



OPERATION AND MAINTENANCE MANUAL

CHIPPING HAMMER

K5P, K5 and K6



ATTENTION

**IMPORTANT SAFETY INFORMATION ENCLOSED. READ THIS MANUAL BEFORE
OPERATING TOOL.**

**IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN
THIS MANUAL INTO THE HANDS OF THE OPERATOR.**

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY

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A) Technical Data

		K5P	K5	K6
Weight	kg	4	5	5,7
Length	mm	353	355	453
Width	mm	206	206	206
Air Consumption	m ³ /min	0,25	0,7	0,55
Stroke Rate	1/min	2700	2580	2100
Working Pressure:	bar	4 - 6	4 - 6	4 – 6
Guar. Noise Level L _{WA}	dB	98	107	107
Vibration Level	m/s ²	8,0	9,27	9,87
Chuck Size	mm	hex 19x50	hex 19x50	hex 19x50

Chipping Hammers are designed for the disintegration of low to medium strength materials (e.g. concrete, masonry bituminous asphalt etc).

The manufacturer is not responsible for customer modifications of tools for applications on which he was not consulted.

B) GENERAL INSTRUCTIONS

1. Placing tool in service

- Always operate, inspect and maintain this tool in accordance with all regulations (local, state, federal and country), that may apply to hand held/hand operated pneumatic tools.
- For safety, top performance, and maximum durability of parts, operate this tool at 7.0 bar/700 kPa maximum air pressure at the inlet with 1/2" (13 mm) inside diameter air supply hose.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Be sure all hoses and fittings are the correct size and are tightly secured.
- Always use clean, dry lubricated air at 7.0 bar/700 kPa maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels. Replace any damaged label.

2. Using the tool

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.
- Keep hands, loose clothing and long hair away from rotating end of tool.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Keep body stance balanced and firm. Do not overreach when operating this tool.
- Tool accessories may continue to impact briefly after throttle is released.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Use accessories recommended by DULA.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.

NOTE

The use of other than genuine replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

Repairs should be made only by authorised trained personnel. Consult your nearest authorised service center.

NOTE

NOT FOLLOWING THE DIRECTIONS OF THIS MANUAL MAY RESULT IN HARM OF PERSONS OR MATERIAL DAMAGES AND THE LOSS OF ANY WARRANTY CLAIMS.

3. Specific Warnings

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Do not carry the tool by the hose.
- Keep body stance balanced and firm. Do not overreach when operating this tool.
- Operate at 7.0 bar/700 kPa maximum air pressure)
- When wearing gloves and operating models with inside trigger, always be sure that the gloves will not prevent the trigger from being released.

- Wear safety shoes, hard hat, safety goggles, gloves, dustmask and any other appropriate protective clothing while operating the tool.
- Do not indulge in horseplay. Distraction can cause accidents.
- Keep hands and fingers away from the throttle lever until it is time to operate the tool.
- Never rest the tool or chisel on your foot.
- Never point the tool at anyone.
- Compressed air is dangerous. Never point an air hose at yourself or co-workers.
- Never blow clothes free of dust with compressed air.
- Be sure all hose connections are tight. A loose hose not only leaks but can come completely off the tool and while whipping under pressure, can injure the operator and others in the area. Attach safety cables to all hoses to prevent injury in case a hose is accidentally broken.
- Never disconnect a pressurised air hose. Always turn off the air supply and bleed the tool before disconnecting a hose.
- The operator must keep limbs and body clear of the chisel. If a chisel breaks, the tool with the broken chisel projecting from the tool will suddenly surge forward.
- Do not ride the tool with one leg over the handle. Injury can result if the chisel breaks while riding the tool.
- Know what is underneath the material being worked. Be alert for hidden water, gas, sewer, telephone or electric lines.
- Use only proper cleaning solvents to clean parts. Use only cleaning solvents, which meet current safety and health standards. Use cleaning solvents in a well-ventilated area.
- Do not flush the tool or clean any parts with diesel fuel. Diesel fuel residue will ignite in the tool when the tool is operated, causing damage to internal parts. When using models with outside triggers or throttle levers, take care when setting the tool down to prevent accidental operation.
- Do not operate the tool with broken or damaged parts.
- Never start the tool when it is lying on the ground.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.

C) OPERATION

1. Lubrication

Always use an air line lubricator with these tools. Attach the lubricator as close to the tool as practical. After each two or three hours of operation and at the beginning of each work shift, if an air line lubricator is not used, disconnect the air hose and pour about 3 cc of oil into the air inlet of the tool.

Before storing the tool or if the tool is to be idle for a period exceeding twenty-four hours, pour about 3 cc of mineral oil into the air inlet and operate the tool for 5 seconds to coat the internal parts with oil.

Recommended environmentally friendly oils:

MOTOREX 190

ÖMV BIHYD M32

BP BIOHYD SE46

TOTAL HYDROBIO 46

SETUZA PRIMOL EKO PNEU

2. Air Supply and Connections

Always use clean, dry lubricated air. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool. An air line filter can greatly increase the life of an air tool. The filter removes dust and moisture.

Make sure all hoses and fittings are the correct size and are tightly secured.

The tool is shipped from the factory with 1/2" G male inlet thread and quick release coupling.

3. Accessory Installation

Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool or before performing any maintenance on this tool. Failure to do so could result in injury.

- 1) Screw out the retainer.
- 2) Insert chisel into the hammer. Pos. 3. or 2.
- 3) Screw on firmly the retainer.

4. General notes

- 10 kg is the recommended amount of downforce to apply to the tool when working. The amount of downforce is correct when the tool hits rhythmically, is comfortable to hold and works efficiently.
- Do not repair the tool at the work site. Always take the tool to a repair shop. Never drag the tool on the ground. The air port and other openings will become clogged with dirt and debris.
- Compressed air is dangerous. When blowing the line clear of dirt, wear eye protection and keep the air line directed toward a safe, clear area.
- Always blow out the air line before using to clear the line of dirt.
- Do not operate the tool unless the chisel is against the work since this will cause premature wear of parts and reduce the vibration isolation properties of the tool.
- Always break material to the point of "give." Cracking does not result in a complete break. Clear away rubble as it is broken since uncleared rubble blocks the point of "give."
- Always take the right size "bite" with the tool. When working new material, experiment to find the right size "bite" required for breaking that material efficiently.
- If "bites" are too big, the operator will try to pry with the tool. This could break the chisel.
- The tool is designed for demolition, not prying. Always use a pick for prying. If "bites" are too small, the operator will be working too slowly.

- If the chisel or accessory should become stuck, do not use excessive force or mechanical means on the tool to pull out the chisel. Break out the stuck chisel with a spare chisel or tool.

D) DISASSEMBLING THE CHIPPING HAMMER

1. General Instructions

- Clean the chipping hammer outer surface.
- Do not disassemble the chipping hammer any further than necessary to replace or repair damaged or worn parts.
- Whenever grasping a chipping hammer or a part in a vice, always use leather or copper-covered vice jaws to protect the surface of the part and help prevent distortion. Take extra care with threaded parts and housings.
- Do not remove any part that is a press fit in or on a subassembly unless the removal of the part is necessary for repairs or replacement.
- Do not disassemble the chipping hammer unless a complete set of O-rings is available for replacement.

2. Disassembly of the Retainer

Unscrew retainer (2 or 3) off the cylinder (7) and remove seal ring (4) from its groove in the cylinder.

3. Main Disassembly

Grip handle body (15) firmly in a vice (use leather or copper covered vice jaws).

Insert three or four pieces of thin sheet steel approximately 8 mm wide, beneath the retaining lip of the

damper moulding (5) (small diameter end). These will allow the rubber retaining lip of the damper to slide along over the groove in the cylinder and ease removal of the damper.

Slide off damper (9) over the cylinder exposing the cylinder flats.

Remove the handle from the vice, invert the chipping hammer and grip the flats of the cylinder in the vice. Use a pipe about 1.5 Meters long positioned through the loop of the handle to first loosen and then completely unscrew the handle assembly from the cylinder and remove.

– Warning –

Once the handle is unscrewed from the cylinder the piston and valve parts will be free to fall and could cause injury.

4. Cylinder Disassembly

Just K5 / K6:

Remove the cover (12). Slide off distribution ring (10) from cylinder (7) and remove spring (9). Allow piston (11) to slide out of the cylinder bore and be caught.

The nozzle (6) is pressed into the cylinder and retained with Loctite 601 – do not disassemble unless replacement is necessary.

5. Handle Disassembly

Grip handle body (15) in leather or copper covered vice jaws and unscrew quick release coupling (21), plug (16) and threaded socket (20).

The inlet bushing (21), plug (16) and threaded socket (20) can be removed if required though it is assembled into the handle using a high strength retainer and disassembly is not normally necessary.

Withdraw spring (19), and starting rod (18). Remove O-ring (17) from the starting rod (18). Remove the lever (14) by pressing or drifting out pin (13).

E) ASSEMBLY OF THE CHIPPING HAMMER

1. General Instructions

- Before assembly of the chipping hammer, clean all parts thoroughly and lubricate surfaces with a thin film of recommended oil – (see lubrication).
- Apply a thin film of O-ring lubricant to all O-rings before final assembly.
- It is recommended that the assembly of the nozzle (6) be carried out by the manufacturer or authorised distributor.
- **The existence of a piston air cushion should be determined.** Hold the cylinder vertically and allow the piston to drop down the bore small diameter first. An air cushion is present if the piston “bounces”, at the bottom of the cylinder and no metal to metal contact noise can be heard. If a cushion is not present contact your authorised repair centre for advise. **Material damages could result which are not covered by the warranty.**

2. Cylinder assembly

Grip the cylinder (7) vertically in a vice protected with leather or copper covered vice jaws.

Lubricate and insert the piston (11) small end first into the bore. Check for air cushion.

Just K5 / K6:

Insert spring (9) into the bore under distribution ring (10). Lubricate and slide the distribution ring (10) onto the cylinder and place the cover (12).

3. Handle assembly

Position lever (14) in its slot in the handle body and align the holes in each part.

Drift or press home the pin (13). Check the lever is free to move easily.

Grip the handle body (15) in a vice protected with leather or copper covered vice jaws.

Locate O-ring (17) on the starting rod (18).

Lubricate and insert starting rod (18) into the handle (15).

Replace the spring (19) and retain in place with threaded socket (20), apply Loctite 2701 to the threads of the socket and screw home fully. Replace the quick release coupling (21).

If the plug (16) has been removed, refit it into the handle body using Loctite 2701 and screw home fully.

Note: the position of the plug (16) and socket (20) with coupling (21) can be interchanged to suit your application.

4. Main assembly

Firmly grip the cylinder assembly vertically across the flats, in a vice protected with leather or copper covered vice jaws.

Just K5 / K6: Check for correct location of the spring (9), distribution ring (10) and cover (12).

Clean the threads on the top of cylinder (7) and in the handle (15), apply Loctite 601 on the cylinder thread. Carefully lower the handle assembly (15) onto the cylinder and engage the threads. Tighten the handle down by hand.

Fully tighten the handle using the 1,5 meters long pipe.

Slide the damper (5) down the cylinder until the damper retaining lip engages with the groove in the cylinder.

Replace the sealing ring (4) in its groove in the cylinder.

Screw the retainer (2 or 3) onto the cylinder assembly.

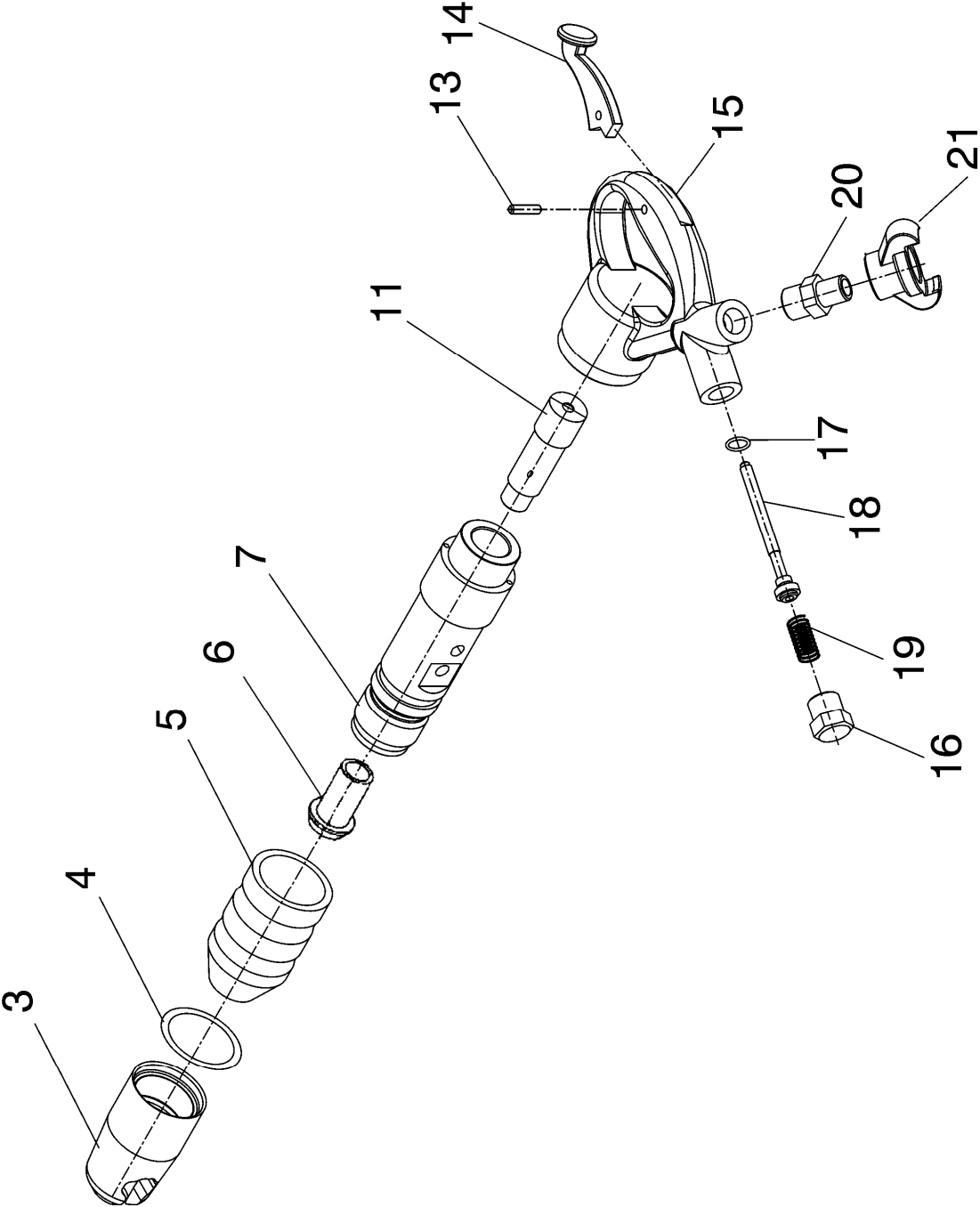
5. Assembly checks

Following service or repair the chipping hammer should be checked for correct operation before being sent back to the job site.

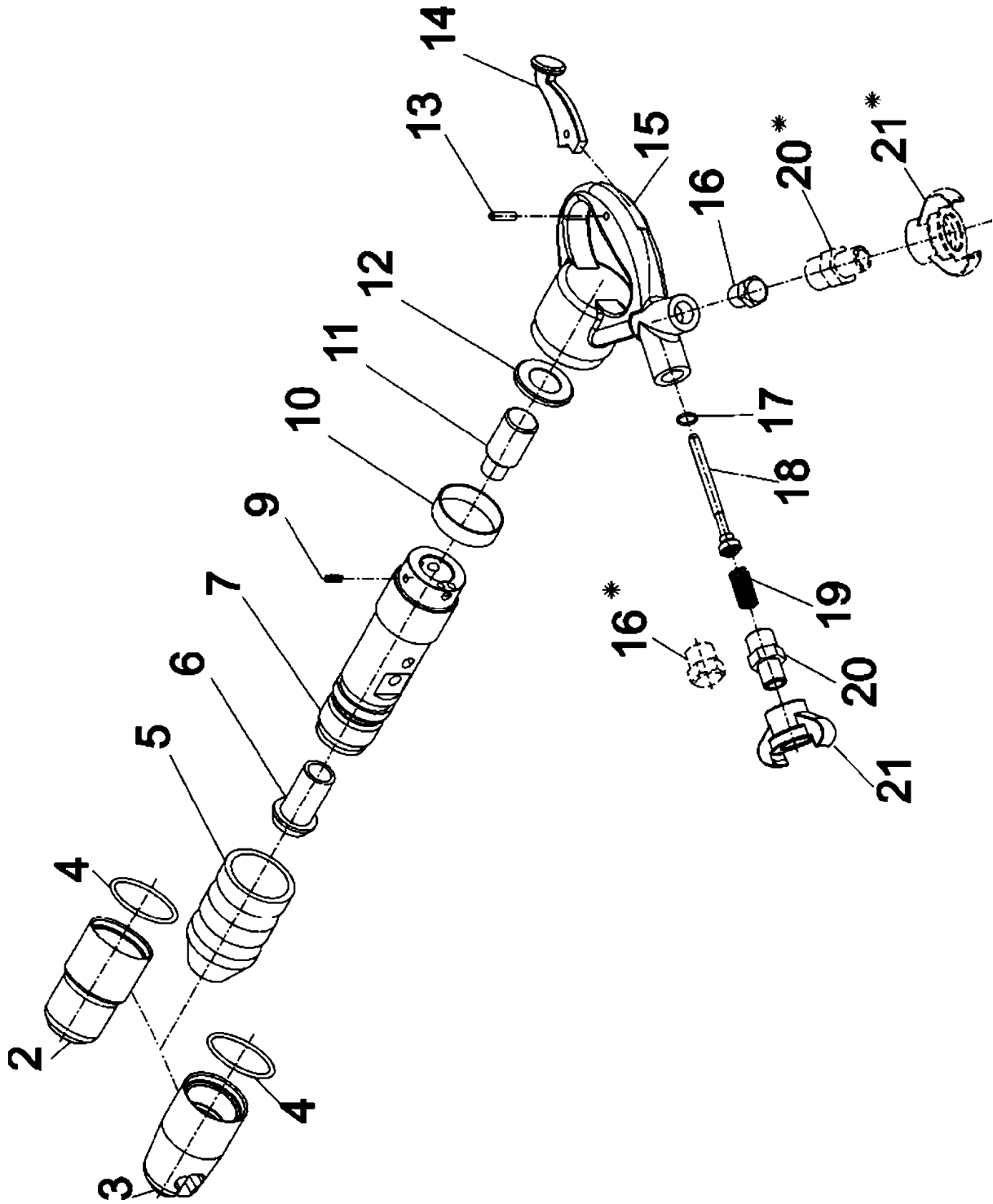
Fit the correct size accessory into the chipping hammer and connect to an airline. Using low pressure 2 bar (30psi) check to ensure the chipping hammer is free of air leaks around the inlet connection and also that the chipping hammer does not automatically start to operate without the trigger being depressed. Increase the air pressure to 6 bar (90psi) and run the tool in short bursts to check the tools starts and stops cleanly and without hesitation.

Chipping hammer operating frequency should be as given in the specification table at the end of this manual.

F) Parts drawing for DULA – Chipping Hammer K5P



G) Parts drawing for DULA – Chipping Hammer K5 and K6



* Alternative position of air inlet

H) Parts list for DULA – Chipping Hammer K5P, K5 und K6

Pos.	Name	Order-No. K5P	Order-No. K5	Order-No. K6
2	Closed Retainer	-	8042390	8042390
3	Opened Retainer	8042400	8042400	8042400
4	O-Ring	273049	273049	273049
5	Damper	1730190	1730190	1730190
7	Cylinder assembly CA	8323940	8324000	8324060
6	Chuck 19x50	2090531	2090531	2090531
9	Spring	-	315129	315129
10	Distribution Ring	-	3908070	3908070
11	Piston	5003490	5003510	5003520
12	Cover	-	1511301	1511301
15	Handle	5259612	5259612	5259612
13	Pin	311222	311222	311222
14	Lever	1418230	1418230	1418230
16	Plug	0026060	0026060	0026060
17	O-Ring	273064	273064	273064
18	Starting Rod	3011213	3011213	3011213
19	Spring	315007	315007	315007
20	Threaded Socket G1/2"	4087210	4087210	4087210
21	Quick coupling	KIG12	KIG12	KIG12