the collet and tighten the screw cap finger tight.
2. Place the smaller of the two wrenches over the collet seat to stop the tool from rotating.
3. Use the larger wrench to fully tighten the collet and grip the stone in position as shown.



ADJUSTING THE SPEED

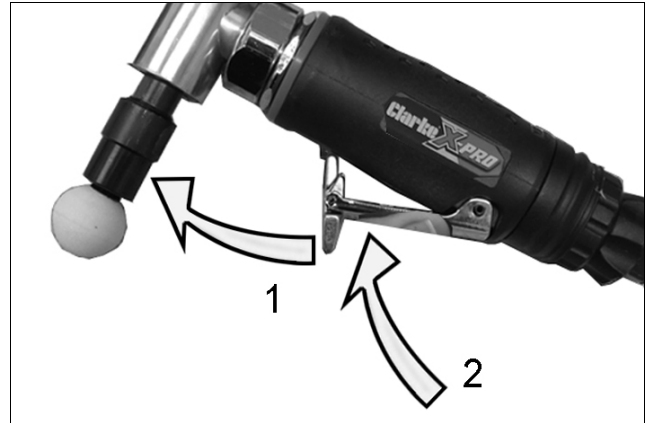
1. Set the tool speed by rotating the control to one of the four settings.
 - The numbers on the speed control knob indicate the speed setting when aligned with the reference mark on the air inlet. Speeds available are (+/-10%):

1	11,000 rpm
2	15,000 rpm
3	18,000 rpm
4	20,000 rpm



OPERATING THE DIE GRINDER

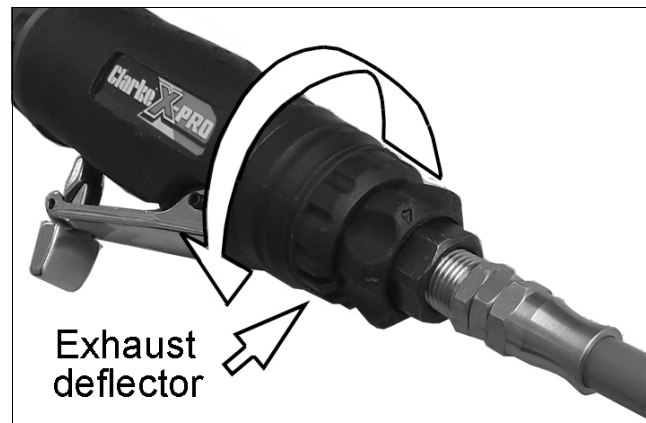
1. Slide the throttle locking lever forward while squeezing the trigger against the body of the tool.
2. Do not use excess pressure on the grinding stone as this will shorten its life.
3. Release the trigger to stop the grinder.
 - The tool will continue to rotate for a short time after the trigger has been released.
4. Always ensure the grinder has stopped before putting it down.



SETTING THE EXHAUST DEFLECTOR

The direction of the exhaust air leaving the tool can be adjusted by rotating the exhaust deflector.

Twist the exhaust deflector sleeve to direct the air as required to deflect air away from the workpiece or operator.



DISCONNECTING THE AIR SUPPLY

1. Do not disconnect the air hose until the supply is isolated at a shut-off valve.
2. Once the pressure has been isolated, disconnect the air supply hose from the air tool.
3. Shut down the compressor at the end of the work session.

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 run the tool for 5 seconds in order to lubricate the internal parts.

When not in use, disconnect from air supply, clean tool and store in a safe, dry place. When storing, replace the blanking plug to the air inlet once the airline is disconnected.

Avoid storing the tool where the temperature is below 0°C.

TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	<ol style="list-style-type: none"> 1. Excessive pressure on tool. 2. Motor parts worn. 3. Worn or sticking mechanism due to lack of lubricant. 	<ol style="list-style-type: none"> 1. Reduce the force applied to the tool. 2. Return to CLARKE dealer for repair. 3. Drip air tool lubricating oil into air inlet. Allow oil to soak moving parts before using.
Tool runs slowly. Air flows weakly from exhaust.	<ol style="list-style-type: none"> 1. Motor parts jammed with gum/dirt. 2. Regulator in closed position. 3. General airflow blocked by dirt. 	<ol style="list-style-type: none"> 1. Examine inlet air filter for cleanliness and clean if necessary. 2. Adjust regulator to open position. 3. Operate tool in short bursts.
Tool will not run. Air flows freely from exhaust.	<ol style="list-style-type: none"> 1. Motor vanes stuck due to buildup of foreign material. 	<ol style="list-style-type: none"> 1. Disconnect air supply and rotate tool assembly manually. 2. Try operating tool in short bursts. 3. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts.
Tool will not shut off.	<ol style="list-style-type: none"> 1. Throttle O-rings damaged or ill-fitting in seat. 	<ol style="list-style-type: none"> 1. Return to CLARKE dealer for repair.

MAINTENANCE



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

DAILY

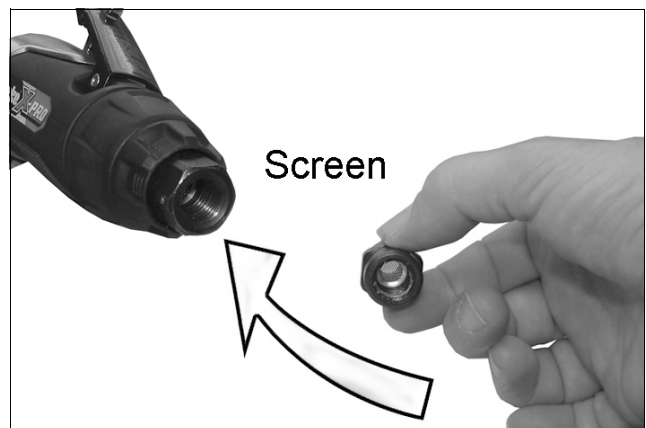
1. Before use, drain water from the air tank, air line and compressor.
2. If no line lubricator or mini oiler is used, ensure that oil is applied to the tool on a daily basis through the air inlet connection. Run a few drops of oil through the tool before use. It may be entered into the tool air inlet, (ensuring the strainer is clear), or into the hose at the nearest connection to the air supply. Then operate the tool.
3. This procedure should be repeated after every two to three hours of use or at the start of the working day.
4. Keep the body of the tool clean and free from debris.

WEEKLY

1. Check the air inlet screen filter for blockage and clean if necessary.

CLEANING

1. Grit or gum deposits inside the tool may also reduce its efficiency.
2. After extensive use, remove the inlet screen filter and flush out the mechanism with gum solvent oil or an equal mixture of CLARKE air-line oil and paraffin. Allow to dry before use.



SERVICE AND REPAIR

1. If the tool runs erratically or becomes inefficient although the air supply is in good order, it may be necessary to dismantle the air motor and replace any worn or damaged parts. Such servicing and repair work should be carried out by a qualified service technician.
2. If the tool still runs erratically or becomes inefficient, and the air supply is of good quality, it may be necessary to dismantle the air motor and replace worn or damaged parts.

3. You may prefer to take the tool to your CLARKE dealer if internal maintenance is required.

GREASING

The right angle drive is fitted with a grease nipple to provide a facility for lubrication of the drive gears.

1. After extensive use, apply a shot of general purpose grease using a suitable grease gun.



PERFORMANCE

Please note that outside factors may effect the operation and efficiency of the air tool.

These include reduced compressor output, excessive drain on the airline, moisture ingress, restrictions in the air-line such as the use of connectors of incorrect size or poor condition which will reduce the air supply.

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

ACCESSORIES

A wide range of accessories is available including filter/regulators, lubricators, high-pressure hoses (5 to 50 metres) etc.

Contact your CLARKE dealer for further information or CLARKE International Service Department.

CLARKE Air Line Oil (part no. 3050825) is available from your CLARKE dealer.

SUITABLE STONES INCLUDE:

CAT144 (10 piece grinding stone set) part no 3120158.



DECLARATION OF CONFORMITY



Hemmill 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 statutory requirement(s):

Supply of Machinery (Safety) Regulations 2008

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

EN/ISO 11148-9:2011

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: 1/2 Air Angle Die Grinder
Model number(s): CAT206
Serial / batch Number: N/A
Date of issue: 23/05/2022

Signed:

J.A. Clarke
Director



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 11148-9:2011

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: 2019

Product Description: 1/2 Air Angle Die Grinder
Model number(s): CAT206
Serial / batch Number: N/A
Date of issue: 23/05/2022

Signed:

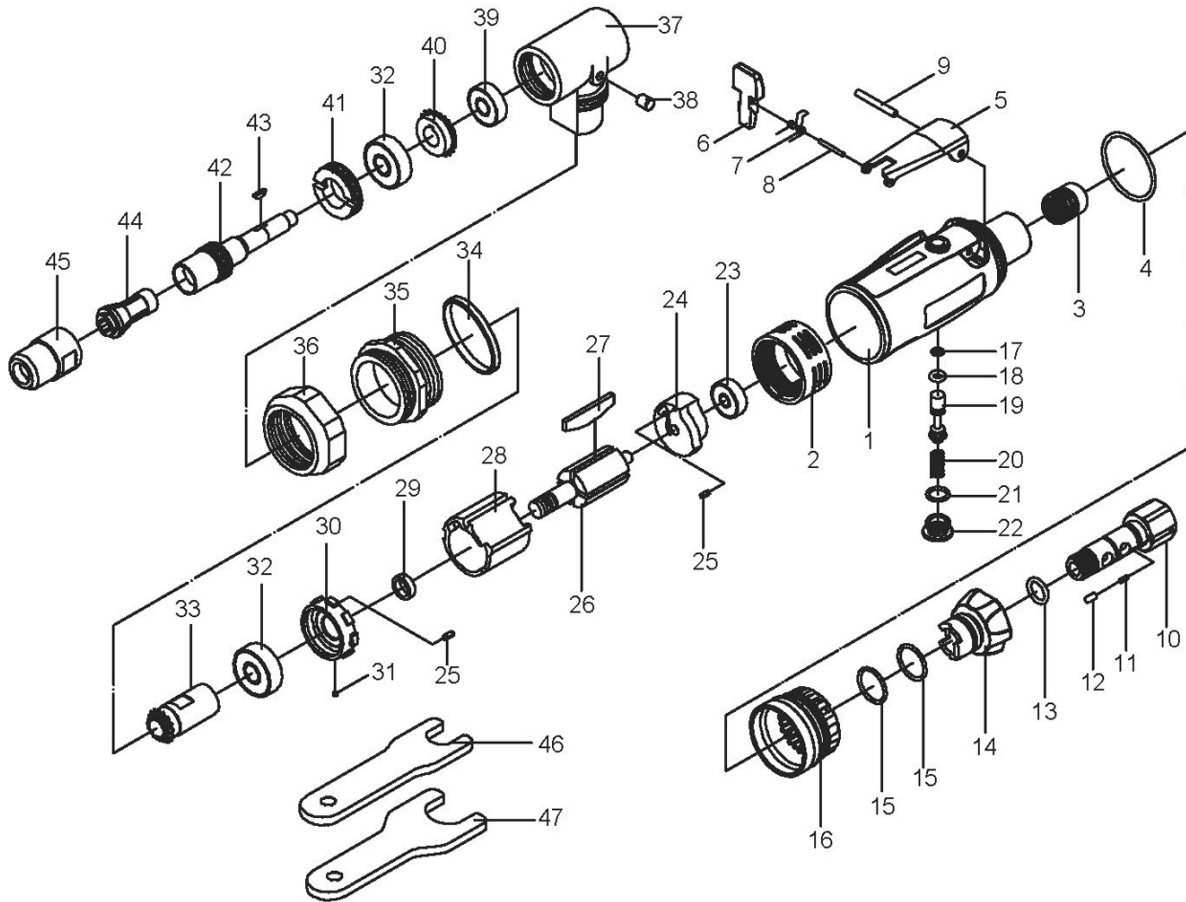
J.A. Clarke
Director

PARTS LIST

No	Description
1	Main Housing
2	Housing liner
3	Bushing
4	O-ring
5	Trigger
6	Lever
7	Spring
8	Pin
9	Trigger pin
10	Air inlet
11	Spring
12	Pin
13	O-ring
14	Air regulator
15	O-ring
16	Exhaust deflector
17	O-ring
18	O-ring
19	Valve stem
20	Spring
21	O-ring
22	Screw
23	Bearing
24	Rear plate

No	Description
25	Set pin
26	Rotor
27	Rotor blade
28	Cylinder
29	Bushing
30	Front plate
31	Steel ball
32	Bearing
33	Gear
34	Seal ring
35	Lock ring
36	Hex nut
37	Right angle gear head
38	Grease cap
39	Bearing
40	Gear
41	Bushing
42	Work spindle
43	Woodruff key
44	Collet
45	Collet jacket
46	Small Wrench
47	Large Wrench

COMPONENT PARTS DIAGRAM



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.

A SELECTION FROM THE VAST RANGE OF

Clarke®

QUALITY PRODUCTS



AIR COMPRESSORS
From DIY to industrial, Plus air tools, spray guns and accessories.

GENERATORS
Prime duty or emergency standby for business, home and leisure.

POWER WASHERS
Hot and cold, electric and engine driven - we have what you need

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From DIY to auto/industrial.

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Submersible, electric and engine driven for DIY, agriculture and industry.

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All sizes for car and commercial use.



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