



China Honway Machinery Co.,LTD

Spike Hammer Operator's Manual



China Honway Technology Co.,LTD
5bldg Changhua Park. Yuelu District, Changsha, China
Tel: 0086-0731-84223603
Fax: 0086-0731-84227598
Cell Phone: 0086-13077380137
Email: sales@honwaymachinery.com
Website: www.honwaymachinery.com

Hand Spike Hammer



Air Consumption/Pressure: 0.6 0.8 0.9m³ /min/0.5Mpa

Model: HWK 1A HWK2A HWK3A

Note: Please carefully read this manual before installing, using or maintaining the machine. Incorrect operation may result in danger. Please keep the manual for reference.

Safety Instructions.....	1
Description of products.....	1
Application and characteristics.....	2
Installation.....	3
Clean.....	3
Air Supply.....	3
Repair and maintenance.....	4
Dismantling.....	4
Waste proposal.....	4
Technical Data.....	5
Fault Treatment.....	6

Safety Instructions

Warning:

Note: Please carefully read this manual before installing, using or maintaining it. Incorrect operation may result in danger and serious injury because of steam wave impact, head biting, sand splashing or detached interface, ruptured pipe,

Danger: During operation, the loosened or detached pipe interface will result in serious personnel injury.

Please save this referential manual after having read and understood all warnings.

• Safety Instructions

1. During operation, the operator must be equipped with protective equipment: helmet, hearing protection device, goggles, ventilation mask, anti-slip boots, durable gloves, appropriate clothing, and first-aid case at hand.
2. This machine isn't an electrical insulation;
3. Filling kerosene or diesel fuel before working everyday.
4. The machine is forbidden to work above the surface to avoid the head splashing out or the pole being ruptured.
5. Don't use flammable solvents, like gasoline, to clean the machine, avoiding explosion caused by overheating of it.
6. Don't use the machine in the area where an explosion may occur
7. Ensuring the pole and interface are connected firmly with the professional cards or devices and the air pressure meet the requirements.
8. This tool should be stored safely and dryly.

Description of the product

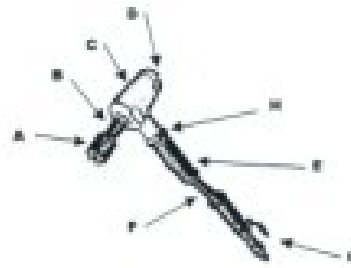
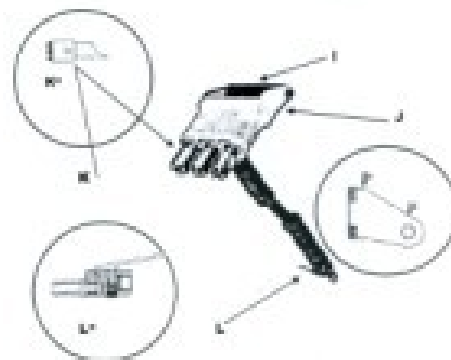


图 1. 图 1. 图 1. 图 1. 图 1. 图 1.



- A. Tungsten alloy head
- B. Piston rod
- C. Cover
- D. Screw pressure valve
- E. Shocking absorption rubber handle
- F. Ventilation handle
- G. Valve switch
- H. Detention screw
- I. Shocking absorption handle
- J. Rubber handle detention screw(j2)
- j1.handle detention screw
- K. Spring pin positioning eye (ko)
- L. Handle pneumatic valve(L0)

Application and Characteristics

HWK1A, HWK2A, HWK3A hand-typed spike hammers are for cleaning the floating cement pastes at the time of building new highway, bridge, railway, water power or electricity projects, airports, bridges, car parks and municipal buildings and so on, to achieve uniform roughness. It's also for the renovation of the old ground floor to remove epoxy resin, etc. It's quite cost-effective, beautiful, stable and flexible.

Note: Spike hammer with ogival head is suited for reshaping concrete or removing floating pulp and powder, to reduce the damage to concrete and ensure a better connection between concrete levels.

Note:

Don't let the tool work over the surface.

Don't let the tool work under the environment which may lead to an explosion.

Don't use the tool as a crowbar.

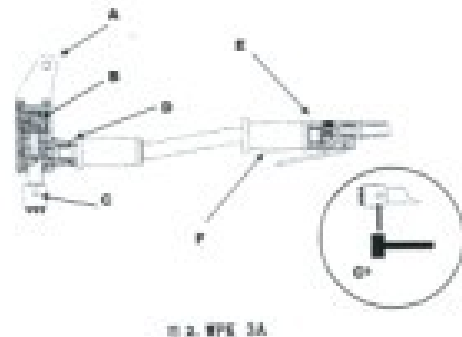
Don't clean the tool by (petroleum) gasoline, or any other thinner or more sparking solvents.

If the tool does not work for a long time, please clean it and put it in the place after assembling.

Don't modify the tool under any circumstance as this will void the warranty and may cause serious injury.

Open the box

1. Taking out all components in the cardboard box;
2. Checking ancillary tools;
3. Checking whether there is damage to the machine during the transportation. If it is, please contact with the machine distributor ASAP.



●Wash oil information

Warning: Only kerosene or diesel oil is suited for cleaning, and high viscosity oil is prohibited. Please seal kerosene or diesel oil and store them in a shady and cool place. Don't clean the machine with gasoline, naphtha; paint thinner, alcohol or other highly flammable fuel or high-viscosity oil such as machine oil.

In addition to kerosene or diesel fuel, you can't use any other oil plants to clean the inner side. Or it will result in:

- A、Shocking absorption rubber grip (HWK3A)
- B、Threaded gland and spring
- C、Spring positioning eye
- Co、Removing / installing spring pin
- D、Hand duct fastening nut
- E、Manual valve
- F、Rubber shock absorption handle

- Greatly reducing the hitting frequency or out of work.
- Choosing the model of diesel oil according to ambient temperature.

Note: When using kerosene or diesel, please ensure oil containers clean. Dirties such as rust, dirt or water will result in wear of cylinder and the regular work

Installation

(Only applied to HWK1, HWK2 and HWK3 models)
These models have positioning spring pin for and professional demolition. These can be found in the box.

● Needed Tools:

- Adjustable wrench
- Pin and spring pin
- Hammer

1. Firstly, stabilizing valve body, then smearing the inner bore of the piston cover with special oil (hydraulic oil, kerosene or diesel), thirdly, pushing the piston cover into the body and pushing the piston rod into the cover.
2. Loading the spring into the spring pressure cover, then loading the spring seat into the cover with some sealant on the threads and screwing it, then using a suitable wrench to spin to 55.NM (ft);
3. (HWK3A) Securely fixing the secondary rubber shock with four fastening screws on the pressure cover.
4. Inserting boots head in the drilled side of stem, then plugging in the spring pin to fix them.
5. Installing two rubbers handles at sides of the hand duct, and screwing in locking nut on the side of a long thread which will be plugged into valve body, then tightening the lock nut.
6. Coating sealant on the thread of the hand duct, and then screwing in the manual valve switch.
7. Connecting the high-pressure nylon duct and the air inlet of manual valve switch; and ensuring good seal, then providing gas to start working.

Clean:

Under such conditions: used repeat over 48 hours, or operated inefficiently, or any pistons becoming tacky, please dismantling and cleaning them with high refined kerosene or diesel oil. If necessary, please replace the old parts.

Air Supply

- a. Compressed air should be clean and dry. We recommend installing filter/regulator/fueller air equipments near the working area.(to remove moisture)
- b. Ensuring the air hose clean and dry (no condensation and concentration in the hose) and in good condition.
- c. Ensuring that inside diameter of the air hose is at least 10 mm (3 / 8 inch). All connections must be secure, and in good condition.
- d. The length of hose is limited to 10 meters (33inch). And with each additional 5meters (50inches), air pressure will fall by about 0.16 bar (3psi pounds /square inch).
- e. Correct operating pressure is 6.2 bar (90 lb square inch psi).
- f. Air consumptions of 1A, 2A, 3A spike hammer are respectively 0.6, 0.8, 0.9 m³ / min
- g. Don't let the operating pressure fall below 5.9 bar (80 lb square inch psi) or increase over 6.9 bar (100psi).For single / double-typed or three-typed spike hammer, air compressor supplies at least 7.08 liters per second (15 cubic inches per minute). Under sever cold condition, it's recommended to use professional no congealable oil

Recommended specification of air hose: fiber reinforced PVC ointment

Inch	Inner Diameter	Outside Diameter
25/23	20	26
Wall Thickness	Pressure of Working (20)	
3.5	6	
Burst Pressure (20)	18	

Start

The inspection before starting.

It's safe to prepare everything. No leakage. Good air hose. The normal pressure of using this tool is 6.2 bar (90 pounds / square inch).

Injecting approximately 50-100m kerosene or diesel into the connector connecting the air compressor and throttle interface.

Before starting, you should firmly connect the machine and the high pressure hose, ensuring no leakage. It's necessary to fasten safety belt on the links to ensure personal safe. Finally, put the head on the work surface and operate it by opening pneumatic valve.

If it needs to be turned off, you can simply release the throttle lever.

When using the tool, you need wear gloves and protective devices.

It needs to be careful to pass on the air hose.

Enough pressure keeping working will lead to constant jumping of the machine, and excessive pressure will hinder work. Only correct operation will create high efficiency.

Excessive working pressure will only lead to premature aging of the machine and fatigue of the operator.

Forbid the machine work over the surface.

Note: When the spring gland is not tightened, the tool will reduce energy or stop working.

Waste disposal

If the tool and the appendix are planned to be destroyed, suggests as follows:

The useless parts must be symbolized to avoid reuse.

According to the local stipulation, you could dismantle the machine to components based on material's constitution and processing program of recycling,

Repair and Maintenance

Only a competent person can carry on the repair and maintenance.

Before carrying on the any following operation, you need to cut off air compressor and clean the surface of the tool.

Dismantling

Firstly, completely releasing the compressed air, then removing the duct joints, and cleaning the machine. Dismantling the thread gland, and taking out of spring seat and spring, pushing the piston rod up and removing the piston sleeve.

●Installation

Before installing, cleaning all parts with kerosene or diesel oil, then checking whether

the parts are intact (If damaged, replacing them). With a vise gripping the cover, covering kerosene or diesel oil on the piston rod and the inner bore, then pushing the piston cover into the body, and the piston rod into the cover, then assembling the spring and spring seat into spring gland. Lastly, screwing the gland into the body with some sealant on the threads of the gland, and then using a suitable wrench spinning it to 55.NM (cattle. m).

Assembling two rubber handle on the ends of handle tube, and screwing locking nut into the side with long thread as described in the picture.

Technical and Data

Model	HWK-1A	HWK-2A	HWK-3A
Weight	2.1KG	3.2KG	5.2KG
Work Width	31mm	69mm	100mm
Work Depth	1-3mm	1-3mm	1-3mm
Blows/min	2560 * 1	2560 * 1	2560 * 1
Air Capacity	500L/min	700L/min	900L/min
Noise	56dB	56dB	56dB
Boot Vibrate	0.96m ² /sec	0.96m ² /sec	0.96m ² /sec
Air Pressure	5kg/ cm ² , 0.8 [^] /min	5kg/ cm ² , 0.8 [^] /min	5kg/ cm ² , 0.8 [^] /min
Concrete	Work Efficiency	Work Efficiency	Work Efficiency
C50	2-3.5 m ³ / h	4-5.5 m ³ / h	6-7.5 m ³ / h
C40	3.5-4 m ³ / h	5-6 m ³ / h	6-8 m ³ / h
C30	5-6 m ³ / h	6-8 m ³ / h	8-10 m ³ / h

Chipping Ability m ² /h	Chipping Depth	3mm	HWK1A	HWK2A	HWK3A
			4-5	6-8	8-10
		5mm	3.5-4	4-5	5-6
Remarks	The capacity is a reference value based on the strength of concrete between the C30-C40. The efficiency of chipping differs with the strength and razor.				

The vibration distribution value is declared according to BS EN12096: 1997.

Same uncertainties allow diversity in the production and manufacturing. The total vibration distribution value is got according to the three-phase vibration data picture.

Due to various factors, the vibration distribution in the expected use ranges from 6.8 to 44m /s² (m / s ²). The vibration is based on the level of task, the clamping degree to the machine and input energy.

Noise level is tested according to EN ISO15744: 1999

Vibration test is based on the BS EN ISO 8662 part1 and part14 and BS EN ISO5349-1: 2001, BS EN ISO 5349-2:2002

Fault Treatment

Fault	Reason	Solution
No reflection after ventilating	<ul style="list-style-type: none"> ● air compressor gas valve is normally open or not ● pneumatic valves is not fully open or not open 	checking whether the pneumatic valve is normally open
	<ul style="list-style-type: none"> ● whether high-pressure air hose is leak or broken. 	cleaning high-pressure air hose or change it
	<ul style="list-style-type: none"> ● whether high-pressure air hose is clogged. 	cleaning the host machine or injecting kerosene or diesel oil about 100ml into the air inlet.
	<ul style="list-style-type: none"> ● too many pollutions or metal powder in the body. 	cleaning it by applying air
head don't work, low operating efficiency	too much petroleum (water) in the compressed air or too much water in air compressor tank	checking the working condition of air compressor or whether there is water in the air storage tank.
	low displacement of the air compressor, pressure below the needs of work.	checking whether the displacement meets the need, or adjusting the pressure of the air compressor and checking the leakage of tubes
	chisel working overload and the hammer head becoming round and blunt. Piston rod and piston sleeve seriously wearied, resulting in decreasing efficiency.	changing with new chisel and piston rod and piston sleeve.
Note: categories and conditions of consumables which are out of the warranty period	a. alloy head b. piston rod c. piston coat d. shock absorption spring	Described components are all consumable parts and out of the warranty. During the warranty, damaged or broken parts caused by incorrect operation are also out of the warranty. If the product is fractured or damaged under correct operation, please provide on-site in-kind photos, and mail back to the manufacturer, the factory will give a reasonable solution or return damaged parts.

If you have problems or any suggestions for improvement, please do not hesitate to contact with us. Your opinion is valuable, and is worthy of our thanks! Our company implements the development and improvement policy of product, so we keep changing the technical specifications and the right of product design. For this, without prior notice to our users, please understand. Thank you!