

ClarkeTM

air



DIE GRINDER

MODEL NO: CAT 89

PART No: 3110845

OPERATION & MAINTENANCE
INSTRUCTIONS



0902

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MODEL No:	CAT89
DESCRIPTION:	DIE GRINDER

Declared vibration emission value in accordance with EN ISO 8662-13	
Measured vibration emission value - α :	<2.5m/s ²
Uncertainty value - K:	m/s ²
Highest measured reading in a single plane	2.08m/s ²
Values determined according to EN28622-1	

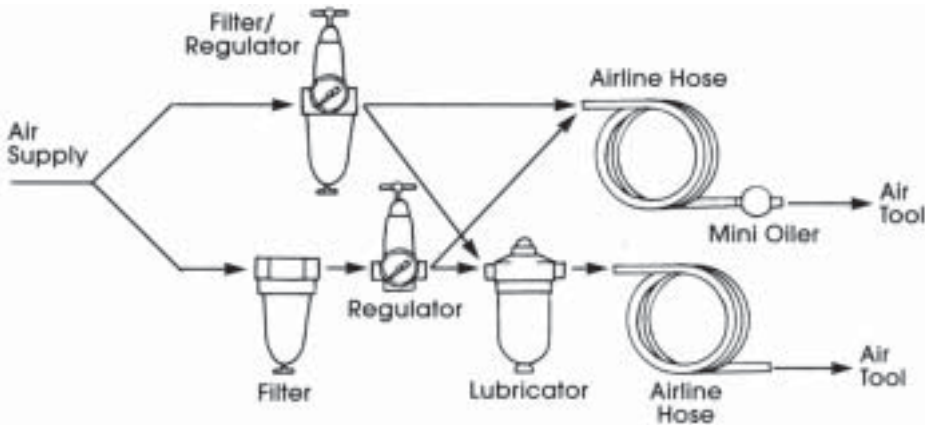


Fig.1

SPECIFICATIONS

Model : CAT 89
 Part No : 3110845
 Free Speed 20,000 RPM
 Collet Capacity 1/8" - 1/4"
 Maximum Air Consumption : 8 CFM
 Maximum Air Pressure : 90 PSI (6.2bar)
 Air Inlet Size : 1/4" BSP
 Minimum Hose Size : 5/16" (8mm) ID
 Weight : 0.5 kg
 Overall Length 5-1/2"

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. Always consult the machines data plate



Please read these instructions carefully before operating the tool

Thank you for purchasing this **CLARKE** Air Die Grinder
Before using the device, please read this manual thoroughly and carefully follow all instructions given. This is for your own safety and that of others around you, and is also to help you achieve long and trouble free service from your new tool.

CLARKE GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt 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 affect your statutory rights.

PARTS & SERVICE TEL: 020 8988 7400

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

ACCESSORIES

A wide range of Airline accessories is available, including Filter/Regulators, Lubricators, High Pressure Hoses from 5 to 100 Metres, etc. Contact your CLARKE dealer for further information, or CLARKE International Sales Department on 01992 565300

SAFETY PRECAUTIONS

IMPORTANT

Failure to follow these precautions could result in personal injury, and/or damage to property.

- ❑ When operating this tool, ALWAYS wear:
 - a. approved impact resistant SAFETY GOGGLES. (Eye glasses are NOT safety glasses)
 - b. a DUST MASK
 - c. EAR DEFENDERS
 - d. a good pair of INDUSTRIAL GLOVES
- ❑ **ALWAYS** disconnect the tool when not in use, and before carrying out any maintenance
- ❑ **ALWAYS** keep a safe distance between yourself and other people when using the tool.
- ❑ **ALWAYS** maintain the tool with care. Keep it clean for best and safest performance.
- ❑ **NEVER** wear ill fitting clothing, remove watches and rings.
- ❑ Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
- ❑ **DO NOT** over-reach. Keep your proper footing and balance at all times.
- ❑ **DO NOT** force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
- ❑ **DO NOT** abuse hoses or connectors. NEVER carry a tool by the hose, or yank it to disconnect from the air supply. Keep hoses away from heat, oil and sharp edges. Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
- ❑ **DO NOT** exceed 90 PSI at the tool.
- ❑ **DO NOT** modify the tool in any way.
- ❑ **DO NOT** remove any labels. Damaged labels should be replaced.
- ❑ 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.
- ❑ **ALWAYS** use screens to protect people in the vicinity from flying debris.
- ❑ **NEVER** point the tool at anyone.

AIR SUPPLY

Tools of this type, operate on a wide range of air pressures. It is recommended that air pressure to this tool does not exceed 90 PSI (6.1bar), at the tool when running. Higher pressure and unclean air, will shorten the tools' life because of faster wear, and could be a safety hazard.

Water in the air line will cause damage to the tool, ensure it is properly maintained at all times.

The recommended procedure to connect this tool to an air supply, is shown at fig. 1 on inside front cover.

The air inlet used for connecting air supply, has a standard 1/4" BSP thread.

Line pressure, or hose inside diameter, should be increased to compensate for unusually long air hoses (over 10m). Minimum hose diameter should be 6mm (1/4" ID.), and fittings should have the same inside dimensions.

ASSEMBLY

Connect a suitable hose to the Grinder using a 1/4" hose adapter, (A whip hose with Quick Fit coupling is available from your CLARKE dealer). then connect the other end to the airline.

NOTE: ensure the airline is turned off.

Your Grinder is now ready for use.



Compressed air can be dangerous. Ensure that you are thoroughly familiar with all precautions relating to the use of compressors and compressed air supply.



OPERATING INSTRUCTIONS

Before starting work drain any water from the air tank and blow condensation from the air line. Drain compressor more frequently in hot humid weather.

1. Ensure Grinder is disconnected from the air supply.
2. Loosen collet nut, and insert appropriate grinding stone. Tighten collet using spanners supplied.
3. Depress throttle lever and wait until motor is running at full speed.
4. Cautiously offer stone to workpiece, DO NOT APPLY EXCESS FORCE, allow tool to do the job for which it was designed, too much pressure could cause stone to shatter resulting in personal injury.
5. When finished grinding, allow grinder to stop running before carefully putting it down.

NOTE:

Grinding stones come with two different size shafts 1/8" and 1/4", therefore you will need to fit different collets, Your grinder comes with the 1/4" collet fitted.

If you need to fit the 1/8" collet, follow instructions below.

- a: hold motor spindle from turning (Item 7) with spanner supplied.
- b: remove collet nut and withdraw collet, store for re-use.
- c: install new collet and re-fit collet nut, (finger-tight only).

IMPORTANT

Never use chipped or cracked stones, always inspect before fitting.

IMPORTANT:

The use of parts other than CLARKE replacement parts may result in safety hazards, decreased tool performance and may invalidate your warranty.



MAINTENANCE

Daily before use.

1. Drain water from air tank, air line and compressor.
2. Check and clean, if necessary, the air inlet gauze filter .
3. Pour a few drops of CLARKE Air Line Oil (approx 3cc), into the air inlet. This should be carried out regardless of whether or not an air line lubricator is used.
If an Air line lubricator is NOT used, this procedure should be repeated after every two to three hours of use.

If the grinder 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.

For lubricating the air motor when in operation, an air line lubricator should be used, with Clarke Air Line Oil, adjusted to 2 drops per minute.

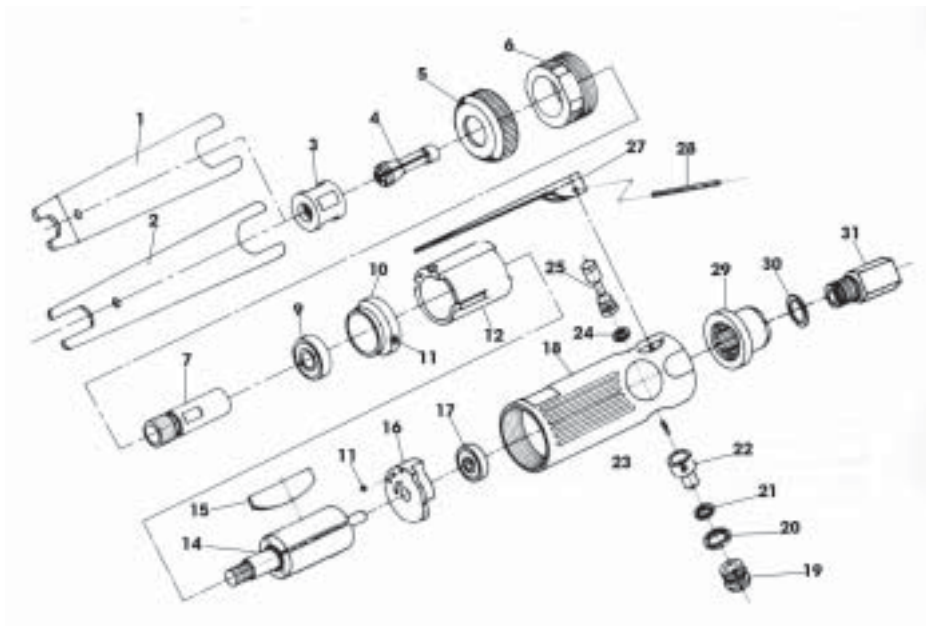
Clarke Air Line Oil is available from your CLARKE dealer, part no. 3050825.

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

Grit or gum deposits in the tool may also reduce efficiency. This condition can be corrected by cleaning the air strainer and tool with air line oil, or failing this, the tool should be disassembled, thoroughly cleaned, dried and reassembled.

If the tool runs erratically or becomes inefficient, and the air supply is sound, dismantle the air motor and replace worn or damaged parts, or take the tool to your CLARKE dealer.

PARTS DIAGRAM



Clarke
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PARTS & SERVICE TEL: 020 8988 7400

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

PARTS LIST

Index No	Part No	Description	Qty
1	KL89001	Double Ended Spanner	1
2	KL89002	Double Ended Spanner	1
3	KL89003	Collet Nut	1
4	KL89004	Collet	1
5	KL89005	Housing Cap	1
6	KL89006	Retainer	1
7	KL89007	Spindle	1
9	KL89009	Ball Bearing	1
10	KL89010	Front End Plate	1
11	KL89011	Ball	3
12	KL89012	Cylinder	1
13	KL89013	'O' Ring	1
14	KL89014	Rotor	1
15	KL89015	Rotor Blade	4
16	KL89016	Rear Plate	1
17	KL89017	Ball Bearing	1
18	KL89018	Motor Housing	1
19	KL89019	Valve Screw	1
20	KL89020	'O' Ring	1
21	KL89021	'O' Ring	1
22	KL89022	Air Regulator	1
23	KL89023	Spring	1
24	KL89024	'O' Ring	1
25	KL89025	Throttle Valve	1
27	KL89027	Throttle Lever	1
28	KL89028	Throttle Lever Pin	1
29	KL89029	Exhaust deflector	1
30	KL89030	'O' Ring	1
31	KL89031	Circlip	1

HAND-ARM VIBRATION

Employers are advised to refer to the HSE publication "Guide for Employers".

All hand held power tools vibrate to some extent, and this vibration is transmitted to the operator via the handle, or hand used to steady the tool. Vibration from about 2 to 1500 hertz is potentially damaging and is most hazardous in the range from about 5 to 20 hertz.

Operators who are regularly exposed to vibration may suffer from Hand Arm Vibration Syndrome (HAVS), which includes 'dead hand', 'dead finger', and 'white finger'. These are painful conditions and are widespread in industries where vibrating tools are used.

The health risk depends upon the vibration level and the length of time of exposure to it.....in effect, a daily vibration dose.

Tools are tested using specialised equipment, to approximate the vibration level generated under normal, acceptable operating conditions for the tool in question. For example, a grinder used at 45° on mild steel plate, or a sander on softwood in a horizontal plane etc.

These tests produce a value 'a', expressed in metres per second per second, which represents the average vibration level of all tests taken, in three axes where necessary, and a second figure 'K', which represents the uncertainty factor, i.e. a value in excess of 'a', to which the tool could vibrate under normal conditions. These values appear in the declaration on page 7.

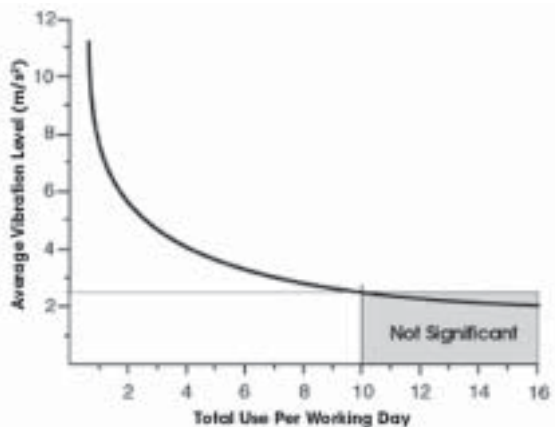
You will note that a third value is given in the specification - the highest measured reading in a single plane. This is the maximum level of vibration measured during testing in one of the axes, and this should also be taken into account when making a risk assessment.

'a' values in excess of 2.5 m/s² are considered hazardous when used for prolonged periods. A tool with a vibration value of 2.8 m/s² may be used for up to 8 hours (cumulative) per day, whereas a tool with a value of 11.2 m/s² may be used for ½ hour per day only.

The graph below shows the vibration value against the maximum time the respective tool may be used, per day.

The uncertainty factor should also be taken into account when assessing a risk. The two figures 'a' and 'K' may be added together and the resultant value used to assess the risk.

It should be noted that if a tool is used under abnormal, or unusual conditions, then the vibration level could possibly increase significantly. Users must always take this into account and make their own risk assessment, using the graph as a reference.



Some tools with a high vibration value, such as impact wrenches, are generally used for a few seconds at a time, therefore the cumulative time may only be in the order of a few minutes per day. Nevertheless, the cumulative effect, particularly when added to that of other hand held power tools that may be used, must always be taken into account when the total daily dose rate is determined.

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This is an important document and should be retained

DECLARATION OF CONFORMITY



We declare that this product complies with the following standards/directives:

- EN ISO 8662-13
- 98/37/EC
- EN 792-9

Description: **Air Operated Die Grinder**

Model No: **CAT89**

Serial (Batch) No: **See Product Data Label**

Signed: _____

A handwritten signature in black ink is written over a horizontal line.

Clarke[®] INTERNATIONAL

Hemnal Street, Epping, Essex CM16 4LG

A SELECTION FROM THE VAST RANGE OF

ClarkeTM

QUALITY PRODUCTS

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Angle grinders, cordless drill sets, saws and sanders.

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All sizes for car & commercial use.



Clarke INTERNATIONAL

For spare parts and servicing, please contact your nearest dealer, or Clarke International on

020 - 8988 - 7400

e-mail: Parts@clarkeinternational.com e-mail: Service@clarkeinternational.com