WARRANTY CARD

1. KH Trading machines and tools are covered by 6/24 months warranty, starting on the date of purchase, as described in the Civil Code (proof of purchase or invoice receipt must be enclosed with the warranty card when making a claim).
2. This warranty does not cover defects caused by unprofessional handling, machine overloads, not complying with instructions contained in this manual, using accessories that are not approved, unauthorized repair, regular wear and tear and damages occurred during transport. Further, this warranty does not cover parts and accessories such as the motor, carbon brushes, seals and hot-air operated parts and parts that need to be changed regularly.
3. If the repair is to be found as not covered by the warranty policy, all costs including the repair and shipping to and from the repair centre will be paid by the customer, according to valid price list. See www.
4. When making a claim, you must present the warranty card, showing the date of the purchase, the serial number of the machine, vendor stamp and signature of sales clerk, as well as the proof of purchase receipt.
5. Warranty claim shall be made at the vendor shop where you bought your machine or you may mail it to a service centre. The vendor is obligated to fill out the warranty card (date of sale, serial number, vendor stamp and signature). All these information must be filled in at the time of sale.
6. The warranty period will be extended for the period of time for which the machine has been in the service centre possession. If the repair or defect is not covered by the warranty policy, all costs including the repair and shipping will be paid by the owner of the machine / tool. We recommend sending the machine in its original packaging. Please, also enclose brief description of the defect with the packaging.
7. Before sending the machine for repair, clean it thoroughly. If the received machine is dirty, it may be rejected by the service shop or you may be charged a cleaning fee.

SERVICE
Logistic centre Klecany
Topolová 483
250 67 Klecany
Czech Republic

Claim department phone number: 266 190 156
266 190 111
Fax: 260 190 100
http://www.KHnet.cz
Email: servis@KHnet.cz

T-mobile: 603 414 975
O2: 601 218 255
Vodafone: 608 227 255

Product: RATCHET SPANNER 1/2" - TOOL KIT 14	
Type: 40250	Serial number (product series):
Date of manufacture:	Repair centre notes:
Date of sale, stamp, signature:	

Without the correctly filled warranty card or without proof of purchase receipt, including the product type (invoice, purchase receipt) no warranty claim will be processed.

unimax

USER'S MANUAL

RATCHET SPANNER 1/2" - TOOL KIT 14

40250

Dear customer. Thank you for purchasing equipment from KH Trading, s.r.o.
Our company is ready to offer you our services - before, during and after you buy our product.
If you have any question, comment or idea, please contact our business centre. We will do our best to address your comment or question in timely matter.

Before first use, please read this manual carefully. It is your responsibility to study all instructions, necessary for safe use and operation and to understand all risks that may be involved during the use of power machines.

WARNING! Do not try to use this machine before reading this entire manual and before you know how to handle it. Keep this manual for future reference.
Pay special attention to safety instructions. Not complying with safety rules may cause injury to the operating person or to people standing by or it may cause damage to the machine or to the work piece. Pay special attention to safety notes and safety labels on the machine.
Never remove or damage them.

Please, write information such as the invoice number and the number of the sale receipt here in this box.

DESCRIPTION

Comparable with a hand ratchet spanner, but without demand on work space. Significantly speeds up work with tightening and releasing joints. Work L/P.
Components of the set are: ratchet spanner, socket spanners 9, 10, 11, 13, 14, 17, 19, extension socket, adapter for clamping bits, universal joint, insert, hand oiler.

TECHNICAL SPECIFICATIONS

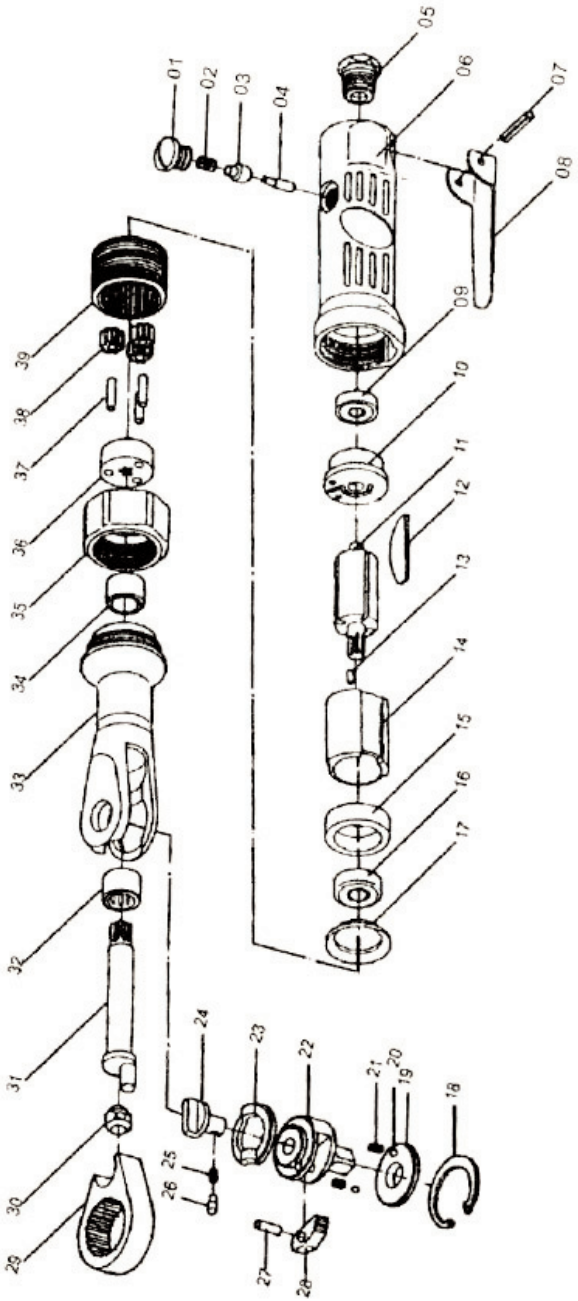
Rated no-load speed	160 min.$^{-1}$
Gyroscopic moment	69 Nm
Work compressed air pressure	6.3 bar
Air consumption	110 l.min.$^{-1}$
Hose diameter	3/8"
Connecting screw-thread	1/4"
Square-end	1/2"
Gross weight	2.9 kg

The accuracy of instructions, graphs and information contained herein, depends on the printing date. Due to continuous product improvement, the manufacturer reserves the right to change technical parameters of the product, without prior customer notification.

LIST OF PARTS

Position	Name	Pc
1	Stopper	1
2	Spring	1
3	Rubber	1
4	Casing	1
5	Screw coupling	1
6	Cabinet	1
7	Stud	1
8	On button	1
9	Rear beaing	1
10	Rear plate	1
11	Rotor	1
12	Rotor sealing	4
13	Stud	1
14	Cylinder	1
15	Head plate	1
16	Head bearing	1
17	Washer	1
18	Clamp ring	1
19	Washer spacer	1
20	Steel ball	2
21	Spring	2
22	Ratchet wheel	1
23	Washer	1
24	Reverse switch	1
25	Spring	1
26	Safety bolt	1
27	Stud	1
28	Latch	1
29	Catch clamp	1
30	Guide bushings	1
31	Crank-shaft	1
32	Needle bearings	1
33	Toothed box	1
34	Washer spacer	1
35	Covering nut	1
36	Bearing roller	1
37	Drive pin	3
38	Cogged wheel	3
39	Wheel with inner cogging	1

DETAILED PART DRAWING



SAFETY PRECAUTIONS

- **This device may be used by a qualified person, 18 years or older who has been trained in work and environmental safety procedures.**
- **Any person using this equipment must possess a medical certificate demonstrating his eligibility to operate this equipment.**

Symbols used in this manual

Warning!
This symbol informs you about the risk of personal injury or damage to the machine or materials.

Risk of being caught by moving machine parts!
Beware of moving machine parts. Loose clothing or body parts may get caught by moving machine parts.

Warning!
Danger of damage.

Note:
Additional information.

Use personal protective gear.

General instructions

- Plastic bags and packaging materials pose danger for small children and animals.
- Make sure you know your tool or machine and you are familiar with its operating procedure. Know the hazards if not used correctly.
- Make sure the user of the tool has been thoroughly introduced with the handling, operation, elements of this tool and with the possible dangers, resulting from its use.
- Always pau special attention to safety instructions stated on the labels. Do not remove or damage them. If the warning label becomes unreadable or damaged please, contact your vendor.
- Maintain your working area clean. Disorganized working area may cause accidents.
- Never work in tight working spaces or poorly lit rooms. Make sure the floor is solid and stable and that you can move around easily. Maintain stable posture during work.
- Stay focused and use all your senses. Pay attention to the working procedure. Do not continue to work if you cannot pay full attention.
- Maintain your tools clean.
- Handles must be kept free of grease and dirt.
- Make sure no children, unauthorized persons or animals have access to your workshop.

- Never put your hands or legs inside the working area.
- Never leave the device without supervision while operating.
- Use only for purposes for which it has been designed.
- Use personal work protection while working (for ex. protective glasses, earplugs, respirator, protective footwear, etc.).
- Do not overreach and know your limits. Use both hands.
- Never work under the influence of alcohol or other drugs.
- Do not use the device if you feel dizzy or weak.
- Any modifications or improvements to the device are strictly prohibited. DO NOT USE if you discover bent part, crack or other damage.
- Never perform any maintenance during operation.
- If you see any unusual sign or hear any strange sound, stop working immediately.
- Do not forget to remove all wrenches and screwdrivers from the machine after use.
- Before use, make sure all screws are tighten securely.
- Perform maintenance regularly. Before use make sure the device is in good working conditions and without any damage.
- Use only original spare parts during repairs.
- Using non-original spare parts or other parts not approved by the manufacturer may cause injury to the operating personnel.
- Use suitable tool or machine for particular type of work. Use this machine only for work that is capable of handling. Do not overload tools, accessories or the machine. For large work volume use more powerful machine.
- Do not overload your device. Measure the work load in such way, so it could be done with comfortable speed. The Warranty does not apply to damages incurred by overload.
- Do not expose to extremely high temperature or direct sunlight.
- This machine is not designed for use in humid environments or under water.
- if you will not use your machine for a longer period of time, store it in a dry and safe place, out of reach of children.
- Prior to turning on the device, make sure all safety elements are working smoothly and effectively. Make sure all movable parts are in good condition.
- Before use make sure that no part is cracked or stuck. Make sure all parts are attached and assembled as designed. Beware of all other conditions that may have a negative effect on the proper functioning of your machine.
- If not stated otherwise in this manual, all damaged parts and safety elements must be repaired or changed.

Fine mechanics

- Never use vise to hold your tool/machine.
- Protect you device from impact and fall. After you finish your work, place your machine back to the protective case.

Assembly

- Do not use the machine unless completely assembled.

Vehicle service centre accessories and equipment

- Before you start working on a vehicle, make sure that the parking brake is applied and that the vehicle is secured against movement.

DISPOSAL

When the operational life of your device is over, dispose of it in accordance with effective rules and regulations. Your product is made of metal and plastic parts that may be recycled when separated.

1. Disassemble all parts.
2. Separate all parts according to the material they are made of (e.g. metals, rubber, plastics, etc.).

Take the separated parts to the recycling facility near you for further processing.

Information about the location of recycling centres may be found at your local City office or throughout an Internet search.

CAUTION

If the machine breaks down, send it back to the vendor for quick repair.
Please, enclose brief description of the defect. That makes repair easier. If the machine is still covered by warranty, enclose the warranty card and proof of purchase receipt. After the warranty period expires, we repair your machine for a special price.

To prevent possible damages during shipping, packed the machine carefully or use the original packaging material. We are not liable for shipping damages due to incorrect packaging of your machine. If making a claim at the shipping company the level and method of packaging plays a major role during claim evaluation process.

Note: Pictures and contents in this manual may slightly differ from the actual product or accessories.
It is due to continuous improvement of our products. Such small differences have no effect on the product functionality.

MAINTENANCE

- Keep your tools clean. Dirt from tools may enter the inner machine mechanism and cause damages to the tool.
- Do not use aggressive cleaning solution or paint thinners for cleaning.
- Clean plastic parts with soft cloth dipped in soapy water.
- Clean and treat metal surfaces with a cloth dipped in paraffin oil.
- If you are not using your machine, conserve it with lubrication and store it in dry place to prevent corrosion.

In accordance with the applicable law, sealing is considered an expendible good and is not covered by the warranty policy.

Detailed description of the use of this device is not included in this manual, because the manufacturer / distributor assumes that the user is experienced in similar type of work. Also according to the applicable law, this device is considered as a commonly sold and used tool. If the user is unfamiliar with the use of this device, we recommend finding out more information about using this device at the Department of work safety.

Lubrication

- It is the basic responsibility of the user of the pneumatic equipment to ensure the input of air removed of condensed water and to ensure reliable lubrication during use.
- Lubrication can be ensured by either partial lubrication with oil designed for pneumatic equipment dripped into the opening for air input in case of short-term use, or with the continual help of a hose lubricator, which is basically more reliable.
- The ideal solution is to the central air converter unit.
- Never use motor or transmission oil. This would lead to the damage of sealing elements, which are not subject to the warranty policy.

After work

- Disconnect the input hose for compressed air and drip 10 drops of oil into the input opening to the pneumatic equipment and by turning it on shortly for approx. 3 0 5 seconds you will ensure full lubrication and conservation of inner parts.

Lubricate working surfaces with appropriate grease regularly.

Compressed air

- Dry and compressed air must have a defined pressure at the device's admission and must be supplied in sufficient quantity. Higher pressure shortens the service life as a result of faster wear and tear and bears the risk of injury.
- The joint, through which the compressed air flows into the device, must correspond to the prescribed dimensions.
- Pay special attention to water, which damages tools when present. Do not forget to release the condensed water from the pressure tank of the compressor on a daily basis and to also dry the hose, which is used to supply the air into the tool.
- Make sure there is enough oil in the container for lubricating compressed air, which is designed for lubricating pneumatic systems. Never use motor or transmission oil. This would lead to the damage of sealing elements.
- It is necessary to protect the device from impurities. Thus it is necessary to pay attention to the cleanliness of infeeding and outfeeding openings.
- Before uncoupling compressed air piping or hose, wait until the pressure equalizes.
- Before starting your work, inspect all couplings and piping for leakage. If leak is found repair it immediately. Leakage overloads the compressor and causes significant increase in operational loads.
- Check the state of the pressure hoses routinely. If you discover damage or leak, stop working immediately and have the defective house changed immediately. Pressurized hoses cannot be twisted. Observe the line on the hose surface. Keep the line as straight as possible.
- The pressure hose must not be lead through places, where there is danger of mechanical damage against sharp edges or squeezing.
- Blow compressed air through new hoses.
- At throughways of constructions, it is necessary to use sleeves and to check their state continuously.
- Use protective plugs and covers to prevent dirt form entering the machine.

Hand tools

- Do not place the machine on working table until it comes to a complete stop.
- When putting your machine back on the worktable, make sure that its tool is not touching anything.
- Never use vise to hold your tool/machine.
- Make sure to have your work piece securely fastened. Use caution during manipulation and/or releasing the work piece from the fastening device.

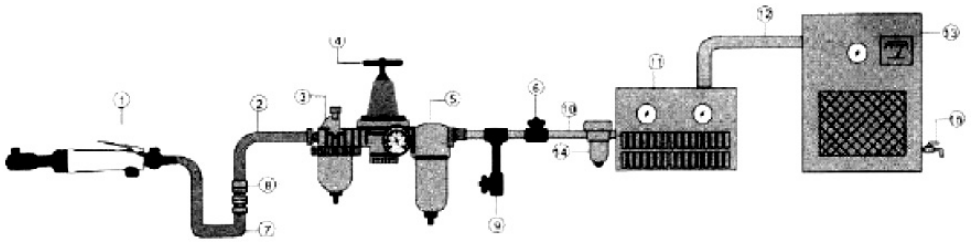
Rotary tools

- Always wear suitable work clothing (do not wear loose clothing, ties, jewellery etc.). Long hair must be covered and tied up behind you head. Do not wear worn out working shoes. Sleeves must be rolled up. Danger of being caught by moving machine parts.
- Do not remove safety covers. Make sure the operating personnel is well-protected.
- Do not touch or come close with moving machine parts during work. Keep your hands away from moving and spinning machine parts.

ASSEMBLY

- Before throwing the packaging material out, make sure no part is left inside. If so, take it out and install it. Use the part listing for check-up and the installation drawing for guidance.

Diagram of tool connection



Description

1. Pneumatic equipment
2. Air hose 3/8" (inner dimensions)
3. Lubricator
4. Pressure regulator
5. Filter
6. Stop valve
7. Spiral hose
8. Coupler and clamp
9. Drain socket
10 Pipe 1/2" (1.27 cm) or larger and insert
11. Air drier
12. Pipe 1" or larger with insert
13. Air compressor
14. Automatic socket drain
15. Drain socket

OPERATION

When working use:

- Ear plugs, as the noise level may exceed the acceptable limit while working.
- Use a safety helmut and work gloves.
- Do you work in an explosive environment.

Start up

- Prior to first start up, drip 10 drops of oil into the input opening for compressed air of the pneumatic system.

Use

- The ratchet spanner has a universal four-sided head for inserting the respective adapter.
- It is inserted on the head by turning.
- To start up, all you have to do is press on.
- To prevent ejection of the spanner or a part upon start up, it is necessary to hold firmly.

Note

- The ratchet spanner is not designed for loosening/tightening joints, which would demand exceeding the maximum gyroscopic moment.
- It does not substitute a torque spanner or workshop tools designed for these purposes.

TROUBLE-SHOOTING

Possible problems

- The tools does not work in the normal speed
- Blocked motor
- The tool starts to work immediately after being connected to compressed air
- Low gyroscopic moment
- High vibration - overheated motor sealing

Causes

- Amount or quality of compressed air does not correspond with the requirements
- Damaged switch
- Rotor sealing is damaged or worn
- Dust has got into the motor
- The tool is not tight
- the bearing is damaged
- O sealing rings are damaged or not on the right place
- Insufficient lubrication

Troubleshooting

- Check to see whether the water hose is damaged or caught
- Check the compressor to see whether or not the appropriate pressure of input air is set
- Check/measure rotor sealing
- Dismantle, clean and check the state and location of inner parts
- Check the sealing
- Change the bearings provided they are damaged
- Calibrate the O rings or place them on the right location
- Ensure correct lubrication during use