Durstmüller

Bergbau- und Drucklufttechnik

BEDIENUNGS- und WARTUNGSANLEITUNG

Abbauhämmer

K8PE / K10PE / K12PE

ACHTUNG

ES FOLGEN WICHTIGE SICHERHEITSHINWEISE.
DIESE BEDIENUNGSANLEITUNG VOR INBETRIEBNAHME DES GERÄTES UNBEDINGT LESEN.
ES LIEGT IM VERANTWORTUNGSBEREICH DES ARBEITGEBERS, DIE IN DIESEM HANDBUCH GEGEBENEN INFORMATIONEN DEM BEDIENER ZUGÄNGLICH ZU MACHEN.
DIE NICHTEINHALTUNG DIESER WARNHINWEISE KANN ZU PERSONEN- UND SACHSCHÄDEN SOWIE DEM VERLUST VON GARANTIEANSPRÜCHEN FÜHREN.

Ausgabe 101, 2013-11-10 WB

DURSTMÜLLER GmbH
Bergbau- und Drucklufttechnik
Salzburger Straße 59
4650 LAMBACH • Austria

Tel. +43 (0)7245 / 28250-0
Fax +43 (0)7245 / 28250-50
e-mail: office@dula.at
Internet: www.dula.at

ISO 9001:2008
Zertifikat Nr. Q1530818

reg. beim KG Wels FN 101833 f
Gesellschaftssitz Lambach
DVR 0506249
UID-Nr. ATU24908205

1. Maintenance, Cleaning and Lubrication

Only qualified and trained service staff are allowed to perform maintenance, service and repairs at sites that provide all the necessary technical and expert equipment.

Regular and careful cleaning is required to provide the required power and safety assurance for the pneumatic breaker functioning. Disassemble and clean the pneumatic hammer. Change all parts that are damaged or worn out. Tighten the screw connections.

This needs to be done at least once each month.

Regular lubrication prevents corrosion development, reduces wear and prolongs the life of hammer. For proper Lubrication Air Line Lubricator MAZ 2 is recommended.

For lubrication, apply pneumatic machine oil which is suitable for operation at a temporary ambient temperature as specified in the table below:

Ambient Temperature	Viscosity (ISO 3448)
- 30 to 0 -10 to +20 +10 to +50	ISO VG 32 - 68 ISO VG 68-100 ISO VG 100-150

When the hammer has been out of operation for a longer time, fill about 1 cm3 oil into air connection. Then put the hammer slowly into operation to allow oil to sufficiently and evenly lubricate all sliding surfaces of the hammer. Apply the same procedure if you intend to set the hammer out of operation for a longer period.

2. Tightening Moments for Screw Connections

Pick hammer LRK 8

Screw connections between:	Thread-Material	Tightening moment
cylinder and front head (1 screw)	M12-10.9	85 Nm

3. Troubleshooting

The following table shows possible causes for operation troubles. Only qualified and trained service staff are allowed to perform maintenance, service and repairs at sites that provide all the necessary technical and expert equipment.

Trouble	Possible causes	Corrective actions
Reduced power of blows	Irregular shank dimensions	Use the right shank
	Insufficient lubrication	Fill up the oiler or use the right oiler.
	A too low pressure or air quantity	Check the air hose for leakage possibility, check and - if necessary - increase the working pressure or air quantity. See Instructions for the Use of Pneumatic Hammers!
Hammer does not operate	Silencer is blocked with ice	Use antifreeze oil.
	Piston is blocked with dirt	Check if piston or cylinder contain scratches. If there are scratches, polis them out.
Irregular blows	Handle is not properly screwed down	Screw down the handle and check other screw connections as well. If necessary, screw them down properly.

4. Disassembly

Do not carry out maintenance, service and repairs on a working site but in a properly equipped workshop.

Only qualified technical staff are allowed to perform maintenance, service and repairs.

IMPORTANT! If pneumatic hammer or its parts are clamped into a vice, it is necessary to provide vice jaws with a protective lining.

Disassembly of parts is evident from the drawing in the List of Spare Parts on page 5.

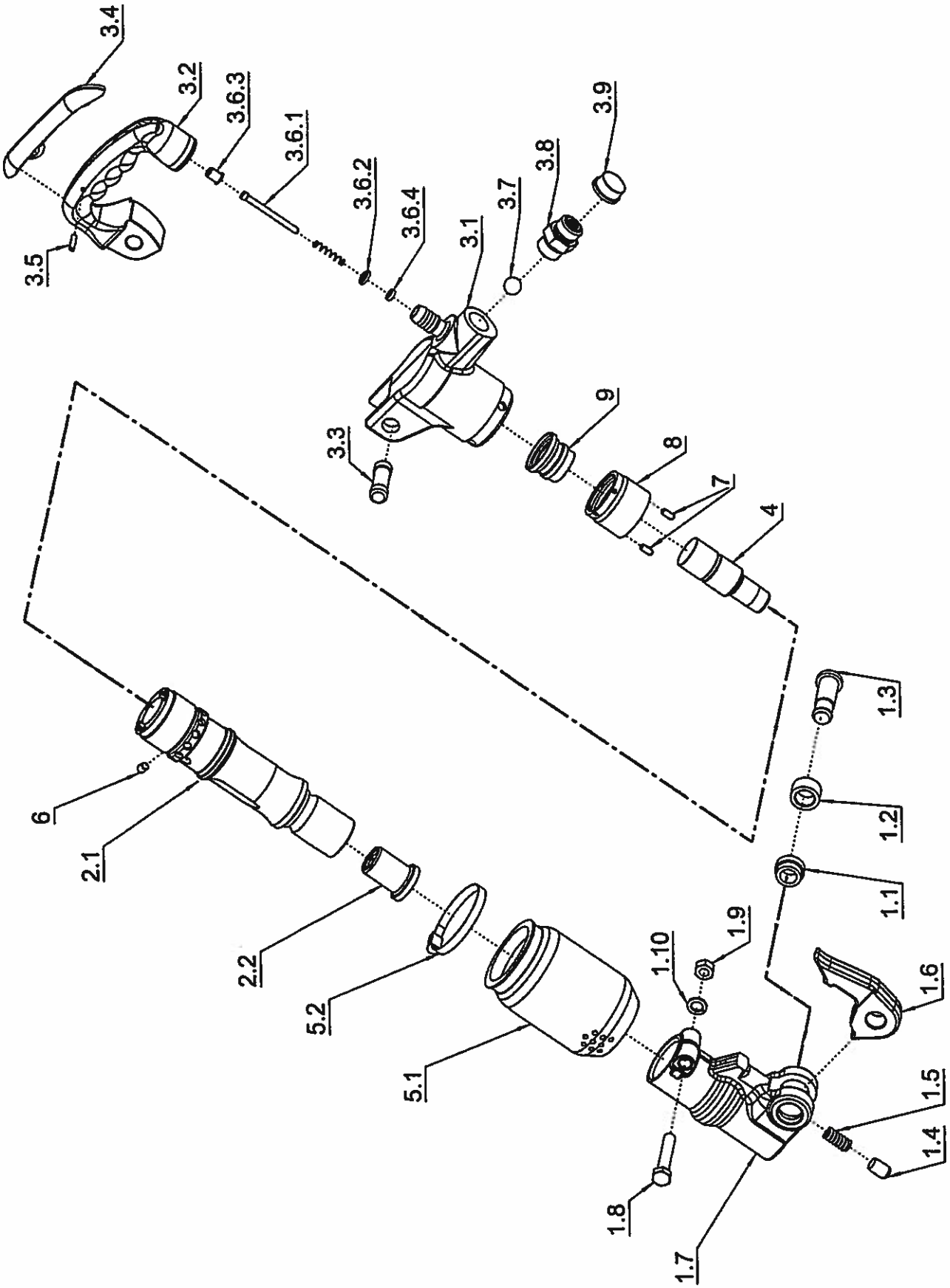
5. Assembly

In case of wear and damage, accurate visual inspection of movable parts and the inside of cylinder is necessary. Change all parts that are damaged or worn out.

IMPORTANT! All parts have to be cleaned and oiled before assembly.

Assembly of parts is evident from the drawing in the List of Spare Parts on page 5.

When assembly is finished, the hammer has to be tested. This is done on the working place by installing tools into the hammer. Select an adequate area where you can crush some concrete or asphalt. Before switching on the drill, take a safe position (consider all safety and other instructions which are seen in the instructions for operation). Apply the hammer for a short time (some minutes) and if the drill crushes the concrete or asphalt adequately, you can put it into regular operation.


3.4
3.2
3.6.3
3.6.1
3.6.2
3.6.4
3.1
3.7
3.8
3.9
3.5
3.3
9
8
7
4
6
2.1
2.2
5.2
5.1
1.10
1.9
1.3
1.2
1.1
1.6
1.5
1.4
1.8
1.7

PICK HAMMER **LRK8PE**
9 359 31

ITEM NO.	DESCRIPTION	PCS	ORDERING NO.
1	**Front head complete**	**1**	**9 359 02 001**
1.1	Bush	1	359 02 003
1.2	Bush	1	359 02 004
1.3	Retainer bolt	1	359 02 005
1.4	Pressure bolt	1	359 02 006
1.5	Pressure spring	1	055 08 108
1.6	Tool retainer	1	359 02 007
1.7	Front head	1	359 02 008
1.8	Hex. screw	1	021 05 072
1.9	Hex nut	1	022 25 012
1.10	Spring washer	1	023 50 012
2	**Cylinder complete**	**1**	**9 359 02 002**
2.1	Cylinder	1	359 02 009
2.2	Chisel bush	1	359 02 010
3	**Handle body complete**	**1**	**9 359 30 001**
3.1	Handle body	1	359 30 001
3.2	Handle body housing	1	612 39 33
3.3	Pin	1	359 30 002
3.4	Trigger	1	612 39 37
3.5	Pin	1	510 50 78
3.6	**Valve complete**	**1**	**89 359 30 003**
3.6.1	Needle valve	1	359 30 008
3.6.2	Intermediate part	1	359 30 006
3.6.3	Cover	1	359 30 005
3.6.4	Seal	1	046 52 665
3.6.5	Spring	1	359 30 007
3.7	Ball	1	055 08 124
3.8	Connection	1	359 01 019
3.9	Plug	1	415 00 001
4	Piston	1	359 02 001
5	**Silencer complete**	**1**	**89 359 02 003**
5.1	Silencer	1	359 01 024
5.2	Werba hose clip	1	055 11 08 76
6	Pin	1	359 01 003
7	Pin	2	024 54 118
8	Control valve housing	1	359 01 004
9	Control valve	1	359 01 005

Ordering No. 1 01 014I

7.2016

INSTRUCTIONS FOR THE USE OF PNEUMATIC PICKHAMMERS AND BREAKERS

S23 S5 COCK9 LRK7 LRK8 SRK12 SRK17 ECO 17 ECO 20 ECO 23 TRK30

READ CAREFULLY THIS MANUAL BEFORE STARTING, OPERATING, MAINTAINING OR REPAIRING PNEUMATIC PICKHAMMERS AND BREAKERS.

SPECIAL ATTENTION HAS TO BE DRAWN TO THE INSTRUCTIONS FOR SAFE OPERATION AND PREVENTION OF ACCIDENTS AS SPECIFIED IN CHAPTER 3, SAFETY REGULATIONS AND PREVENTION OF ACCIDENTS.
IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.

THE FOLLOWING SIGNAL INDICATES A MAJOR HAZARD:

ALSO READ MAINTENANCE INSTRUCTIONS BEFORE STARTING, MAINTAINING OR REPAIRING PNEUMATIC PICKHAMMERS AND BREAKERS.

The term "hammer" in this text refers to pickhammers and breakers shown on page 2 in these Instructions.

CONTENTS

1. Appearance of Hammers

2. Introduction and General Specification

These instructions contain 14 pages. The operator has to read them carefully and thoroughly before the first use of hammers. In addition, he also has to read the Maintenance Instructions for Pneumatic Hammers. Hammers can be used only in accordance with the instructions mentioned above. Keep the instructions in a safe and easy accessible place. They have to be within the operator's reach at all times.

Only operators who are legally old enough, trained and properly qualified are allowed to operate the hammers. The maintenance and repairs of hammers can be carried out by skilled and qualified persons at properly equipped places only.

In addition to safety regulations in these instructions, it is necessary to follow all legal and other binding regulations and legal stipulations that refer to safety at work, prevention of accidents, protection of persons, life and the environment. Always follow stricter regulations.

Hammer can be a source of hazard, in particular if its use and operation are not restricted to specified purposes, if it does not conform with regulations or if the hammer is used by a person who is not skilled and trained for this purpose. This could represent a risk of serious injury or even death of operator or other persons. It can cause damage on objects and property.

Signs and stickers on hammers bearing important information regarding staff safety are supplied with every new hammer and are legible. Make sure that the signs are always legible.

Air hose and connections are not within the scope of delivery of hammers. Exception are S5 hammers where the pipe with a connection are available as option.

3. Safety Regulations and Warnings

Apply the regulations for safe work.

WARNING: DANGER TO LIFE

When operating the hammers, various installations (gas, water, electric, telephone and other installations with poisonous chemicals, flammables, hot water, hot steam, etc.) can be damaged. Before starting, the hammer operator has to obtain accurate information on the location of installations. A damaged installation can represent danger to life. It can lead to electric shock, explosion, poisoning and burns.
The hammers are not insulated against electric shock.

WARNING: DANGER TO LIFE

Before using the hammer, make sure that the environment in which you intend to operate the hammer is free of all explosive gas mixtures. Some hammers are not suitable for use in explosive atmospheres. Any failure to observe this requirement can result in explosion, fire and severe damage or death of the operator and other persons in the intermediate and remote vicinity. Substantial material damage can occur. Some hammers are not suitable for use in explosive atmospheres.
If you want to use the hammer in such an environment, request a Declaration of conformity for the hammer for such an environment.

Before starting the operation, take all safety precautions. Secure the working area to prevent flying parts or accessories damage persons or things. Prevent endangering of persons at all times.

Materials containing asbestos, flint or other substances that are hazardous to health may permanently damage the respiratory system. Therefore always wear respiratory protection while operating the hammer.

Increased working pressure (air) increases the noise level and vibrations of hammers. This is harmful to health. Make sure that pressure does not exceed the values specified in these instructions.

Always wear approved protective clothing, safety shoes, safety glasses, anti-vibration safety gloves, helmets, hearing protection against noise and dust masks. Tie up long hair and cover it under a kerchief, hairnet or head-cover.

The individual worker should use the drill daily maximal so long as specified in the recommendations of the EU Directive 2002/44 / EC. Employers and employees are advised to read guide "EU Good Practice Guide HAV." before using the drill.

The ear protection should reduce noise for at least 25 to 36 dB.

When operating, hammer produces a lot of noise. Accordingly, always use corresponding hearing protection (ear covers or ear plugs). If the hammer has a sound-absorbing protection, make sure it is always in a faultless function.

Strong vibration produced while hammer is in operation is transmitted into the wrists, joints, arms and the body. This can gradually damage the operator's arms. Therefore wear protective damping gloves. As soon as you feel discomfort, tingling or pain in your arms or hands, stop using the hammer. Seek medical advice before resuming use.

Make sure that compressed air supply hose is properly connected to the machine. A loose hose can come completely off the tool and while whipping under pressure, it can injure the operator and others in the area. Make sure that compressed air supply hoses and their connections are in perfect condition and are not damaged. Be sure that all compressed air connections are tight. Attach safety cables to all hoses to prevent injury in case a hose is accidentally broken. To avoid the hazard of damage, never use compressed air to blow clothes free of dust. Never disconnect a pressurized hose. Always turn off the the air supply and bleed the hammer by pressing the trigger.

Before starting the hammer, make sure that tools are properly inserted and that the tool retainer is in the locked position. Keep body stance balanced and firm in a safe position. Only then you can switch on the hammer. Keep hands and fingers aways from the trigger before all this is done. While in operation, a tool can break. Therefore keep your limbs and body clear of the tool to prevent serious injuries.

Keep hands away from tools when operating the hammer. Vibrations are much stronger on tools which makes them more harmful. Tool breaking or sudden changes in hammer position man result in injuring fingers, wrists or the whole arm.

Always concentrate on your work! Use common sense! Never operate the machine when you are tired, under the influence of drugs, alcohol or other substances which might affect your vision, reaction ability or judgement.

When you do not use the hammer that is still connected to compressed air supply (compressor), make sure that it is properly laid down in order to prevent unexpected and uncontrolled switch-on. Third, not authorized and unqualified persons have to be prevented from accessing the working area at all times.

When you cease or finish working, switch off the shut-off valve on the compressed air supply first. To regulate the shut-off valve, follow the instructions produced by the producer of compressed air source. Then vent the supply hose running to the hammer and the hammer itself. Venting is made by depressing the trigger on the hammer handle.

If troubles occur during operation (for ex. irregular blows, power loss or if unusual noise and/or vibration appears), immediately switch off the hammer. Defect has to be eliminated before operation is resumed.

A release of trigger has to instantly stop the hammer operation. If the trigger does not function smoothly, stop the hammer operation at once. Defect has to be eliminated before operation is resumed.

Before changing tools, cleaning, servicing or repairing the hammer, always turn off the compressed air supply and disconnect the air supply hose first. The air supply to the hammer can be disconnected only after hose and hammer have been vented. Cleaning, servicing and repairs of the hammer can be carried out in workshops with adequate equipment by properly qualified and trained personnel only who strictly follow the instructions for maintenance and servicing. If defects cannot be eliminated with procedures described in the instructions, consult the producer or seller. This is the only possible way to ensure functioning, long life and safe operation of the hammer.

Do not point the hammer or tool at yourself or other people. Do not rest it on your foot.

Never "ride" the hammer with one leg over the handle. If the tool should break, the machine can injure you.

Do not use the hammer when there is clearance in the handle. The handle could break and injure your arms, legs and other parts of body. Do not use the hammer with loose screw connections. Hammer parts could break which would result in dangerous situations that could endanger the operator and others in the vicinity. Before resuming the hammer operation, all above mentioned defects have to be eliminated.

Do not use hammer as a lever to lift rocks or other objects.

Hammers, breakers and accessories are designed for demolition works in construction and building applications - concrete, stone, asphalt, etc. Plug hammer COCK9 is made for stone splitting and other works in dimensional stone business. Hammer SRK 12 PE SPLITTER is used exclusively for splitting the stone in combination with splitting tools. Any other use without the prior written consent of the producer is not permitted and is extremely dangerous.

Any modification of hammers and breakers without the prior written consent of the producer is not allowed. Failure to observe this procedure may result in safety hazards.

Replace worn and damaged parts in due time or additional damage may occur on hammers and breakers resulting in safety hazards that could endganger both the operator and other persons in the vicinity. When replacing parts, only genuine spare parts can be used. The use of any other parts can be dangerous.

4. Use of Hammers

4.1. Air Quality

Properly prepared compressed air is the most important single factor responsible for the service life of the hammer. Use dry (without moisture) and clean air (without dust particles and dirt). This is possible if you use adequate air filters. Air containing impurities, moisture or other corrosion substances can prevent a normal hammer operation and can even damage its elements.
Air filtering is followed by air oiling using a proper air oiler. For continuous intensive operation (8 hours a day), it is recommended to use the MAZ 20 lubricating device which has to be installed max. 3 m away from the hammer (hose length). For less intensive operation, you can also use a compressor-mounted oiler, but only if the air supply hose does not exceed 6 m in length.
Oil tank has to be always filled with a high-quality oil for heavy pneumatic machines with ignition temperature between 200 and 230 ° C. The use of oils with viscosity is recommended, as given in the table below.

Ambient Temperature [°C]	Viscozity (ISO 3448)
- 30 do + 10	ISO VG 32 - 68
- 10 do + 20	ISO VG 68 - 100
+ 10 do + 50	ISO VG 100 - 150

Oil has to contain additives which provide the specified oil film strength and additives which provide moisture emulsifying. The latter is particularly important in the environment where water and moist air are present. It is necessary to use a permanently non-corrosive oil suitable for use with steel and bronze with the contents of phosphorus as low as possible or without phosphorus at all. Every effort must be made to avoid oil contamination from water or impurities.

Check the level of oil before and during hammer operation. Prevent any lack of compressed air in the hammer since it could cause damage to its vital elements (piston, cylinder, etc.) in a very short time. This would dramatically shorten the life of hammer. Air pressure is of essential importance. It must never exceed the values shown in table (see chapter Technical Data).
Working pressure that is higher than specified will intensify the hammer's wear and increase the level of noise and vibrations which affects the health of operator and other people in the vicinity. If your source of air has a higher working pressure than specified in the chapter Technical Data, use air regulation and reduce the pressure correspondingly. To ensure a normal operation, the source of compressed air has to provide a sufficient air quantity which must be at least the same as air consumption on the hammer (see chapter Technical Data).

4.2. Connecting the Hammer to the Compressed Air Supply

Before connecting the hammer to air supply hoses, make sure that hoses are not under pressure. All air supply hoses have to be of adequate quality with a suitable section. Do not use any damaged, abraded or deformed hoses and connections. Periodical cleaning of hoses is necessary. All hoses and connections have to be clean and dry before they are attached to the hammer. Otherwise water, moisture, pipe scales and impurities may penetrate the hammer which can damage hammer parts and shorten its life.

4.3. Application

Hammers are meant for demolition works in the construction and building applications - asphalt, concrete and stone. Plug hammer COCK9 is made for stone splitting and other works in dimensional stone business. Hammer SRK 12 PE SPLITTER is used exclusively for splitting the stone in combination with splitting tools. When used it must be ensured that it doesn't come to pinching at inside part of the tool. Using hammers SRK 12PE SPLITTER for other purposes is strictly prohibited!
Always use tools with a shank that corresponds to data in the chapter Technical Data. Tools have to be free of damage. They have to be properly sharpened. Otherwise, hammer can get damaged and tools can break or jag. The hammer must never operate without tools inserted.

Oil presence in hammers is of vital importance for their operation and long life. Therefore, check for the presence of oil in the exhaust and shank part immediately after starting the hammer. If there is no oil present, examine air quality and eliminate all deficiencies before you put the hammer into operation again.
Switch on the pneumatic hammer by depressing the trigger on the handle. Shifting the trigger instantly opens the supply of compressed air into the hammer and starts the hammer operation.
In the normal use of a new breaker can occur overheating. This is not unusual. Therefore do not use full power in the first hours of operation but operate with half power only. Carefully check the temperature of hammer with your hand by holding it on the front part of cylinder (when you do this, the breaker must not operate) from time to time. As long as you feel no discomfort while holding your hand on cylinder, it is safe to continue with the operation. When the heat is great enough to cause discomfort, you have to let the hammer cool before you resume the operation. The lack of oil in the air can also cause overheating. Therefore check for oil presence in the shank. If there is no oil present, check air quality and eliminate all deficiencies before you start to operate the hammer again.
In case of functional problems during operation (for ex. irregular blows, loss of power or unusual noise or vibrations appear), switch off the hammer immediately. The trouble has to be eliminated before you continue to use the hammer.

Hold the hammer firmly against the work while in operation. Avoid idle blows at all cost as they increase wear and reduce the life of hammer, in particular of its piston.
To stop the hammer, release the trigger on the handle. This disconnects the supply of compressed air and the hammer operation stops.
In case of trouble in trigger functionining, immediately stop the pneumatic hammer. Eliminate trouble before you continue to use the hammer again.

When you stop working, close the shut-off valve on the compressed air source (compressor – to operate the shut-off valve, follow the instructions of the producer of the compressor) and vent the air hose and the hammer by depressing the trigger. You can disconnect the air hose and pull tools out of the hammer only when there is no more overpressure left in the air supply hose. When you do not use the hammer, clean, oil the outside surface and store the hammer in a dry place.
Periodically, disassemble the entire hammer and wash its elements in a nonflammable and nontoxic cleaning agent that conforms to valid health and safety regulations. Then dry and oil the elements well before you reassemble the hammer.

5. Technical Data

The information applies to S23, S5, COCK9, COCK9W, LRK7PE, LRK8PE, SRK12PE, SRK12FPE, SRK17PE, SRK17FPE, ECO17, ECO2, ECO23 and TRK30N types only.

Hammer	S23	S5	COCK9	COCK9 W
Weight [kg]	2,6	5,7	7,6	7,6
Length [mm]	270	405	345	345
Working pressure [bar]	6	6	6	6
No. of blows [min^{-1}] *	2200	2550	1500	1500
Air consumption [m3min-1]*	0.3	0.4	0.6	0.6
Sound pressure level Lp, r = 1 m (ISO 15744) [dB] **	87	91	91	91
Sound power level Lw (ISO 15744) [dB] **	101	105	105	105
Vibration level according to ISO 28927-10 3-axles [ms^{-2}] ***	12.5	7	7	7
Vibration level according to ISO 8662 1-axis [ms^{-2}] ***	13.7	14.5	12.6	12.6
Air connection	R3/4"	R3/4"	R3/4"	R3/4"
Shank [mm]	14,3/12,5 S15 conus 1:12	19 x 50 hexagona	15 - cone 1:12 hexagona	15 - cone 1:10 hexagona

Hammer	LRK7PE	LRK7PEA	LRK8PE	SRK12PE	SRK12PEA	SRK12FPE
Weight [kg]	8,3	9,5	9,9	12,9	13,7	12,9
Length [mm]	454	503 - 530	455	625	663 - 690	625
Working pressure [bar]	6	6	6	6	6	6
No. of blows [min-1] *	1650	1650	1650	800	800	800
Air consumption [m3min-1]*	1	1	1	1.2	1.2	1.2
Sound pressure level Lp, r = 1 m (ISO 15744) [dB] **	91	91	91	91	91	91
Sound power level Lw (ISO 15744) [dB] **	105	105	105	105	105	105
Vibration level according to ISO 28927-10 3-axles [ms-2] ***	13	-	13	13	7	13
Vibration level according to ISO 8662 1-axis [ms-2] ***	18.7	-	19.4	17.8	11.9	17.8
Air connection	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"
Shank [mm]	25 x 75 round	25 x 75 round	22 x 82,5 hexagonal	25 x 75 round	25 x 75 round	26 x 70 round

Hammer	SRK17PE	SRK17FPE	ECO17	ECO20	ECO23	TRK30
Weight [kg]	20,5	20,8	17,5	20,3	22,8	27.5
Length [mm]	611	637	565	660	670	668
Working pressure [bar]	6	6	6	6	6	6
No. of blows [min-1] *	1400	1400	1380	1070	920	1100
Air consumption [m3min-1]*	1,5	1,5	1,4	1,4	1,4	1.6
Sound pressure level Lp, r = 1 m (ISO 15744) [dB] **	94	94	94	95	95	96
Sound power level Lw (ISO 15744) [dB] **	108	108	108	109	109	110
Vibration level according to ISO 28927-10 3-axles [ms-2] ***	6.8	6.8	16.7	17.4	18.1	21.6
Vibration level according to ISO 8662 1-axis [ms-2] ***	8.7	8.7	12.3	14.6	15.3	20.2
Air connection	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"
Shank [mm]	22 x 82,5 hexagonal	25 x 108 hexagonal	22 x 82,5 hexagonal	25 x 108 hexagonal	25 x 108 hexagonal	32 x 152 hexagonal

* The value of the number of blows and air consumption can show a 15% deviation as a result of the method of measuring and deviations in the manufacture of hammers.

** The noise level value can show a deviation of 2 dB as a result of the method of measuring and deviations in the manufacture of hammers

*** The value of vibration level can show a 15% deviation as a result of the method of measuring and deviations in the manufacture of hammers.

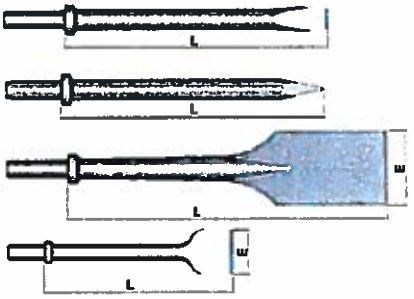
The level of vibrations on LRK7, LRK7P, LRK8, LRK8P, SRK12 and SRK12P types is by 100 % higher than with other hammer types.

The LRK7, LRK8, SRK12 and SRK17 types have on the average by 3 dB increased level of noise. We recommend to use the S23, S5, COCK9, COCK9W, LRK7PE, LRK8PE, SRK12PE, SRK12FPE, SRK17PE, SRK17FPE, ECO17, ECO20, ECO23 and TRK30 types.

WARNING: DANGER TO LIFE

The wear of tool chuck and/or shank part greately increases the level of nois and vibrations which could damage your hearing, arms and contribute to other illnesses. Therefore it is essential importance that you exchange worn tool chucks and tools in due time.

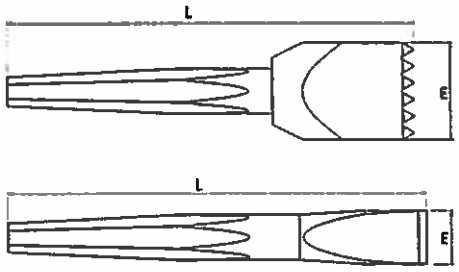
6. Tools



Tools	Hammer type	Shank [mm]	Length L [mm]	Width E [mm]	Weight [kg]	Order No.
Chisel	S5	19x50 hexagonal	260 260 250	25 25 60	0,80 0,80 0,80	407 00 125 407 00 123 407 00 124
	LRK8PE SRK17PE ECO17	22x82,5 hexagonal	350	-	1,40	407 00 082
	ECO20 ECO23	25x108 hexagonal	450	-	2,6	407 00 103
	TRK30	32x152 hexagonal	300	-	4,25	407 00 084
Moil point	S5	19x50 hexagonal	260	-	0,80	408 00 072
	LRK7PE	25x75 round	350	-	1,80	408 00 028
	SRK12PE SRK12FPE	25x75 round	450	-	2,20	408 00 029
	LRK8PE SRK17PE ECO17	22x82,5 hexagonal	450	-	2,25	408 00 030
	ECO20 ECO23	25x108 hexagonal	450	-	2,6	408 00 32
	TRK30	32x152 hexagonal	450	-	4,35	408 00 036
Spade	LRK8PE SRK17PE ECO17	22x82,5 hexagonal	425	100	3,30	409 00 019
	ECO20 ECO23	25x108 hexagonal	425	140	2,4	409 00 012
	TRK30	32x152 hexagonal	350	100	3,25	409 00 013

Data in Table refer to all hammer types.
We produce also tools of different shapes and lengths, if required.

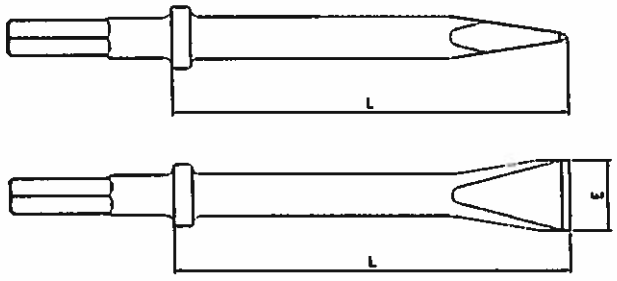
Tools for COCK9:



Tools	Hammer typ	Shank [mm]	Length L [mm]	Width E [mm]	Weight [kg]	Order No.
Chisel	COCK9	15 - cone 1:12 hexagonal	250	25	1	407 00 044
Bushing tool (square head)	COCK9	15 - cone 1:12 hexagonal	242	50x50	1,85	9 410 00 011 (410 00 014 + 410 00 015)

We produce also tools of different shapes and lengths, if required.

Tools for S23:



Tools	Hammer typ	Shank [mm]	Length L [mm]	Width E [mm]	Weight [kg]	Order No.
Moil Point	S23	14,3/12,5 S15 cone 1:12	150 250	- -	0,28 0.42	408 00 019 408 00 060
Chisel	S23	14,3/12,5 S15 cone 1:12	150 250	25	0,28 0,42	407 00 062 407 00 105

We produce also tools of different shapes and lengths, if required.

7. Declaration on Conformity

Producer
Oprema Ravne d.o.o.
Koroška cesta 14
2390 Ravne na Koroškem
Slovenia

Tel.: ++386(0)2 870 7940
Fax: ++386(0)2 870 7941

confirms that the pneumatic pickhammers and breakers

- **S23 with serial No. 1XXX,**
- **S5 with serial No. 1XXX,**
- **COCK9 with serial No. 1XXX,**
- **COCK9W with serial No. 1XXX,**
- **LRK7PE with serial No.1XXXX,**
- **LRK8PE with serial No. 1XXXX,**
- **SRK12PE with serial No. 1XXXX,**
- **SRK12PE SPLITTER with serial No. 1XXXX,**
- **SRK12FPE with serial No. 1XXXX,**
- **SRK17PE with serial No. 1XXXX,**
- **SRK17FPE with serial No. 1XXXX,**
- **ECO17 with serial No. 1XXXX,**
- **ECO20 with serial No. 1XXXX,**
- **ECO23 with serial No. 1XXXX,**
- **TRK30N with serial No. 1XXXX**

and their accessories conform to the Noise Emission Directive 2000/14/EC of 8 May 2000 and Machinery Directive 2006/42/EC of 17 May 2006.

Signature: Managing Director Darko Jevšnikar Date: March 2016

8. Warranty Conditions

The manufacture of pneumatic pickhammers and breakers at Oprema Ravne is based on extensive and rich experience in the use of high-quality material. Along with normal operation conditions, this guarantees a long service life of pickhammers and breakers.
As defects in material and manufacturing process are possible in spite of stringent inspection, we provide warranty for the product in accordance with the following general conditions:

- Warranty is in effect for 12 months from the day of purchase or 2000 working hours, whichever comes first.
- Warranty applies to defects in functioning that result from deficiency in material or manufacturing process.
- Producer can eliminate found deficiencies at his option (by improvement, replacement, repair, etc.).
- Transport costs are borne by the buyer.
- Replaced parts are owned by the producer.
- Producer shall not be held liable for any indirect damage and consequential loss in production.
- Warranty can be enforced only if you inform the hammer's producer of the defect immediately after its appearance; further use of the hammer is not allowed as it can endanger the safety and health of its operator and other persons in the surrounding area and it can further damage the hammer.

Warranty does not apply to:

- damage resulting from the use of incorrect hose connections and hoses
- damage resulting from improper use, transport or maintenance of the hammer
- normal wear of hammer elements
- damage on hoses and connections resulting from improper use and maintenance
- damage resulting from the use and storage of the hammer in aggressive environments (acid, salt, ...)

Warranty
Warranty rights expire if the owner is changed, non-genuine spare parts are used, the hammer is modified without a prior consent of the company Oprema Ravne d.o.o. or if maintenance is implemented by a person or entity who does not have the authorization by Oprema Ravne d.o.o.