

Clariflo®

X-PRO



NEEDLE SCALER

MODEL NO: CAT170

PART NO: 3120187

OPERATING & MAINTENANCE INSTRUCTIONS

UK
CA | CE

ORIGINAL INSTRUCTIONS

GC02/22 Rev 1

INTRODUCTION

Thank you for purchasing this CLARKE Needle Scaler.

Please read all of the safety and operating instructions carefully before using this product. 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.

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.

SPECIFICATION

Model Number	CAT170
Min. Hose Size (ID)	8mm (5/16" BSP)
Max Operating Pressure	90 psi (6.2 bar)
Average/Max Air Consumption	3.5 cfm (average) 14.8 cfm (max)
Blows per minute	4600 (@ 6.2 bar)
Air Inlet Size	1/4" BSP Female
Sound Pressure Level (LpA dB)	84 dB(A)
Sound Power Level (LwA dB)	95 dB(A)
Vibration Levels	9.4 m/s ²
Weight	2.9 kg

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.
4. Do not operate the tool where there are flammable liquids or gases.
5. Stay alert and use common sense - do not operate the tool when you are tired or under the influence of alcohol, drugs or medication.
6. Always wear eye protectors when using the tool. Eye protectors must provide protection from flying particles from the front and the side. Ear protectors should also be worn.
7. Do not overreach - Keep proper footing and balance at all times.

USE OF POWER TOOLS

1. Never use oxygen, carbon dioxide, combustible gasses or any type of bottled gas as a source of power for this tool.
2. Do not connect the air supply hose with your finger on the trigger.
3. Do not exceed the maximum pressure for the tool of 90 psi / 6.2 bar.
4. Keep the air supply hose away from heat, oil and sharp edges.
5. Do not fit the tool to any stand or clamping device that may damage it.
6. Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
7. Do not use the tool for any purpose than that described in this manual.
8. Do not carry out any alterations or modifications to the tool.
9. 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.
 - Passing the tool to another person.
10. Never use the tool if it is defective or operating abnormally.
 11. This tool should be serviced at regular intervals by qualified personnel.
 12. Avoid damaging the tool by applying excessive force.
 13. Always maintain the tool with care. Keep it clean for the best and safest performance.
 14. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
 15. Do not force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
 16. Do not remove any labels. Damaged labels should be replaced.
 17. 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.
 18. Always use both hands to control the tool.
 19. Always ensure the tool has stopped before putting it down after use

TRANSPORT & STORAGE

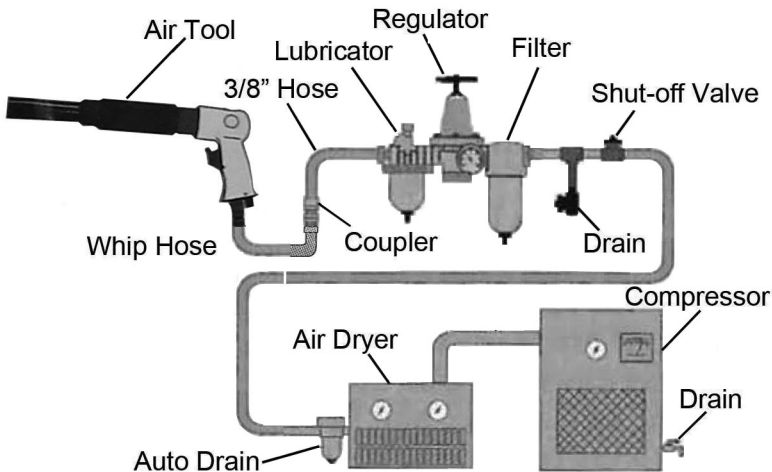
1. Never carry the tool by the air hose or with your finger on the trigger.
2. Always disconnect from the air supply when the tool is not required for immediate use in order to avoid accidental starting.
3. When not in use the tool should be disconnected from the air supply and stored in a dry place out of the reach of children.
4. Avoid storing the tool where the temperature is below 0°C.

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.

- 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 and topped up with oil. Clarke airline oil should be used, and the lubricator adjusted to approx 2 drops per minute.
- 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 dirty air will shorten the life of the tool due to faster wear and is a possible safety hazard.

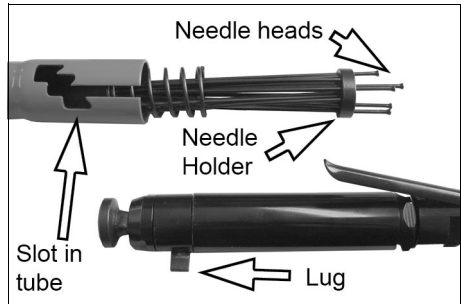
BEFORE USE

ASSEMBLING THE NEEDLE HOLDER

The needle scaler is packed in two halves.

- The main body and hammer assembly
 - The needles with needle holder, needle tube and spring
1. Insert the needles, needle holder and spring into the needle tube, Ensure the needle holder is the correct way round, so that the heads of the needles sit snugly in the recesses in the holder.

2. Push the needle tube, complete with needles, needle holder and spring, on to the main body so that the retaining lug in the body enters the slot in the side of the tube. Continue to push against spring pressure until the body can be twisted, and thereby locked, into one of three positions.



The first position, achieved by turning the body and the retaining lug

anticlockwise, creates the greatest needle force, the second position, achieved by pushing harder against spring pressure and turning the body clockwise, creates a slightly lesser force, and the third position, achieved in a similar manner, creates even less.

3. Select a position depending upon your work requirements, dictated by the finish required and the type of material being worked on.

CONNECTING THE AIR SUPPLY



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.

1. Remove the protective plug from the air inlet port and connect a suitable hose.
2. A gauze filter is fitted within the air inlet adapter. Ensure this filter is always in place and clean. The airline is connected to the adapter, preferably via a quick release coupling (not supplied).
3. Connect the other end of the hose to the compressor.

4. Turn on the air supply and check for air leaks. Rectify any found before proceeding.
 - PTFE tape may be useful for sealing threaded connections.
5. If required, connect an in-line mini oiler to the tool.
 - A mini oiler helps to prolong the life of the air tool.
6. 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 airline connector or via the hose at the nearest connection to the air supply.
7. Ensure the trigger is NOT depressed when connecting the air line.

USING THE NEEDLE SCALER

1. Hold the tool with both hands and bring towards the work at an angle of approx. 60-70°. With the airline pressure set to 90 psi (621 bar), squeeze the trigger and allow the needles to come into contact with the work.
2. Moving slowly across the work surface, proceed to remove scale, rust or other contaminants taking care not to damage the surface. Regulate the air supply pressure and locking groove setting to adjust the performance of the tool.
3. Release the trigger to stop operation, noting that the tool may run briefly after the trigger is released.

DISCONNECTING THE AIR SUPPLY

1. Do not disconnect the compressed air supply hose until the air supply has been shut down or isolated at the shut off valve and the compressed air expelled by running the tool until it stops.
2. Refer to the compressor instruction manual for the procedure to shut down and release the compressed air.
3. Once the pressure has been released, disconnect the air supply hose from the needle scaler.

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 tool 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 OR BEFORE USE

1. Before use, drain water from the air-line and compressor.
2. Lubricate the air tool daily or before use 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 & OVERHAUL

1. Keep the tool 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 strainer 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. Replacement needles can be fitted if required as described on page 6.

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 needle scaler 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.

TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	<ol style="list-style-type: none"> 1. Piston parts worn. 2. Worn or sticking mechanism due to lack of lubricant. 	<ol style="list-style-type: none"> 1. Return to Clarke dealer for repair. 2. 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. Moving parts jammed with gum/ dirt. 2. Air-line regulator in closed position. 3. General airflow blocked by dirt. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Piston 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. 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.	<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.

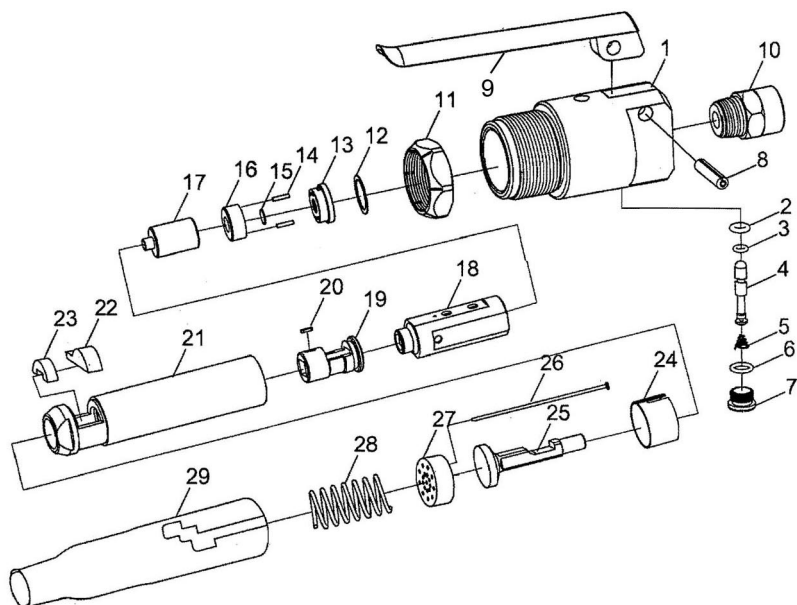
ACCESSORIES AND CONSUMABLES

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 the Clarke International Service Department.

Replacement 19-piece Needle Set;- CAT172 (Clarke part no; 3120189).

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

COMPONENT PARTS



No	Description
1	Main Body
2	O-Ring
3	O-Ring
4	Throttle Valve
5	Spring Gasket
6	Gasket
7	Valve Cap
8	Pin
9	Throttle Lever
10	Hose Adaptor
11	Locking Ring
12	Alignment Shim
13	Rear Valve Block
14	Pin (2)
15	Valve

No	Description
16	Front Valve Block
17	Piston
18	Barrel Sleeve
19	Nose
20	Key
21	Barrel Assembly
22	Driver Retainer
23	Retainer Buffer
24	Retainer Clip
25	Needle Driver
26	Needle (19)
27	Needle Holder
28	Spring
29	Needle Tube

DECLARATION OF CONFORMITY



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 11148-4:2012.

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: 2015

Product Description: X-PRO Needle Scaler
Model number(s): CAT170
Serial / batch Number: N/A
Date of Issue: 09/02/2022

Signed:

J.A. Clarke
Director



Clarke[®]
INTERNATIONAL
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):

BS EN ISO 11148-4:2012

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: X-PRO Needle Scaler
Model number(s): CAT170
Serial / batch Number: N/A
Date of Issue: 09/02/2022

Signed:

J.A. Clarke
Director

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