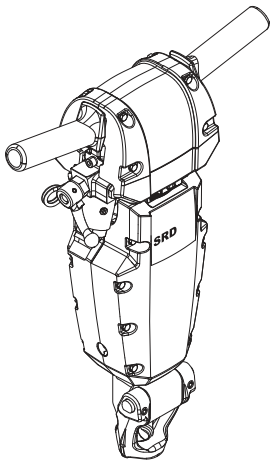
SRD

20, 25

Safety and operating instructions

Rock drills



Original instructions

Atlas Copco

Contents

Original instructions

Introduction

Thank you for choosing a product from Atlas Copco. Since 1873, we have been committed to finding new and better ways of fulfilling our customers' needs. Through the years, we have developed innovative and ergonomic product designs that have helped customers improve and rationalize their daily work.

Atlas Copco has a strong global sales and service network, consisting of customer centers and distributors worldwide. Our experts are highly trained professionals with extensive product knowledge and application experience. In all corners of the world, we can offer product support and expertise to ensure that our customers can work at maximum efficiency at all times.

For more information please visit:
www.atlascopco.com

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About the Safety and operating instructions

The aim of the instructions is to provide you with knowledge of how to use the pneumatic breaker in an efficient, safe way. The instructions also give you advice and tell you how to perform regular maintenance on the pneumatic breaker.

Before using the pneumatic breaker for the first time you must read these instructions carefully and understand all of them.

Safety instructions

To reduce the risk of serious injury or death to yourself or others, read and understand the Safety and operating instruction before installing, operating, repairing, maintaining, or changing accessories on the machine.

Post this Safety and operating instruction at work locations, provide copies to employees, and make sure that everyone reads the Safety and operating instruction before operating or servicing the machine. For professional use only.

In addition, the operator or the operator's employer must assess the specific risks that may be present as a result of each use of the machine.

Save all warnings and instructions for future reference.

Safety signal words

The safety signal words Danger, Warning and Caution have the following meanings:

DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Personal precautions and qualifications

Only qualified and trained persons may operate or maintain the machine. They must be physically able to handle the bulk, weight, and power of the machine. Always use your common sense and good judgement.

Personal protective equipment

Always use approved protective equipment. Operators and all other persons in the working area must wear protective equipment, including at a minimum:

- Protective helmet
- Hearing protection
- Impact resistant eye protection with side protection
- Respiratory protection when appropriate
- Protective gloves
- Proper protective boots
- Appropriate work overall or similar clothing (not loose-fitting) that covers your arms and legs.

Drugs, alcohol or medication

⚠ WARNING Drugs, alcohol or medication

Drugs, alcohol or medication may impair your judgment and powers of concentration. Poor reactions and incorrect assessments can lead to severe accidents or death.

► Never use the machine when you are tired or under the influence of drugs, alcohol or medication.

► No person who is under the influence of drugs, alcohol or medication may operate the machine.

Installation, precautions

⚠ DANGER Whipping air hose

A compressed air hose that comes loose can lash around and cause personal injury or death. To reduce this risk:

► Check that the compressed air hose and the connections are not damaged, replace if necessary.

► Check that all compressed air connections are properly attached.

► Never carry a pneumatic machine by the air hose.

► Never attempt to disconnect a compressed air hose that is pressurized. First switch off the compressed air at the compressor and then bleed the machine by activating the start and stop device.

► Do not use quick disconnect couplings at tool inlet. Use hardened steel (or material with comparable shock resistance) threaded hose fittings.

► Whenever universal twist couplings (claw couplings) are used, we recommend that lock pins are installed and whipcheck safety cables are used to safeguard against possible hose to tool and hose to hose connection failure.

► Never point a compressed air hose at yourself or anyone else. To avoid the risk of getting injured, never use compressed air to blow for example dust, dirt etc. from your clothes.

⚠ WARNING Ejected insertion tool

If the tool retainer on the machine is not in a locked position, the inserted tool can be ejected with force, which can cause personal injury.

► Never start the machine while changing the insertion tool.

► Before changing the insertion tool or accessories, stop the machine, switch off the power supply and bleed the machine by activating the start and stop device.

► Never point the inserted tool at yourself or anyone else.

► Make sure that the insertion tool is fully inserted and the tool retainer is in a locked position before the machine is started.

► Check the locking function by pulling the inserted tool outwards forcefully.

⚠ WARNING Moving or slipping insertion tool

An incorrect dimension of the inserted tool's shank can result in that the inserted tool is lost or is slipping out during operation. Risk of severe injury or crushed hands and fingers.

► Check that the insertion tool has the right shank length, type and dimensions that the machine is intended for.

Operating, precautions

⚠ DANGER Explosion hazard

If a warm insertion tool comes into contact with explosives, an explosion could occur. During operation with certain materials as well as use of certain materials in machine parts, sparks and ignition can occur. Explosions will lead to severe injuries or death.

- ► Never operate the machine in any explosive environment.
- ► Never use the machine near flammable materials, fumes or dust.
- ► Make sure that there are no undetected sources of gas or explosives.
- ► Never drill in an old hole.

⚠ WARNING Unexpected movements

The inserted tool is exposed to heavy strains when the machine is used. The inserted tool may break due to fatigue after a certain amount of use. If the inserted tool breaks or gets stuck, there may be sudden and unexpected movement that can cause injuries. Furthermore, losing your balance or slipping may cause injury.

- ► Make sure that you always keep a stable position with your feet as far apart as your shoulder width, and keeping a balanced body weight.
- ► Always inspect the equipment prior to use. Never use the equipment if you suspect that it is damaged.
- ► Make sure that the handles are clean and free of grease and oil.
- ► Keep your feet away from the inserted tool.
- ► Stand firmly and always hold on to the machine with both hands.
- ► Never drill in an old hole.
- ► Never start the machine when it is lying on the ground.
- ► Never ‘ride’ on the machine with one leg over the handle.
- ► Never strike or abuse the equipment.
- ► Check regularly for wear on the insertion tool, and check whether there are any signs of damage or visible cracks.
- ► Pay attention and look at what you are doing.

⚠ WARNING Stalling hazard

If the insertion tool gets caught during operation, the whole machine will start to rotate if you lose your grip on it. This unexpected rotation of the entire machine may cause serious injury or death.

- ► Stand firmly and always hold onto the machine with both hands.
- ► Make sure that the handle or handles are clean and free from grease and oil.
- ► Never drill in an old hole.

⚠ WARNING Trapping hazard

There is risk of neck ware, hair, gloves and clothes getting dragged into or caught by a rotating insertion tool or accessories. This may cause choking, scalping, lacerations or death. To reduce the risk:

- ► Never grab or touch a rotating drill steel.
- ► Avoid wearing clothing, neck ware or gloves that may get caught.
- ► Cover long hair with a hair net.

⚠ WARNING Dust and fume hazard

Dusts and/or fumes generated or dispersed when using the machine may cause serious and permanent respiratory disease, illness, or other bodily injury (for example, silicosis or other irreversible lung disease that can be fatal, cancer, birth defects, and/or skin inflammation).

Some dusts and fumes created by drilling, breaking, hammering, sawing, grinding and other construction activities contain substances known to the State of California and other authorities to cause respiratory disease, cancer, birth defects, or other reproductive harm. Some examples of such substances are:

- Crystalline silica, cement, and other masonry products.
- Arsenic and chromium from chemically-treated rubber.
- Lead from lead-based paints.

Dust and fumes in the air can be invisible to the naked eye, so do not rely on eye sight to determine if there is dust or fumes in the air.

To reduce the risk of exposure to dust and fumes, do all of the following:

- ► Perform site-specific risk assessment. The risk assessment should include dust and fumes created by the use of the machine and the potential for disturbing existing dust.
- ► Use proper engineering controls to minimize the amount of dust and fumes in the air and to minimize build-up on equipment, surfaces,

clothing, and body parts. Examples of controls include: exhaust ventilation and dust collection systems, water sprays, and wet drilling. Control dusts and fumes at the source where possible. Make sure that controls are properly installed, maintained and correctly used.

- ► Wear, maintain and correctly use respiratory protection as instructed by your employer and as required by occupational health and safety regulations. The respiratory protection must be effective for the type of substance at issue (and if applicable, approved by relevant governmental authority).
- ► Work in a well ventilated area.
- ► If the machine has an exhaust, direct the exhaust so as to reduce disturbance of dust in a dust filled environment.
- ► Operate and maintain the machine as recommended in the operating and safety instructions.
- ► Select, maintain and replace consumables/ insertion tools/ other accessories as recommended in the operating and safety instructions. Incorrect selection or lack of maintenance of consumables/ inserted tools/ other accessories may cause an unnecessary increase in dust or fumes.
- ► Wear washable or disposable protective clothes at the worksite, and shower and change into clean clothes before leaving the worksite to reduce exposure of dust and fumes to yourself, other persons, cars, homes, and other areas.
- ► Avoid eating, drinking, and using tobacco products in areas where there is dust or fumes.
- ► Wash your hands and face thoroughly as soon as possible upon leaving the exposure area, and always before eating, drinking, using tobacco products, or making contact with other persons.
- ► Comply with all applicable laws and regulations, including occupational health and safety regulations.
- ► Participate in air monitoring, medical examination programs, and health and safety training programs provided by your employer or trade organizations and in accordance with occupational health and safety regulations and recommendations. Consult with physicians experienced with relevant occupational medicine.
- ► Work with your employer and trade organization to reduce dust and fume exposure at the worksite and to reduce the risks. Effective health and safety programs, policies and procedures for protecting workers and others against harmful exposure to dust and fumes should be established and implemented based on advice from health and safety experts. Consult with experts.
- ► Residues of hazardous substances on the machine can be a risk. Before undertaking any maintenance on the machine, clean it thoroughly.

⚠ WARNING Projectiles

Failure of the work piece, of accessories, or even of the machine itself may generate high velocity projectiles. During operating, splinters or other particles from the working material may become projectiles and cause personal injury by striking the operator or other persons. To reduce these risk:

- ► Use approved personal protective equipment and safety helmet, including impact resistant eye protection with side protection.
- ► Make sure that no unauthorised persons trespass into the working zone.
- ► Keep the workplace free from foreign objects.
- ► Ensure that the work piece is securely fixed.

⚠ WARNING Splinters hazard

Using the insertion tool as a hand struck tool can result in splinters hitting the operator and can cause personal injury.

- ► Never use an insertion tool as a hand struck tool. They are specifically designed and heat-treated to be used only in a machine.

⚠ WARNING Slipping, tripping and falling hazards

There is a risk of slipping, tripping or falling, for example tripping on hoses or on other objects. Slipping, tripping or falling can cause injury. To reduce this risk:

- ► Always make sure that no hose or other object is in your way or in any other person's way.
- ► Always make sure you are in a stable position with your feet as far apart as your shoulder width and keeping a balanced body weight.

⚠ WARNING Motion hazards

When using the machine to perform work-related activities, you may experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.

- ► Adopt a comfortable posture while maintaining secure footing and avoiding awkward off-balanced postures.

- ► Changing posture during extended tasks may help avoid discomfort and fatigue.
- ► In case of persistent or recurring symptoms, consult a qualified health professional.

⚠ WARNING Vibration hazards

Normal and proper use of the machine exposes the operator to vibration. Regular and frequent exposure to vibration may cause, contribute to, or aggravate injury or disorders to the operator's fingers, hands, wrists, arms, shoulders and/or nerves and blood supply or other body parts, including debilitating and/or permanent injuries or disorders that may develop gradually over periods of weeks, months, or years. Such injuries or disorders may include damage to the blood circulatory system, damage to the nervous system, damage to joints, and possibly damage to other body structures.

If numbness, persistent recurring discomfort, burning sensation, stiffness, throbbing, tingling, pain, clumsiness, weakened grip, whitening of the skin, or other symptoms occur at any time, when operating the machine or when not operating the machine, stop operating the machine, tell your employer and seek medical attention. Continued use of the machine after the occurrence of any such symptom may increase the risk of symptoms becoming more severe and/or permanent.

Operate and maintain the machine as recommended in these instructions, to prevent an unnecessary increase in vibration.

The following may help to reduce exposure to vibration for the operator:

- ► Let the machine do the job. Use a minimum hand grip consistent with proper control and safe operation. Use the correct feed force on the machine. Avoid pressing too hard.
- ► If the machine has vibration absorbing handles, keep them in a central position, avoid pressing the handles into the end stops.
- ► When the percussion mechanism is activated, the only body contact with the machine you should have are your hands on the handle or handles. Avoid any other contact, for example supporting any part of the body against the machine or leaning onto the machine trying to increase the feed force. It is also important not to keep the start and stop device engaged while extracting the tool from the work surface.
- ► Make sure that the inserted tool is well-maintained (including sharpness, if a cutting tool), not worn out, and of the proper size. Insertion tools that are not well-maintained, or that are worn out, or that are not of the proper size result in longer time to complete a task (and a longer period of exposure to vibration) and may result in or contribute to higher levels of vibration exposure.
- ► Immediately stop working if the machine suddenly starts to vibrate strongly. Before resuming the work, find and remove the cause of the increased vibrations.
- ► Never grab, hold or touch the inserted tool when using the machine.
- ► Participate in health surveillance or monitoring, medical exams and training programs offered by your employer and when required by law.
- ► When working in cold conditions wear warm clothing and keep hands warm and dry.
- ► The exhaust air is strongly chilled and shall not make contact with the operator. Always direct the exhaust air away from hands and body.

See the "Noise and vibration declaration statement" for the machine, including the declared vibration values. This information can be found at the end of these Safety and operating instructions.

- ◆ Comply with the recommended air-pressure when operating the machine. Either higher or lower air-pressure has the potential of resulting in higher levels of vibration.

⚠ DANGER Electrical hazard

The machine is not electrically insulated. If the machine comes into contact with electricity, serious injuries or death may result.

- ► Never operate the machine near any electric wire or other source of electricity.
- ► Make sure that there are no concealed wires or other sources of electricity in the working area.

⚠ WARNING Concealed object hazard

During operating, concealed wires and pipes constitute a danger that can result in serious injury.

- ► Check the composition of the material before operating.
- ► Watch out for concealed cables and pipes for example electricity, telephone, water, gas and sewage lines etc.
- ► If the inserted tool seems to have hit a concealed object, switch off the machine immediately.
- ► Make sure that there is no danger before continuing.

⚠ WARNING Involuntary start

Involuntary start of the machine may cause injury.

- ► Keep your hands away from the start and stop device until you are ready to start the machine.
- ► Learn how the machine is switched off in the event of an emergency.
- ► Release the start and stop device immediately in all cases of power supply interruption.
- ► Whenever fitting or removing the insertion tool, switch off the air supply, bleed the machine by pressing the start and stop device and disconnect the machine from the power source.

⚠ WARNING Noise hazard

High noise levels can cause permanent and disabling hearing loss and other problems such as tinnitus (ringing, buzzing, whistling, or humming in the ears). To reduce risks and prevent an unnecessary increase in noise levels:

- ► Risk assessment of these hazards and implementation of appropriate controls is essential.
- ► Operate and maintain the machine as recommended in these instructions.
- ► Select, maintain and replace the insertion tool as recommended in these instructions.
- ► If the machine has a silencer, check that it is in place and in good working condition.
- ► Always use hearing protection.
- ► Use damping material to prevent work pieces from 'ringing'.

Maintenance, precautions

⚠ WARNING Machine modification

Any machine modification may result in bodily injuries to yourself or others.

- ► Never modify the machine. Modified machines are not covered by warranty or product liability.
- ► Always use original parts, cutting blades/ working tools, and accessories.
- ► Change damaged parts immediately.
- ► Replace worn components in good time.

⚠ CAUTION Hot working tool

The tip of the working tool can become hot and sharp when used. Touching it can lead to burns and cuts.

- ► Never touch a hot or sharp working tool.
- ► Wait until the working tool has cooled down before carrying out maintenance work.

⚠ WARNING Insertion tool hazards

Accidental engagement of the start and stop device during maintenance or installation can cause serious injuries, when the power source is connected.

- ► Never inspect, clean, install, or remove the insertion tool while the power source is connected.

Storage, precautions

- ◆ Keep the machine and tools in a safe place, out of the reach of children and locked up.

Overview

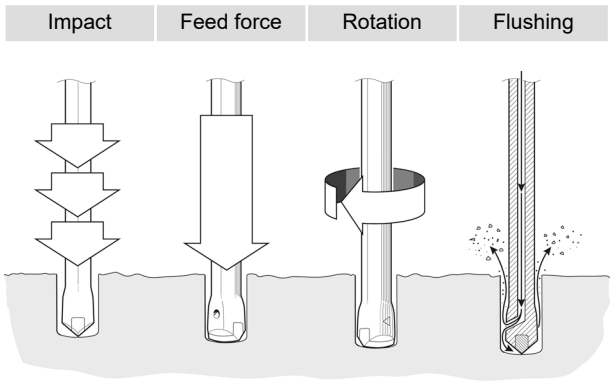
To reduce the risk of serious injury or death to yourself or others, read the Safety instructions section found on the previous pages of this manual before operating the machine.

Design and function

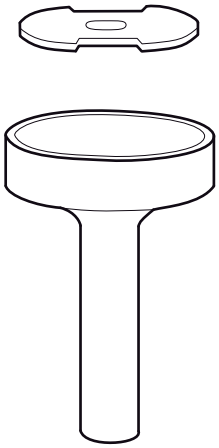
SRD 20 and SRD 25 are pneumatic rock drills designed for vertical drilling, plug hole drilling and drilling in concrete for construction and mining applications. No other uses are permitted.

To choose correct insertion tools, contact your local Atlas Copco dealer.

Working principle of a rock drill

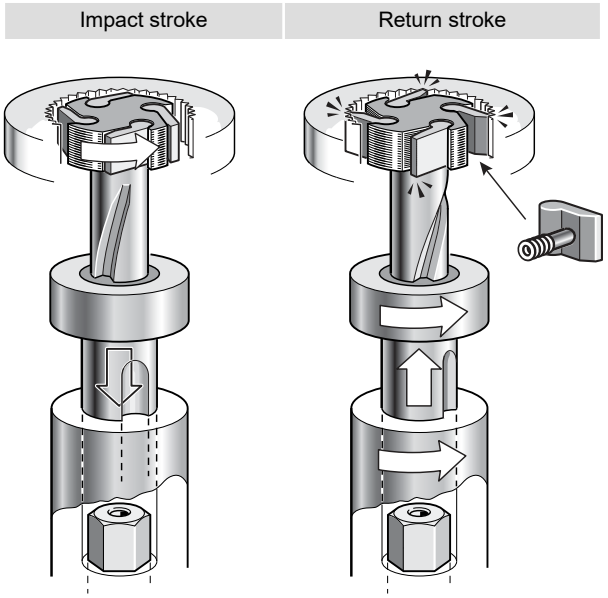


Control valve mechanism



The valve directs the air alternately from one side to the other of the piston so that it moves up and down. The piston transmits the energy through the drill steel to the bottom of the hole.

Rotation mechanism

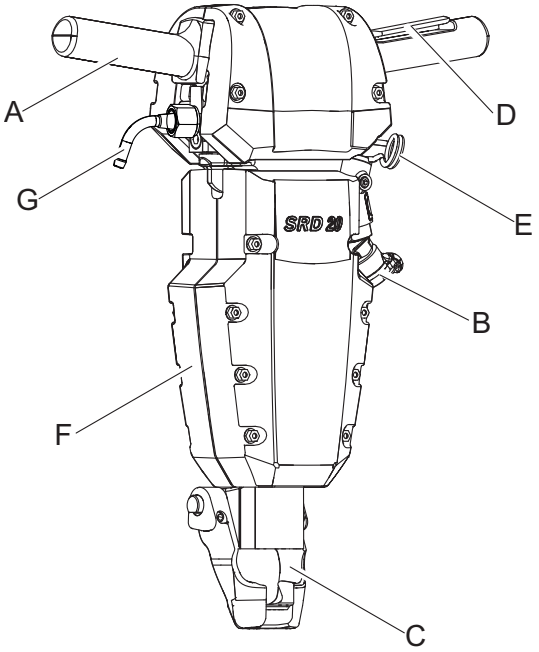


The drill steel is turned slightly with each blow by the rifle bar rotation. The rotation is anti-clockwise and is applied on the return stroke of the piston.

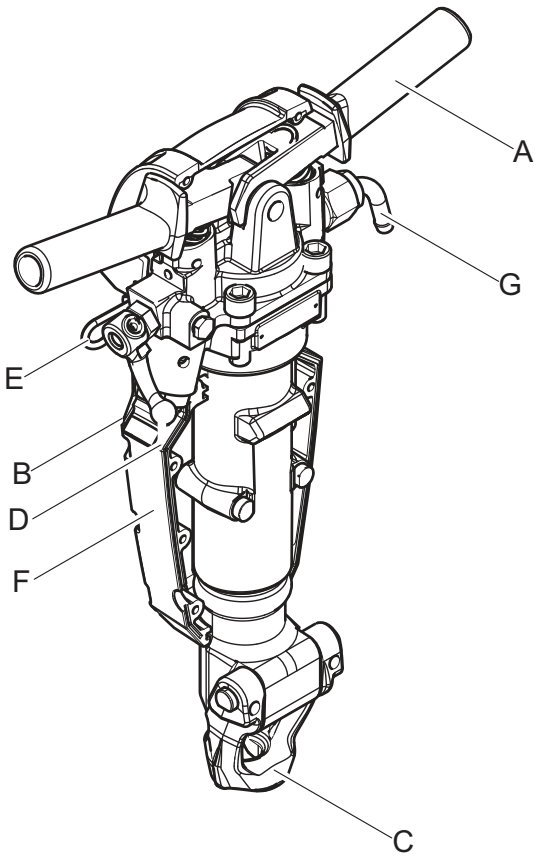
Flushing

Flushing is ducted through a hole in the piston. This means that flushing air is provided as soon as the compressed air is switched on.

Main parts



SRD 20



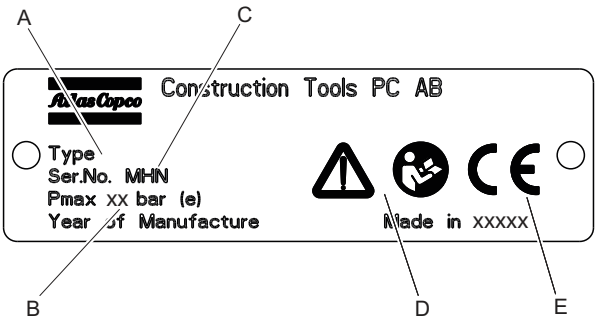
SRD 25

A. Handle
B. Air inlet nipple
C. Drill steel retainer
D. Throttle lever
E. Extra flushing
F. Silencer
G. Water inlet

Labels

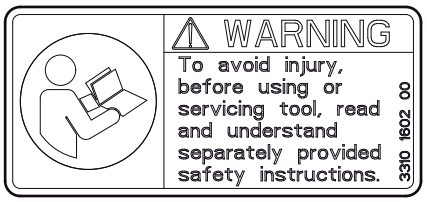
The machine is fitted with labels containing important information about personal safety and machine maintenance. The labels must be in such condition that they are easy to read. New labels can be ordered from the spare parts list.

Data plate



A. Machine type
B. Maximum permitted compressed air pressure
C. Serial number
D. The warning symbol together with the book symbol means that the user must read the safety and operating instructions before the machine is used for the first time.
E. The CE symbol means that the machine is EC-approved. See the EC declaration which is delivered with the machine for more information. If the CE symbol is missing, it means that the machine is not EC-approved.

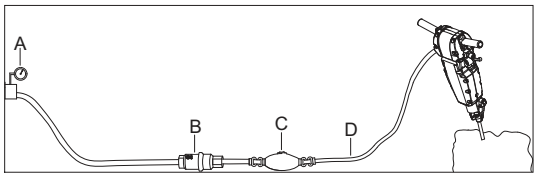
Safety label



To avoid injury, before using or servicing tool, read and understand separately provided safety instructions.

Installation

Hoses and connections



A. Compressed air source

B. Water separator (optional)

C. Lubricator (optional)

D. Max. 3 m (10 ft) compressed air hose between the lubricator and the machine.

- Check that you are using the correct recommended operating pressure, 6 bar (e) (87 psi).
- The maximum permissible air pressure, 7 bar (e) (102 psi), must not be exceeded.
- Blow any impurities out of the compressed air hose before connecting it to the machine.
- Select the correct dimension and length for the compressed air hose. For hose lengths up to 30 m (100 ft), a hose with a minimum internal diameter of 19 mm (¾ in.) must be used. If the hose length is between 30 and 100 m (100 and 330 ft), a hose with a minimum internal diameter of 25 mm (1 in.) must be used.

Methods to prevent freezing

Ice formation in the silencer can occur when the ambient air temperature is 0–10°C (32-50 °F) and the relative humidity is high.

The machine is designed to avoid the formation of ice in the silencer. Despite this, under extreme conditions ice can form in the silencer.

Take the following actions to further counteract the risk of ice formation:

- Use Atlas Copco Rock Drill AIR-OIL as a lubricant.
- Use VAM 5A water separator.

If the rock drill freeze, never heat it to melt the ice. Always let the ice thaw at room temperature.

Never pour methylated spirits or similar substances into the rock drill, as they will interfere with the lubrication and lead to increased wear.

Connecting a water separator

The length of the air hose between the compressor and the water separator must be such that the water vapor is cooled and condenses in the hose before reaching the water separator.

If the ambient temperature is below 0°C (32°F) the hose must be short enough to prevent the water from freezing before reaching the water separator.

Lubrication

The rock drill is lubricated with oil mixed with compressed air, which is taken to the parts that need continuous lubrication. Oil is metered into the compressed air using an Atlas Copco BLG 30 or CLG 30 lubricator connected to the air line.

Use Atlas Copco Rock Drill AIR-OIL which is specially developed for BBC, BBD, RH and SRD pneumatic Rock drills. Rock Drill AIR-OIL is readily biodegradable according to OECD 301 and has high film strength that can withstand heavy loads. If Rock Drill AIR-OIL is not available use a mineral-based air tool oil with the properties recommended in the table below.

Temperature range °C (°F)	Viscosity grade (ISO 3448)
-30 to 0 (-22 to +32)	ISO VG 32-68
-10 to +20 (+14 to +68)	ISO VG 68-100
+10 to +50 (+50 to +122)	ISO VG 100-150

Pressure adjustment

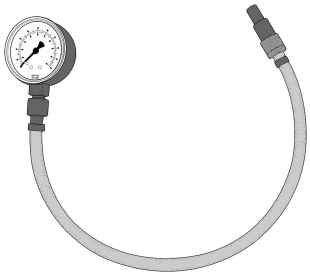
Air pressure

Ensure that the compressor can deliver the required air pressure of 4–6 bar (58 – 87 psi) to the machine.

1. High pressure causes rough operation and excessive wear.
2. Low pressure results in a slow drilling speed.

Calibrate the correct air pressure

Use the Atlas Copco **(9090 0550 80)** pressure gauge to check the air pressure when the rock drill is running. The pressure should be measured close to the inlet nipple. Recommended operating pressure is 6 bar (87 psi).



The pressure gauge is equipped with a needle which is pressed into the hose to measure the pressure inside.

Drill steel

⚠ CAUTION Hot working tool

The tip of the working tool can become hot and sharp when used. Touching it can lead to burns and cuts.

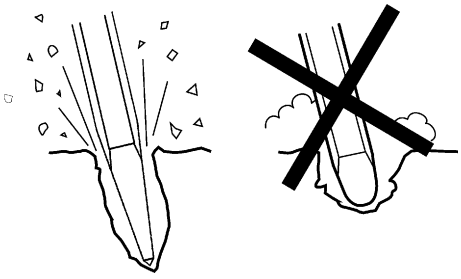
- ► Never touch a hot or sharp working tool.
- ► Wait until the working tool has cooled down before carrying out maintenance work.

NOTICE Never cool a hot insertion tool in water, it can result in brittleness and early failure.

⚠ WARNING Vibration hazard

Using inserted tools that do not fulfil the criteria mentioned below, will result in a longer time to complete a task, and may result in higher levels of vibration exposure. A worn tool will also cause increased working time.

- ► Make sure that the inserted tool is well-maintained, not worn out and of the proper size.
- ► Always use a sharp tool in order to work efficiently.



⚠ WARNING Ejected insertion tool

If the tool retainer on the machine is not in a locked position, the inserted tool can be ejected with force, which can cause personal injury.

- ► Before changing the insertion tool, stop the machine, switch off the compressed air supply and bleed the machine by activating the start and stop device.

Before fitting the insertion tool

Check that the tool shank is of the correct size and length for the chuck used. The shank must be clean and the tool must be in good condition. Shanks which are chipped, rounded, out of square or too hard on the striking end will operate inefficiently and cause premature piston failure.

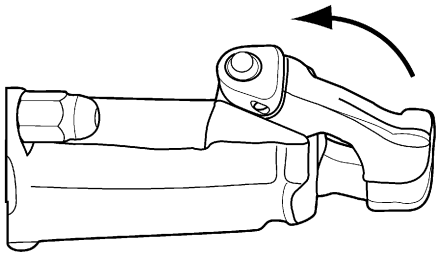
Inspect the drill steel:
A dull drill steel will slow down the drilling speed and overstrain the drill mechanism. When changing drill steel make sure that the new one is the correct size to follow your previous bore.

Before drilling, check that the flushing hole in the drill steel is not blocked.

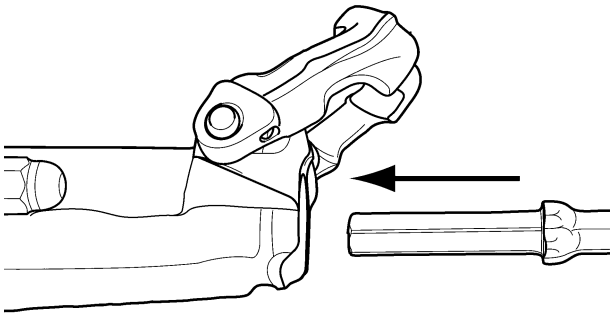
Fitting the drill steel

Whenever fitting the drill steel the following instructions must be observed:

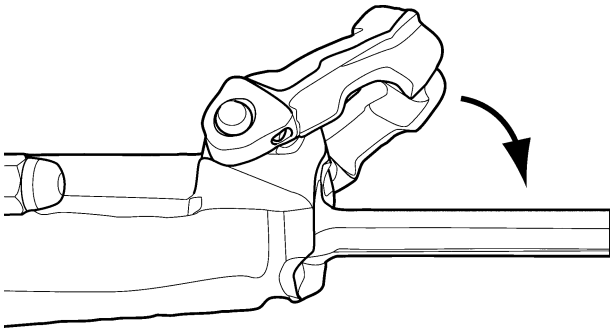
1. Push the retainer outwards in the direction of the arrow, until the front portion of the retainer is able to accommodate the drill steel collar.



2. Insert the drill steel in the chuck.



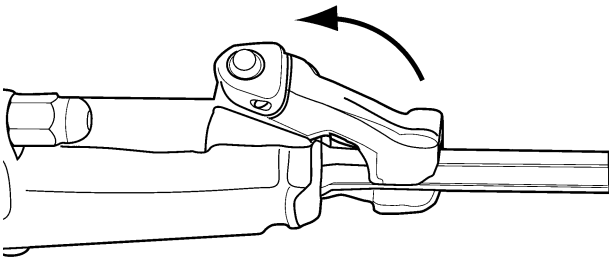
3. When the drill bottoms, push back the retainer to lock it.



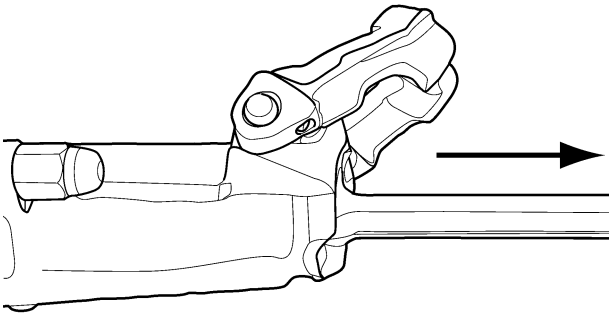
Removing the drill steel

Whenever removing the drill steel the following instructions must be observed:

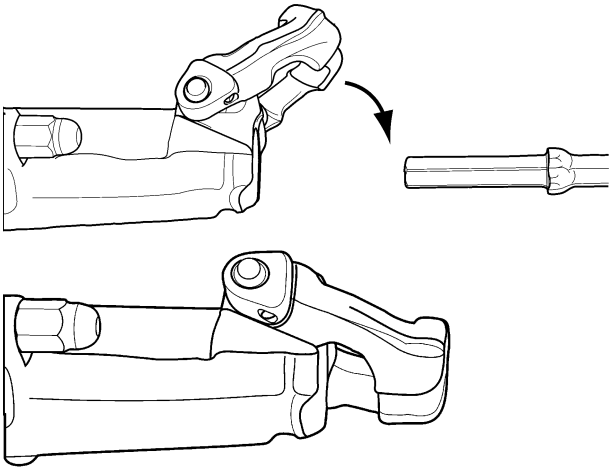
1. Push the retainer outwards in the direction of the arrow until the drill steel collar disengages from the front of the retainer.



2. Pull the drill steel out.



3. Push back the retainer.



Operation

⚠ WARNING Involuntary start

Involuntary start of the machine may cause injury.

- ► Keep your hands away from the start and stop device until you are ready to start the machine.
- ► Learn how the machine is switched off in the event of an emergency.
- ► Stop the machine immediately in all cases of power supply interruption.

Preparations before starting

Check the drilling equipment

- ◆ Check that all of the drilling equipment is in good condition.
- ◆ Check that the impact surface of the drill steel shank is flat, with no signs of wear.
- ◆ Make sure that the air inlet and exhaust ports are free from obstructions.
- ◆ Check that the flushing holes in the drill steel and drill bit are not blocked, and that the flushing air and water flows through without obstruction.
- ◆ Make sure that the air filter (located in the air nipple) is clean and not torn or distorted.
- ◆ Ensure that the fittings are tight and leak-proof.

⚠ DANGER Whipping air hose

A compressed air hose that comes loose can lash around and cause personal injury or death

- ► Check that the compressed air hose and the connections are not damaged.
- ► Check that all compressed air connections are properly attached.

Blow out the air hose

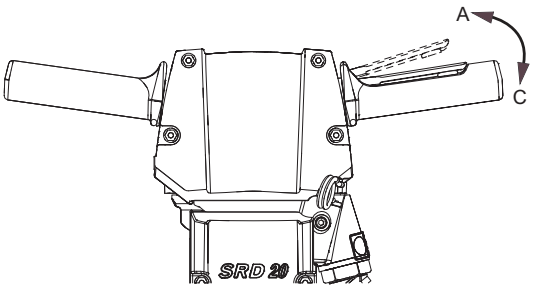
- ◆ Every day before using the drill, blow out the air hose to clear it of accumulated dirt and moisture.

Fill the lubricator with oil

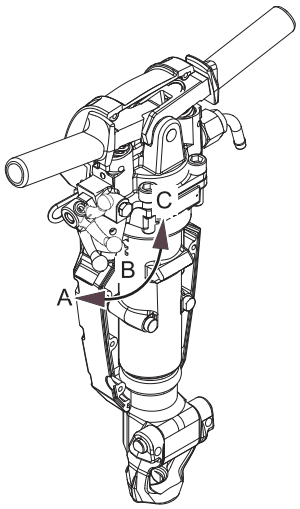
- ◆ Check that the chuck and insertion tool shank are always covered with a film of oil.

Controls

Throttle lever



SRD 20



SRD 25

The rock drill is equipped with a throttle lever for regulating compressed air to the percussion mechanism and a blower lever for extra blow-cleaning.

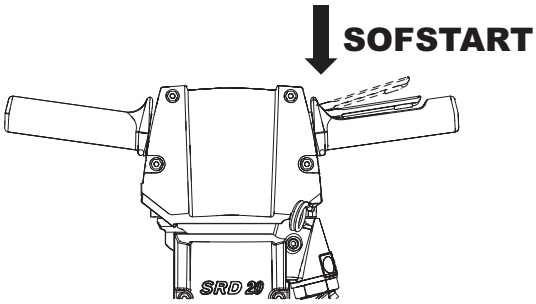
A. Throttle valve closed (stop position)

B. Throttle lever half open

C. Throttle lever fully open

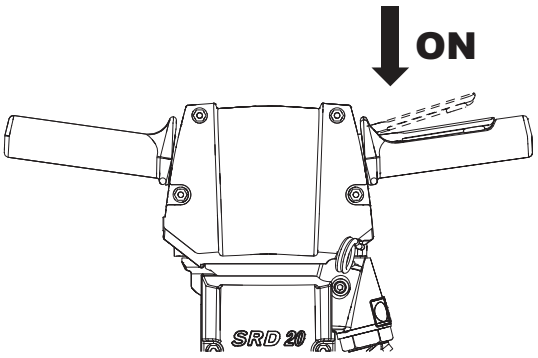
Start and stop

Starting the rock drill



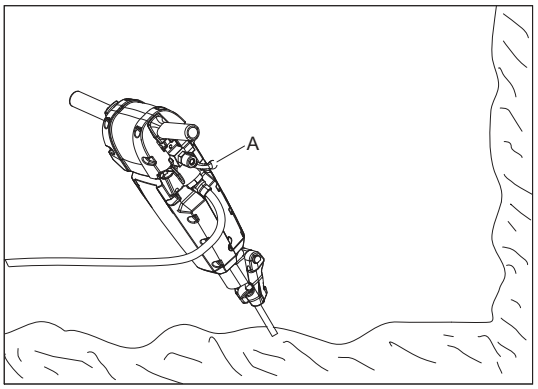
SRD 20

1. Open the main valve for compressed air.
2. Align the rock drill so that the drill steel touches the required collaring point.
3. Slightly press the start and stop device to activate SOFSTART, in order to get a good grip on the surface from the beginning.
4. Collar the hole with reduced feed force.



SRD 20

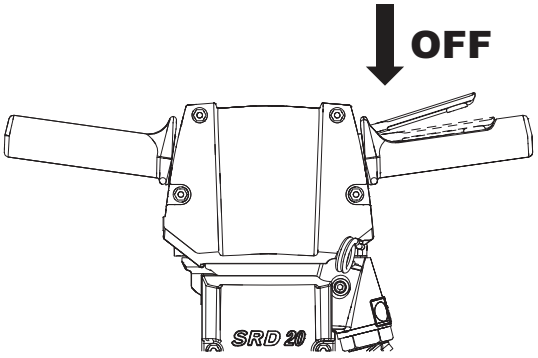
1. Continue to press the start and stop device all the way down to activate full power of the pneumatic rock drill.



SRD 25

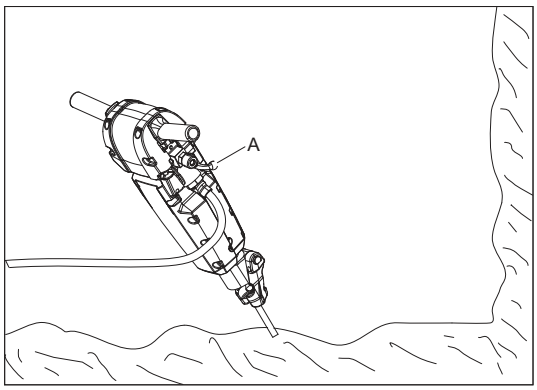
1. Open the main valve for compressed air.
2. Align the rock drill so that the drill steel touches the required collaring point.
3. Move the throttle lever (A) forward a little, which will start the percussion and rotation.
4. Collar the hole with reduced feed force.
5. Move the throttle lever (A) fully forward once the drill steel has gained a secure footing in the rock.

Stopping the rock drill



SRD 20

1. Stop the pneumatic rock drill by releasing the start and stop device. The start and stop device will automatically return to the stop position.



SRD 25

1. Pull the throttle lever (A) backwards to the closed position, this will stop the percussion and rotation.

Operating

Drilling

- Use protective shoes, gloves, helmet, ear protectors, impact resistant eye protection with side protection and respiratory protection.
- Stand firmly and always hold the machine with both hands.
- Hold the inserted tool firmly against the work surface before starting the machine.

When taking a break

- During all breaks you must place the machine in such a way that there is no risk for it to be unintentionally started. Make sure to place the machine on the ground, so that it can not fall.
- In the event of a longer break or when leaving the workplace: Switch off the power supply and then bleed the machine by activating the start and stop device.

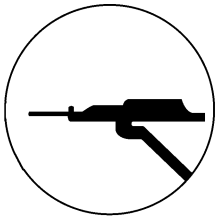
Maintenance

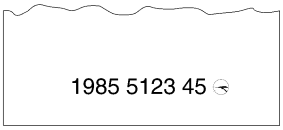
Regular maintenance is a basic requirement for the continued safe and efficient use of the machine. Follow the maintenance instructions carefully.

- Before starting maintenance on the machine, clean it in order to avoid exposure to hazardous substances. See “Dust and fume hazard”.
- Use only authorised parts. Any damage or malfunction caused by the use of unauthorised parts is not covered by warranty or product liability.
- When cleaning mechanical parts with solvent, comply with appropriate health and safety regulations and ensure there is satisfactory ventilation.
- For major service of the machine, contact the nearest authorised workshop.
- After each service, check that the machine's vibration level is normal. If not, contact the nearest authorised workshop.

Differences between original parts and pattern parts

When buying a part, the first thing to do is to verify that the part is an Atlas Copco part. Most parts can be identified.





Rock drill parts are normally marked with a part number and the Atlas Copco identity mark which is a circle with a rock drill. In a few cases the part is marked either with the circle only or the part number only.

Rubber and plastic parts are not normally marked.

Competitors that copy our parts often mark major, expensive parts. Some parts have only the part number, but some of them also have an identity mark in the form of the initials of the manufacturer's name. Part numbers on the pattern parts are mostly stamped by hand which results in irregularities. The part numbers stamped by Atlas Copco are regular and the individual figures are the same size. In addition the depth of the figures and the spacing between the figures in each group are the same.

Every day

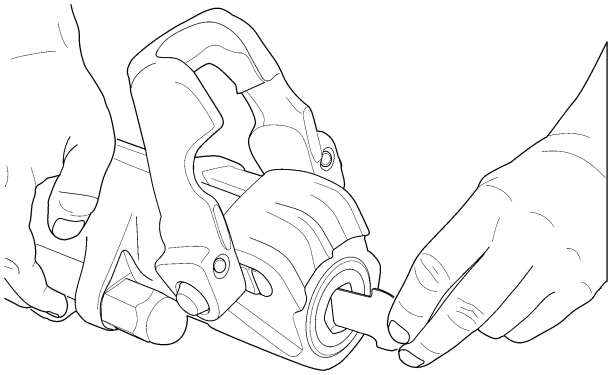
Before undertaking any maintenance or changing the insertion tool on pneumatic machines, always switch off the air supply and bleed the machine by depressing the start and stop device then disconnect the air hose from the machine.

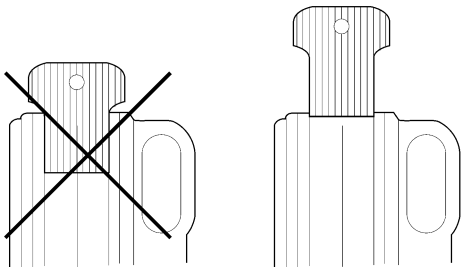
- Clean and inspect the machine and its functions each day before the work commences.
- Conduct a general inspection for leaks and damage.

- Check that the air inlet nipple is tightened and that the claw coupling is free from damage.
- Check the function of the throttle handle. Make sure that it moves freely up and down.
- Check the function of the retainer. Make sure that it locks the drill steel.
- Change damaged parts immediately.
- Replace worn components in good time.
- Check the through bolts of the machine. Make sure that they are tightened.
- If the machine is equipped with a silencer, check for damage.

Checking for wear

1. Check the wear in the chuck bushing using the Atlas Copco **(3091 0038 00)** gauge (22 mm).
   If the wear limit has been exceeded, the drill steel shank will wear more quickly, or become deformed. This will lead to stoppages and increased drill-steel consumption.



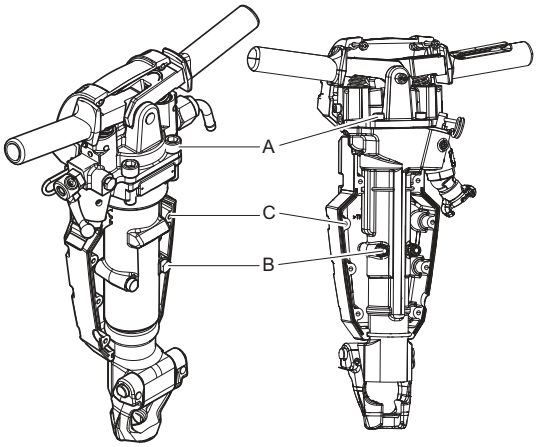


2. Check the hoses, couplings and controls for leakage and damage.
3. Check that the rock drill is receiving enough lubrication. Fill the lubricator if necessary.
4. Drain the water separator.

Periodic maintenance

After each operating period of approximately 100 working hours or three times a year the machine must be dismantled and all parts be cleaned and checked. This work must be performed by authorized staff, trained for this task.

Tightening torque



SRD 25, SRD 20

A. Backhead bolt, (50 Nm, 37 ft.lbf)
B. Intermediate part pin, for SRD 20 (25 Nm, 18 ft.lbf) and for SRD 25 (30 Nm, 22 ft.lbf)
C. Silencer, (8-10 Nm, 6-7 ft.lbf)

Damage patterns

Worn or broken parts must always be studied carefully before they are replaced. They can give important information about the condition of the drill and about the way it is used and maintained.

Problem	Cause
Steel parts are a bluish colour	The parts have been subjected to excessive heat. This can be caused by insufficient lubrication or idling
Steel parts have small almost microscopic fissures on the wear surfaces	See above
Irregular cavities on the surface of bronze parts	See above
Cutting marks	Secondary damage
	Dirt inside the drill
	Interior misalignment due to uneven tension of the side bolts

Storage

- Always oil the rock drill well, before you put it into storage.
- Always store the machine in a clean and dry place.
- Make sure that no foreign matter enters the machine.
- Protect the chuck using the plastic plug provided with the machine. Alternatively, use a wooden plug or a clean piece of cotton waste.
- In the case of long-term storage, pour a quantity of oil directly into the rock-drill's air intake and then turn on the air briefly. This will protect the machine from corrosion.

Disposal

A used machine must be treated and disposed of in such a way that the greatest possible portion of the material can be recycled and any negative influence on the environment is kept as low as possible, and in respect to local restrictions.

Technical data

Machine data

Model	Part number	Piston bore mm (in.)	Stroke length mm (in.)	Overall length mm (in.)	Weight kg (lb)	Shank dimension mm (in.)
SRD 20 E	8311 0320 10	55 (2.16)	60 (2.36)	590 (23.2)	24 (53)	22 X 108 (⅞ x 4¼)
SRD 25 E	8311 0325 10	65 (2.56)	59 (2.32)	600 (23.6)	27 (60)	22 X 108 (⅞ x 4¼)
SRD 25 E	8311 0325 09	65 (2.56)	59 (2.32)	600 (23.6)	27 (60)	25 X 108 (1 x 4¼)

Model	Air consumption (6 bar) l/s (foot ^{3}/min)	Impact rate (6 bar) Hz	Hole diameter mm (in.)
SRD 20 E	39 (83)	35	28-34 (1.10-1.34)
SRD 25 E	50 (106)	34	29-40 (1.14-1.57)
SRD 25 E	50 (106)	34	34-50 (1.34-1.97)

Noise and vibration declaration statement

Guaranteed sound power level **Lw** according to EN ISO 3744 in accordance with directive 2000/14/EC.

Sound pressure level **Lp** according to EN ISO 11203.

Vibration value **A** and uncertainty **B** determined according to EN ISO 28927-10. See table ”Noise and vibration data” for the values of A, B, etc.

These declared values were obtained by laboratory type testing in accordance with the stated directive or standards and are suitable for comparison with the declared values of other tools tested in accordance with the same directive or standards. These declared values are not suitable for use in risk assessments and values measured in individual work places may be higher. The actual exposure values and risk of harm experienced by an individual user are unique and depend upon the way the user works, in what material the machine is used, as well as upon the exposure time and the physical condition of the user, and the condition of the machine.

We, Construction Tools PC AB, cannot be held liable for the consequences of using the declared values, instead of values reflecting the actual exposure, in an individual risk assessment in a work place situation over which we have no control.

This tool may cause hand-arm vibration syndrome if its use is not adequately managed. An EU guide to managing hand-arm vibration can be found at http://www.humanvibration.com/humanvibration/EU/VIBGUIDE.html

We recommend a programme of health surveillance to detect early symptoms which may relate to vibration exposure, so that management procedures can be modified to help prevent future impairment.

Noise and vibration data

	Noise		Vibration	
	Declared values		Declared values	
	Sound pressure	Sound power	Three axes values	
	EN ISO 11203	2000/14/EC	EN ISO 28927-10	
Model	Lp r=1m dB(A) rel 20µPa	Lw guaranteed dB(A) rel 1pW	A m/s ^{2} value	B m/s ^{2} spreads
SRD 20 E	99	111	9.0	1.9
SRD 25 E	99	112	9.7	1.9

Accessories

Description	Remark	Quantity	Part number
CLG 30, European type	For both mineral and synthetic oil	1	8202 5102 39
BLG 30, European type	For mineral oil	1	8202 5102 05
VAM 01, European type	Airflow <50 l/s (106 ft3/min)	1	8092 0110 58
VAM 5A, European type	Airflow <120 l/s (254 ft3/min)	1	8092 0110 82
Rubber hose, pre-mounted	20 mm (3⁄4 in.)	1	9030 2047 00
X-LITE flat hose, universal	20 mm (3⁄4 in.)	1	9030 2115 00
Rock Drill AIR-OIL	4 l (1 gal)	1	8099 0201 04
Rock Drill AIR-OIL	10 l (2,5 gal)	1	8099 0201 10

EC Declaration of Conformity

EC Declaration of Conformity (EC Directive 2006/42/EC)

We, Construction Tools PC AB, hereby declare that the machines listed below conform to the provisions of EC Directive 2006/42/EC (Machinery Directive), and the harmonised standards mentioned below.

Rock drills	Part number	Pmax (bar)
SRD 20 E	8311 0320 10	7
SRD 25 E	8311 0325 10	7
SRD 25 E	8311 0325 09	7

Following harmonised standards were applied:

- EN ISO 11148-5

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Place and date:
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