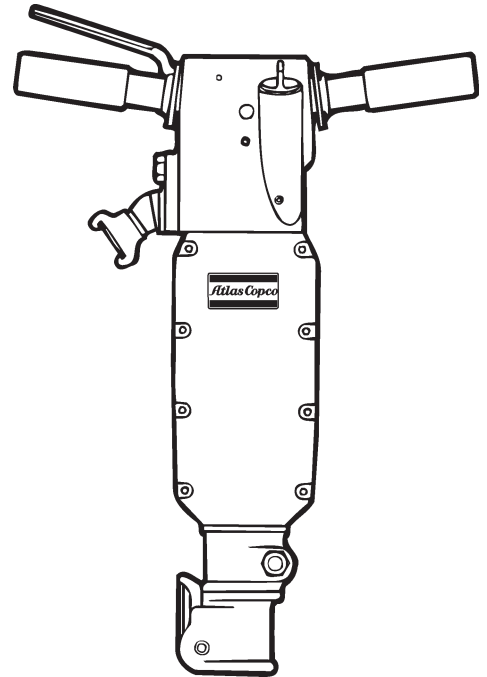


Safety and Operating instructions Pneumatic breakers

- Ⓡ **FR** Consignes de sécurité et d'utilisation
Brise-béton pneumatiques
- Ⓡ **DE** Sicherheits- und Betriebsvorschriften
Druckluft-Aufbrechhämmer
- Ⓡ **ES** Instrucciones de seguridad y funcionamiento
Rompedores neumáticos
- Ⓡ **PT** Instruções de Segurança e Utilização
Martelos demolidores pneumáticos
- Ⓡ **IT** Istruzioni per la sicurezza e l'uso
Demolitori pneumatici
- Ⓡ **NL** Veiligheids- en bedieningsinstructies
Pneumatische sloophammers
- Ⓡ **GR** Οδηγίες ασφάλειας και λειτουργίας
Πνευματικές σφύρες
- Ⓡ **FI** Turvamääräykset ja käyttöohjeet
Paineilmavasarat
- Ⓡ **DK** Sikkerhedsinstruktioner og betjeningsvejledning
Tryklufthamre
- Ⓡ **NO** Sikkerhetsinstrukser og bruksanvisning
Pneumatiske spett
- Ⓡ **SE** Säkerhets- och driftsanvisningar
Tryckluftsspett



CONTENTS

English	4
Français	22
Deutsch	40
Español	58
Português	76
Italiano	94
Nederlands	112
Ελληνικά	130
Suomi	148
Dansk	166
Norsk	184
Svenska	202

ENGLISH

Contents

SAFETY INSTRUCTIONS	6
Safety symbols used	6
Machine and tool operating hazards	6
Explosion and fire hazard	7
Electrical/Concealed object hazards	7
Projectile hazard	7
Noise hazard	7
Silica/Dust hazard	8
Vibration hazard	8
Machine modification hazard	9
Additional safety instructions	9
Protective equipment	9
Service and maintenance	9
Insertion tools	10
OPERATING INSTRUCTIONS	11
Design and function	11
Main parts	11
Signs and stickers on the machine	12
Noise level	12
Choosing the correct pneumatic breaker for a task	12
Installation	12
Connections between the compressed air source and the machine	12
Connecting a water separator	13
Fitting and removing the insertion tool	13
Actions before starting	13
Prevent freezing	13
Lubrication	13
Choosing insertion tool	14
Checking for wear	14
Start and stop	14
Starting a cut	15
Operation	15
When taking a break	16
Maintenance	16
General	16
Daily maintenance	16
Vibration-absorbing handles main parts	16
Periodic maintenance	16
Tightening torques	17
Actions before transport and storage	17
Troubleshooting	17
Disposal of used machine	17
Technical data	18
Noise & Vibration Declaration Statement	19
Additional Vibration Information	19
Noise and vibration data	20

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

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 risk of serious injury or death to yourself or others, read these safety instructions before operating the machine.

Post these safety instructions at work locations, provide copies to employees, and make sure that everyone reads the safety instructions before operating or servicing the machine.

Comply with all safety regulations.

Safety symbols used

The indications **Danger**, **Warning** and **Caution** have the following meanings:

- | | |
|--|---|
|  Danger | Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. |
|  Warning | Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. |
|  Caution | Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. |

Machine and tool operating hazards

Warning

Sudden or unexpected movement of the machine may occur during operating, which may cause injuries. Furthermore, losing your balance or slipping may cause injury. To reduce risks:

- ▶ 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.
- ▶ Stand firmly and always hold on to the machine with both hands.
- ▶ Do not start the machine when it is lying on the ground.
- ▶ Make sure that the handles are clean and free of grease and oil.

Warning

Unintended start of the machine may cause injury.

- ▶ Keep your hands away from the start and stop device until you are about to start work.

Warning

The insertion tool is exposed to heavy strains when the machine is used and after a certain amount of use the tool may break due to fatigue. If the tool breaks, there may be sudden or strong movements. Such sudden or strong movements may cause serious 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.
- ▶ Keep your feet away from the insertion tool.
- ▶ Do not 'ride' on the machine with one leg over the handle, since you could be seriously injured if the tool were to break suddenly.
- ▶ Check regularly for wear to the insertion tool, and check whether there are any signs of damage or visible cracks.

Warning

An incorrect dimension of the insertion tool's shank can result in that the insertion tool is lost or is slipping out during operation. An insertion tool that is lost or slips out can cause personal injury.

- ▶ Before inserting the work tool, make sure that the shank's dimensions are the ones that should be used in the machine.
- ▶ Insertion tools without a collar may not be used.

Warning

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

- ▶ Once the insertion tool has been mounted and locked, the locking function must be checked by pulling the insertion tool outwards powerfully.
- ▶ Make sure that the tool is fully inserted and the tool retainer is in the locked position before the machine is started.
- ▶ Never point the insertion tool at yourself or anyone else.

Warning

Starting the machine while changing the insertion tool may cause personal injury.

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

Warning

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

- ▶ Check that the compressed air hose and the connections are not damaged.
- ▶ Check that all compressed air connections are properly attached.
- ▶ Never attempt to disconnect a compressed air hose that is pressurized. First switch off the compressed air by the compressor and then bleed the machine by activating the start and stop device.

Warning

If the oil plug on a pressurized machine comes loose it can blow out and cause personal injury.

- ▶ Before loosening the oil plug, the compressed air must be switched off by the compressor and the system must be bled.
- ▶ Before starting the machine, check that the threads on the oil plug and in the lubricator are not damaged or worn out.
- ▶ Check that the O-ring on the oil plug is in place and that it is not damaged or worn out.

Explosion and fire hazard

Warning

Breaking and drilling and working with certain materials can cause sparks, which may ignite explosive gases and cause explosions. Explosions may cause serious injury or death.

To reduce such risk of explosion:

- ▶ Never operate the machine in any explosive environment.
- ▶ Do not use the machine near flammable materials, fumes or dust.
- ▶ Make sure that there are no undetected sources of gas.

Electrical/Concealed object hazards

Warning

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

- ▶ To reduce the risk of such injury or death, 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.

Warning

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

- ▶ Before you start breaking, check the composition of the material you are to work on.
- ▶ Watch out for concealed cables and pipes e.g. electricity, telephone, water, gas and sewage lines etc.
- ▶ If the tool seems to have hit a concealed object, switch off the machine immediately.
- ▶ Make sure that there is no danger before continuing.

Projectile hazard

Warning

During breaking, drilling or hammering, splinters or other particles from the worked material may become projectiles and cause personal injury by striking the operator or other persons.

- ▶ Use approved personal protective equipment, including impact resistant safety glasses with side protection, to reduce the risk of being injured by a projectile.

Noise hazard

Warning

High sound levels may cause permanent hearing loss.

- ▶ Use hearing protection in accordance with occupational health and safety regulations.

Silica/Dust hazard

Warning

Exposure to crystalline silica (sometimes called 'silica dust') as a result of breaking, drilling, hammering, or other activities involving rock, concrete, asphalt or other materials may cause silicosis (a serious lung disease), silicosis-related illnesses, cancer, or death. Silica is a major component of rock, sand and mineral ores.

To reduce silica exposure:

- ▶ Use proper engineering controls to reduce the amount of silica in the air and the build-up of dust on equipment and surfaces. Examples of such controls include: exhaust ventilation and dust collection systems, water sprays, and wet drilling. Make sure that controls are properly installed and maintained.
- ▶ Wear, maintain, and correctly use approved particulate respirators when engineering controls alone are not adequate to reduce exposure below permissible levels.
- ▶ Participate in air monitoring, medical exams, and training programs offered by your employer and when required by law.
- ▶ Wear washable or disposable protective clothes at the worksite; shower and change into clean clothes before leaving the worksite to reduce exposure of silica to yourself, other persons, cars, homes, and other areas.
- ▶ Do not eat, drink, or use tobacco products in areas where there is dust containing crystalline silica.
- ▶ Wash your hands and face before eating, drinking, or using tobacco products outside of the exposure area.
- ▶ Work with your employer to reduce silica exposure at your worksite.

Warning

Some dust, fumes or other airborne material created during use of the machine may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of such chemicals are:

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

To reduce your exposure to these chemicals, work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

Vibration hazard

Warning

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 other body parts, including debilitating and/or permanent injuries or disorders that may develop gradually over periods of weeks, months, or years. Such injury or disorder 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, 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, do not resume operating the machine 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.

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

- ▶ Let the tool do the job. Use a minimum hand grip consistent with proper control and safe operation.
- ▶ When the percussion mechanism is activated, the only body contact with the machine you should have is your hands on the handles. Avoid any other contact, e.g. 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 trigger engaged while extracting the tool from the broken work surface.
- ▶ Make sure that the inserted tool is well-maintained (including sharp, 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.
- ▶ 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.

- ▶ Do not 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.

Note! See the "*Noise & Vibration Declaration Statement*" for the machine, including the declared vibration values and "*Additional vibration information*". It is found at the end of these Safety and Operating instructions.

Machine modification hazard

Warning

Any machine modification not approved by Atlas Copco may result in serious injuries to yourself or others.

- ▶ **The machine must not be modified without Atlas Copco's permission.**
- ▶ **Use only original parts and accessories approved by Atlas Copco.**

Additional safety instructions

- ▶ Machines and accessories must only be used for their intended purpose.
- ▶ T-handle breakers weighing 15 kg or more may only be used for vertical breaking.
- ▶ Only qualified and trained persons may operate or maintain the machine.
- ▶ Learn how the machine is switched off in the event of an emergency.
- ▶ The maximum permissible air pressure for the machine must not be exceeded.
- ▶ Release the start and stop device immediately in all cases of power supply interruption.
- ▶ Always inspect the equipment prior to use. Do not use the equipment if you suspect that it is damaged.
- ▶ Always use your common sense and good judgment.
- ▶ Pay attention and look at what you are doing.
- ▶ Do not use the machine when you are tired or under the influence of drugs, alcohol or anything else that may affect your vision, reactions or judgment.
- ▶ Participate in safety and training courses.
- ▶ Never strike or abuse any equipment.

- ▶ Keep the machine and tools in a safe place, out of the reach of children and locked up.
- ▶ Make sure that all the attached and related equipment is properly maintained.
- ▶ Signs and stickers bearing important information regarding personal safety and care of the machine are supplied with every machine. Make sure that the signs are always legible. New signs and stickers can be ordered from the spare parts list.
- ▶ Make sure that no unauthorized personnel trespass into the working zone.
- ▶ Keep the workplace clean and free from foreign objects.
- ▶ Never point a compressed air hose at yourself or anyone else. To avoid the risk of getting injured, never use compressed air to blow e.g. dust, dirt etc. from your clothes.

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
- ▶ Protective boots

Service and maintenance

Regular maintenance is a prerequisite for keeping the machine safe and effective. Carefully follow the operating instructions.

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.

- ▶ Use only authorized parts. Any damage or malfunction caused by unauthorized parts will not be covered by Warranty or Product Liability.
- ▶ Change damaged parts immediately.
- ▶ Replace damaged and worn components in good time.
- ▶ For major service to the machine, contact your nearest authorised workshop.
- ▶ When cleaning mechanical parts with solvent, make sure to comply with current health and safety regulations and that there is satisfactory ventilation.

Insertion tools

- ▶ Keep the tools clean and in good condition. Regularly check the insertion tools, make sure that they are sharp and not worn out.

NOTE! The machine can be destroyed if you use incorrect insertion tools.

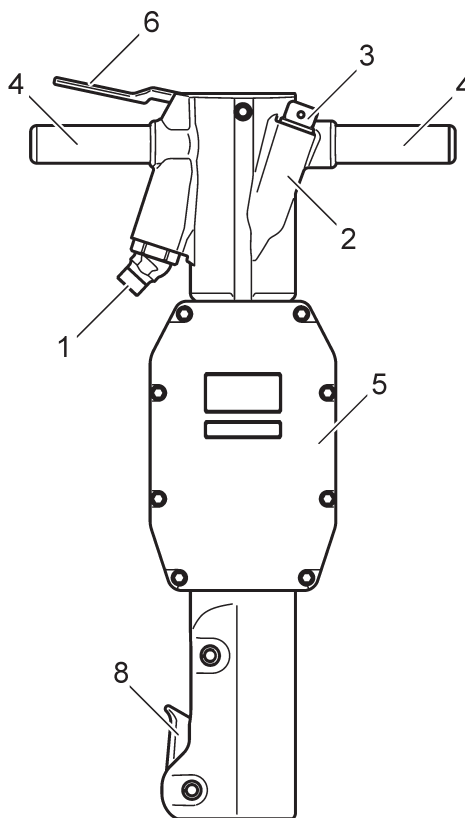
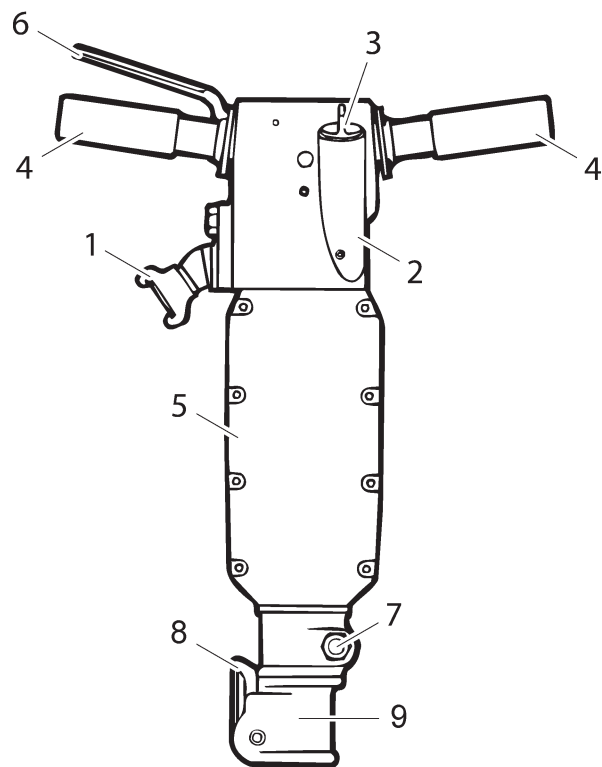
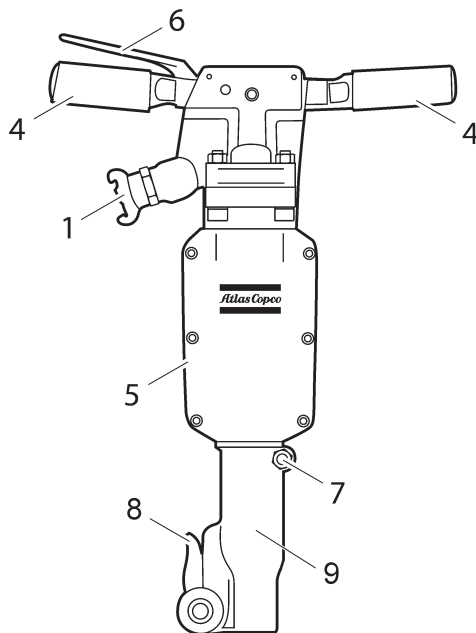
OPERATING INSTRUCTIONS

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

Design and function

TEX P is a range of hand-held, pneumatic breakers designed for medium to heavy demolition of materials such as concrete, asphalt and brickwork. The pneumatic breakers are designed for vertical use. No other use is permitted.

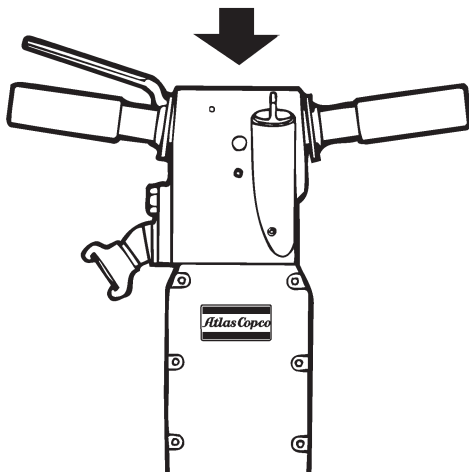
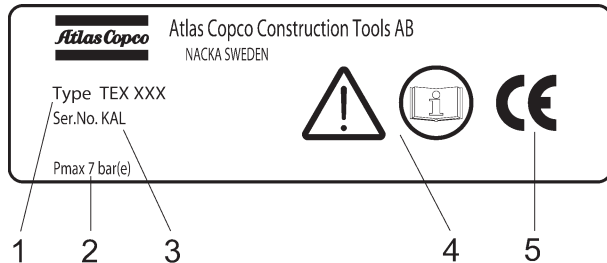
Main parts



1. Air inlet
2. Lubricator
3. Oil plug
4. Handle
5. Silencer
6. Trigger (start/stop device)
7. Bolt
8. Tool retainer
9. Front head

Signs and stickers on the machine

Signs and stickers with important information about personal safety and machine care are mounted on the machine. The signs and stickers must always be legible. New signs and stickers can be ordered from the spare parts list.



The data plate contains the following important information:

1. Machine type
2. Maximum permitted compressed air pressure
3. Serial number
4. 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.
5. The CE symbol means that the machine is CE-approved. See the CE declaration which is delivered with the machine for more information.

NOTE! Certain machines in this range are not CE-approved!

Noise level



The noise level sign displays the guaranteed noise level according to EC directive 2000/14/EC.

Choosing the correct pneumatic breaker for a task

It is important to choose the correct size of pneumatic breaker for the work to be performed.

A pneumatic breaker that is too small means that the work will take longer.

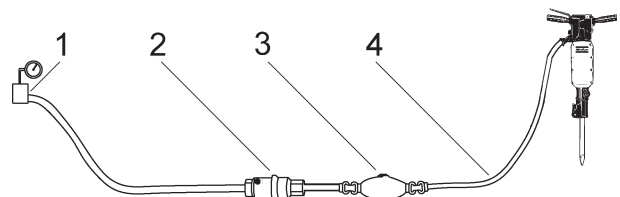
A breaker that is too big means that there must be frequent repositioning, which is unnecessarily tiring for the operator.

A simple rule for choosing the correct size of pneumatic breaker is that a normal sized piece of broken material should be removed from the workpiece within 10–20 seconds operation.

- ▶ If it takes less than 10 seconds a smaller pneumatic breaker should be selected.
- ▶ If it takes more than 20 seconds a larger pneumatic breaker should be selected.

Installation

Connections between the compressed air source and the machine



1. Compressed air source
2. Water separator (optional)
3. Lubricator (optional)
4. **NOTE!** Max. 3 meter compressed air hose between the lubricator and the machine.

- ▶ Check that you are using the correct recommended operating pressure, 6 bar (e).

- ▶ 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 meters, a hose with a minimum internal diameter of 19 mm (3/4") should be used. If the hose length is between 30 and 100 meters, a hose with a minimum internal diameter of 25 mm (1") should be used.

Connecting a water separator

Use a sufficiently long hose between the compressor and the water separator to ensure that the water vapor is cooled and condenses in the hose before reaching the water separator. If the ambient temperature is below 0°C the hose must not be so long that the water freezes in the hose before reaching the water separator.

Fitting and removing the insertion tool

Whenever fitting/removing the insertion tool the following instructions must be observed:

1. To prevent an accidental start: switch off the air supply and disconnect the machine from the power source. Bleed the machine by pressing the start/stop device.
2. Before inserting a tool, lubricate the tool shank with grease.
3. Fit/remove the insertion tool.
4. Close the tool retainer and check the lock function by tugging the inserted tool sharply outwards.

Actions before starting

Prevent freezing

Ice formation in the silencer can occur when the ambient air temperature is 0–10°C 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.

The following actions can be taken to further counteract the risk of ice formation:

1. Use Atlas Copco AIR-OIL as a lubricant. AIR-OIL counteracts freezing.
2. Use a water separator.

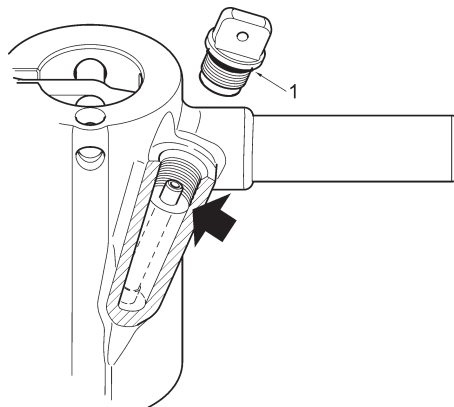
Lubrication

The lubricant is important for the machine's function and has a great impact on the useful service life. The pneumatic breaker is usually fitted with an integrated lubricator. If there is no integrated lubricator, a separate lubricator should be connected to the air hose. To guarantee good lubrication, the length of the air hose between the separate lubricator and the pneumatic breaker should not exceed 3 meters.

Use a synthetic lubricant such as Atlas Copco AIR-OIL or mineral oil with the properties recommended in the table below.

Lubricant	Temperature-range °C	Viscosity
AIR-OIL	-20 to +50	-
Mineral oil/ Syntetic oil	+15 to +50	ISO VG 46–68
	-20 to +15	ISO VG 22–32

Checking the level and filling lubricant:

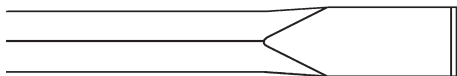


- ▶ Oil levels should be checked daily.
- ▶ The machine should be placed vertically when checking the level and filling lubricant.
- ▶ Wipe clean around the oil plug and remove it.
- ▶ Check that the threads are not damaged or worn out. Any part with damaged or worn out threads must be replaced.
- ▶ Check the O-ring (1). If the O-ring is missing or damaged it should be replaced immediately.
- ▶ See table for correct lubricant.
- ▶ Fill lubricant to the "lowest" thread.
- ▶ Tighten the plug firmly by hand only and wipe off any excessive oil.

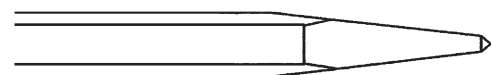
Choosing insertion tool

A correct insertion tool is a condition for a good operation. To avoid unnecessary machine damages, it is important to choose insertion tools with a high quality.

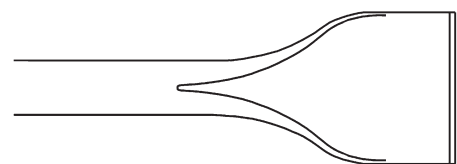
Recommended insertion tools are listed in the machine's spare parts list.



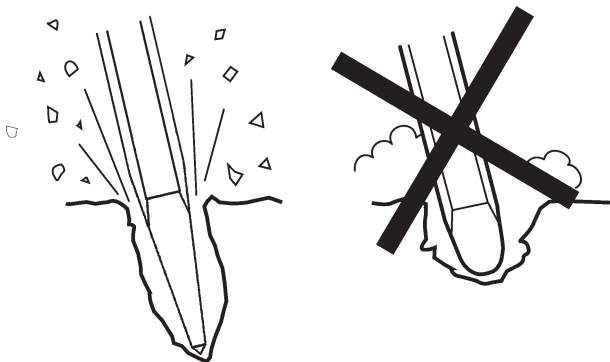
The narrow chisel should be used for demolition and cutting work in concrete and other types of hard material.



The moil point should only be used for creating holes in concrete and other types of hard material.



The wide chisel should be used in soft materials e.g. asphalt and frozen ground.

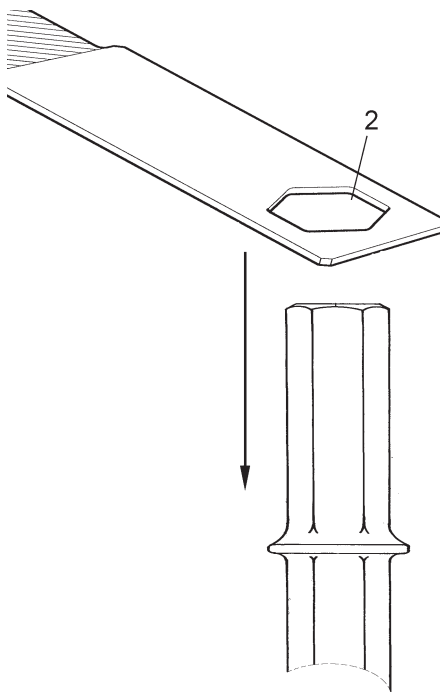


Always use a sharp tool to be able to work effectively. A worn out tool causes increased vibrations and the operation will take longer.

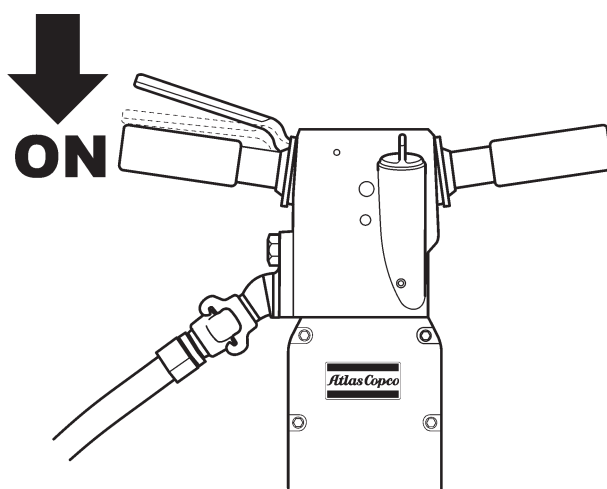
Checking for wear

Using an insertion tool with a worn out shank leads to increased machine vibrations. To avoid getting increased vibrations, check the shank for wear before the insertion tool is fitted in the machine.

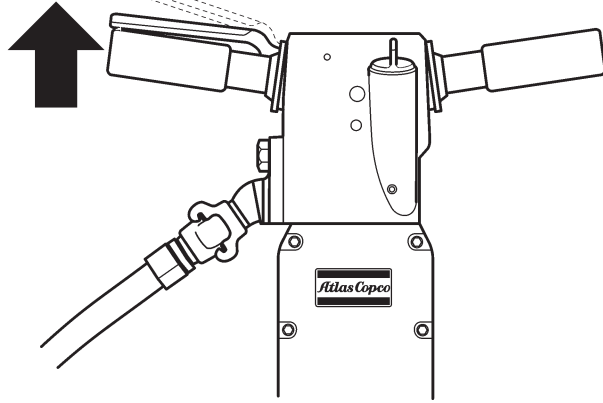
Use the gauge that corresponds to the insertion tool's shank dimension. If the gauge's hole (2) can be pushed down on the insertion tool's shank, this means that the shank is worn out and the insertion tool should be replaced.



Start and stop



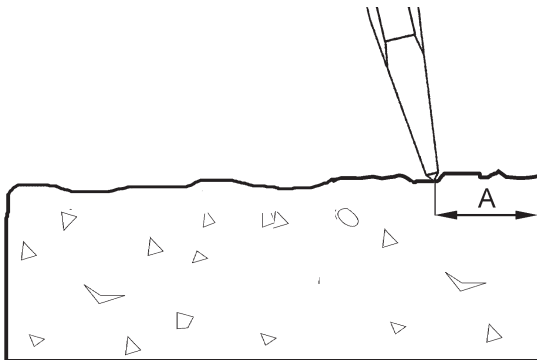
Starting position: The start and stop device is in the upper position. Start the pneumatic breaker by pressing down the start and stop device.

OFF

Stop the machine by releasing the start and stop device. The start and stop device returns automatically to the stop position.

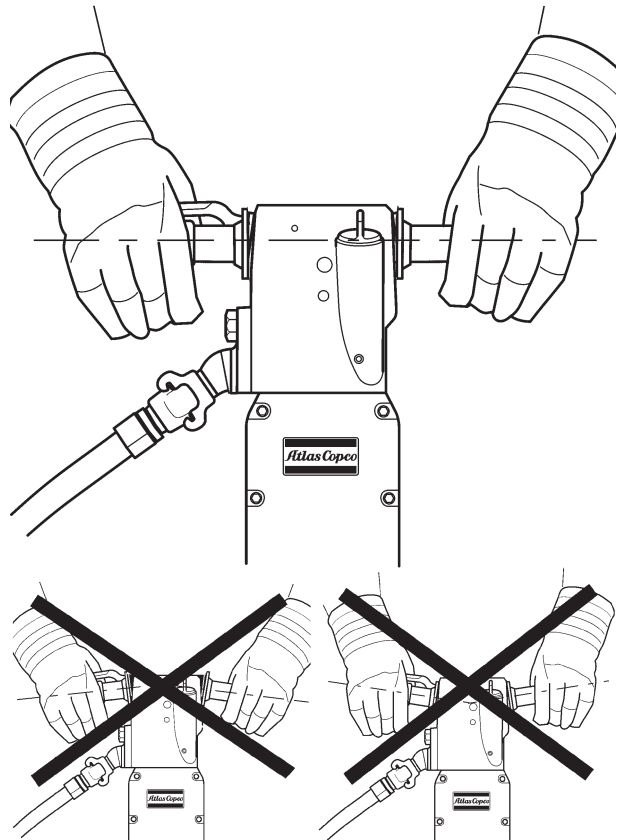
Starting a cut

- ▶ Stand steady and make sure that your feet are at a safe distance from the insertion tool.
- ▶ Press the machine against the surface of the workpiece before starting.
- ▶ Adjust the breaking distance (A) so that the insertion tool does not get stuck.
- ▶ Do not try to cut too big a bite.
- ▶ Trying to loosen an insertion tool that is stuck will expose the operator to unnecessary vibrations.



Operation

- ▶ Let the machine do the work; do not press too hard. The vibration-absorbing handle must absolutely not be pressed all the way down to the base.
- ▶ Pneumatic breakers with vibration-absorbing handles: The feed force should be adapted so that the handles are pressed down "half way". The best vibration damping and breaking effect is achieved at this position.



- ▶ Avoid working in extremely hard materials e.g. granite and reinforcing iron (re bar) which would cause substantial vibrations.
- ▶ Any form of idling, operating without insertion tool or operating with an uplifted machine must be avoided.
- ▶ When the machine is lifted, the start and stop device must not be activated.
- ▶ Check regularly that the machine is well lubricated.

When taking a break

- ▶ During all breaks you must put the machine away in such a way that there is no risk for it to be unintentionally started.
- ▶ In event of a longer break or when leaving the workplace: Switch off the compressed air supply and then bleed the machine by activating the start and stop device.

Maintenance

General

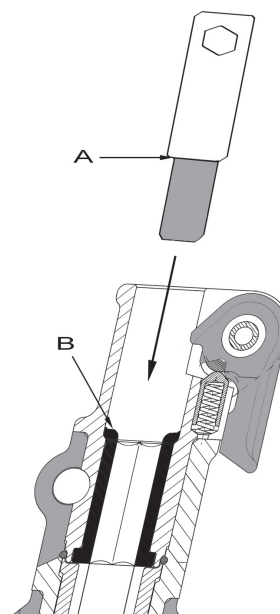
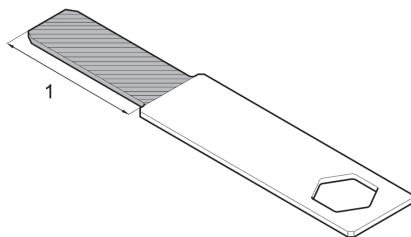
Regular maintenance is a fundamental condition for the machine to continue to be a safe and efficient tool.

Daily maintenance

- ▶ Clean and inspect the machine every day.
- ▶ Check the tool retainer for wear and function.
- ▶ 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 regularly that the oil plug is tightened.
- ▶ Check that the O-ring on the oil plug is undamaged and that it closes tightly.
- ▶ Check the threads in the machine lubricator and on the oil plug. Make sure they are not damaged or worn out.

For the machine to maintain the specified vibration values, this should always be checked:

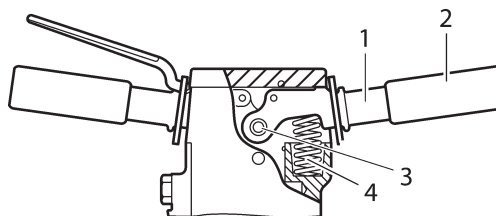
- ▶ Too big a clearance between the insertion tool's shank and the chisel bushing will generate increased vibrations. To avoid getting exposed to excessive vibrations, check the chisel bushing for wear every day. Use the gauge that corresponds to the insertion tool's shank dimension. If the gauge's part (1) can be pushed fully into the chisel bushing, the bushing is worn out and must be replaced! See also "Checking for wear" for checking the insertion tool's shank.



If it is possible to push the gauge to point A fully into the chisel bushing (point B) then the chisel bushing or fronthead should immediately be replaced.

- ▶ If the machine is equipped with vibration-absorbing handles their function should be checked.
- ▶ Check that the handles are moving freely (up – down) and do not jam.
- ▶ Check that the springs are not damaged, see "Vibration-absorbing handles main parts".

Vibration-absorbing handles main parts

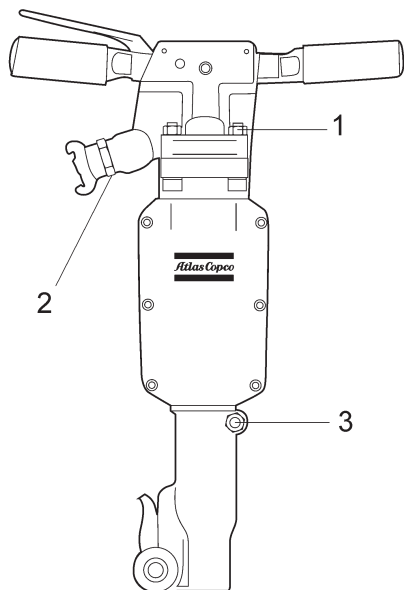


1. Handle
2. Handle sleeve
3. Bearing
4. Spring

Periodic maintenance

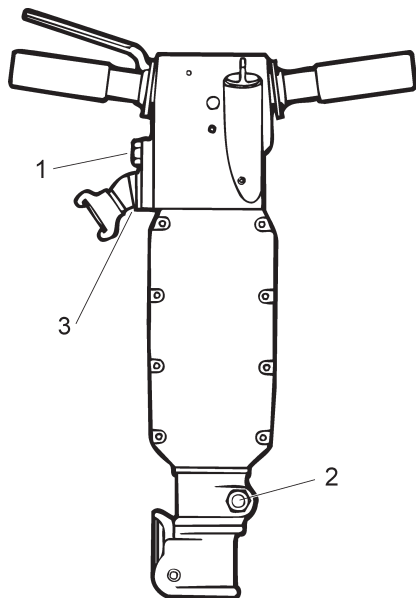
After each operating period of approximately 150 impact hours or twice a year the machine must be dismantled and all parts be cleaned and checked. This work must be performed by authorized staff, trained for this task.

Tightening torques



TEX 20-21

1. Nut, 140 Nm
2. Nipple, 250 Nm.
(Use Loctite 243)
3. Nut, 70 Nm



TEX P

1. Screw plug, 200 Nm
2. Nut, 350 Nm
3. Swivel nut
(Use loctite 243)

Actions before transport and storage

- ▶ Make sure that the machine is properly cleaned before storage.
- ▶ Pour approx. 5 cl of oil directly into the air inlet nipple, connect the machine to the compressed air supply and start it for a few seconds.
- ▶ Always store the machine in a dry place.

Troubleshooting

If the pneumatic breaker does not start, has low power or uneven performance, check the following points.

- ▶ Check that the insertion tool being used has the correct shank dimension.
- ▶ Check that the pneumatic breaker is getting the correct amount of lubricant.

NOTE! Too much lubrication can cause starting problems, low power or uneven performance.

- ▶ Check that the compressed air system supplies the machine with sufficient air pressure to get full power.
- ▶ Check the dimension and length of the air hose are according to the recommendations. See "Installation".
- ▶ If there is a risk of freezing, check that the machine's exhaust ports are not blocked.
- ▶ If the machine function is still not satisfactory after this procedure, contact an authorised service workshop.

Disposal of used machine

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.

Technical data

TEX Type	Weight kg	Length mm	Impact freq. Hz	Air Consumption l/s	Shank mm
14PS	14.5	565	25.0	23	22x82.5 25x108
14PS US	14.5	565	25.0	23	25x108
15PE	17.5	565	25.0	23	22x82.5 25x108
15PE US	17.5	565	25.0	23	25x108
18PS	20.0 21.0	615 660	24.5 24.5	25 25	25x108 28x152/28x160
18PS US	20.0 20.0 21.0	615 615 660	24.5 24.5 24.5	25 25 25	25x82.5 25x108 28x152/28x160
19PE, 19PE US	23.0 24.0	615 660	24.5 24.5	25 25	25x108 28x152/28x160
20PS	20.0	635	20.0	23	25x108
20PS-1	20.0	600	20.0	23	R25x75SQ
21PE	21.0	650	20.0	23	25x108
21PE-1	21.0	615	20.0	23	R25x75SQ
22PS	23.5 24.5 24.5	645 690 690	22.0 22.0 22.0	30 30 30	25x108 28x152/28x160 32x152/32x160
22PS US	24.5	690	22.0	30	28x152/28x160
23PE	26.5 27.5 27.5	645 690 690	22.0 22.0 22.0	30 30 30	25x108 28x152/28x160 32x152/32x160
23PE US	27.5	690	22.0	30	28x152/28x160
27PS, 27PS US	28.5 28.5	725 725	20.5 20.5	32 32	28x152/28x160 32x152/32x160
28PE, 28PE US	31.5 31.5	725 725	20.5 20.5	32 32	28x152/28x160 32x152/32x160
32P	32.0 32.0	745 745	20.0 20.0	34 34	28x152/28x160 32x152/32x160
32PS	34.0 34.0	745 745	20.0 20.0	34 34	28x152/28x160 32x152/32x160
33PE, 33PE US	37.0 37.0	745 745	20.0 20.0	34 34	28x152/28x160 32x152/32x160
39P	37.0 37.0	750 750	18.5 18.5	40 40	28x152/28x160 32x152/32x160
39PS	39.0 39.0	750 750	18.5 18.5	40 40	28x152/28x160 32x152/32x160
40PE, 40PE US	42.0 42.0	750 750	18.5 18.5	40 40	28x152/28x160 32x152/32x160
P60	31.0 31.0	690 690	25.0 25.0	36 36	28x152/28x160 32x152/32x160
P60S	33.0 33.0	690 690	25.0 25.0	36 36	28x152/28x160 32x152/32x160
P90	41.0 41.0	710 710	21.0 21.0	40 40	28x152/28x160 32x152/32x160
P90S	43.0 43.0	710 710	21.0 21.0	40 40	28x152/28x160 32x152/32x160
All data at 6 bar (e)					

Noise & Vibration Declaration Statement

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

Sound pressure level **L_p** in accordance with EN ISO 11203

Vibration value **A** and uncertainty **B** in accordance with EN ISO 8662-5. Please see table "Noise and vibration data" for values 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 adequate 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 breaker is used, as well as upon the exposure time and the physical condition of the user, and the condition of the breaker.

We, Atlas Copco, 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.

Additional Vibration Information

This tool may cause hand-arm vibration syndrome if its use is not adequately managed.

This additional vibration information may be of assistance to employers in meeting their obligations (for example under EU Directive 2002/44/EC) to assess the risks to their workers arising from hand arm vibration associated with the use of this tool.

The vibration emission varies greatly with task and operator technique. The declared vibration value relates to a single axis on the non-trigger handle and much higher vibration levels may occur at other hand positions or measurement directions.

We believe that normal intended use of the tool will usually produce three axes vibration emissions in the range of **C** m/s² breaking concrete and in the range of **E** m/s² breaking asphalt (vibration total values, as defined in ISO 5349-1:2001) depending on the details of the task, but emissions outside this range may occur for some applications.

A figure of **D** m/s² for concrete and **F** m/s² for asphalt is probably a useful average emission value when, for example, estimating the likely average exposures (and hence risk in accordance with EU Directive 2002/44/EC) of users performing a wide range of tasks within the intended use of the tool. We point out that application of the tool to a sole specialist task may produce a different average emission and in such cases we strongly recommend a specific evaluation of the vibration emission.

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

Noise and vibration data

TEX Type	Noise		Vibration Values					
			Single axis values		Three - axes values			
	Declared values		Declared		Additional information			
	ISO 11203	2000/14/EC	ISO 8662-5		Concrete		Asphalt	
	Lp measured r=1m dB(A) rel 20µPa	Lw guaranteed dB(A) rel 1pW	A m/s ² value	B m/s ² spreads	C m/s ² range	D m/s ² ave.	E m/s ² range	F m/s ² ave.
14PS	93	105	17.4	8.0	-	-	-	-
15PE	93	105	3.4	2.7	7.4–8.1	7.8	4.6–5.3	5.0
18PS	94	106	11.7	5.5	-	-	-	-
19PE	94	106	3.0	2.4	4.9–5.2	5.1	3.2–4.0	3.6
20PS	93	105	16.2	7.5				
21PE	93	105	5.0	3.5	7.9–9.0	8.5	6.8–7.1	7.0
22PS	95	107	10.7	5.0				
23PE	95	107	2.6	2.2	4.8–5.4	5.1	3.4–4.5	4.0
27PS	94	106	11.3	5.3				
28PE	94	106	3.0	2.5	5.2–6.3	5.8	5.7–6.0	5.9
32PS	99	111	11.1	5.0				
33PE	99	111	2.7	2.3	4.2–4.8	4.5	4.1–4.4	4.3
39PS	99	111	13.0	6.0				
40PE	99	111	3.8	3.0	4.3–4.9	4.6	3.3–3.6	3.5
P60S	97	109	17.4	8.0				
P90S	99	111	15.2	7.0				



Any unauthorized use or copying of the contents or any part thereof is prohibited.
This applies in particular to trademarks, model denominations, part numbers and drawings.

© 2005 Atlas Copco Construction Tools AB, Stockholm, Sweden | No. 9800 0650 90 | 2005-12-07