

MSDS SHEET;

PRODUCT: PNEUMATIC POKER CONCRETE VIBRATOR

SCOPE:

VHA - Internal pneumatic vibrators

The VHA range of pneumatic needles is designed to provide high operating frequency with high working efficiency under safe conditions.

Ease-of-use and maintenance-free make the VHA the perfect solution for compacting concrete when electricity is not available.

Applications

The VHA range is ideal for every type of compaction: from lab tests to heavy infrastructure projects. As a pneumatic vibrator, VHA doesn't need electricity and can even work out of concrete without overheating. This means no work interruptions even in severe conditions.



Features

There are no moving parts inside the hose, this means less vibration on the hands and arms of the operator and an extended service life.



Advantages

- High working efficiency
- No work interruptions
- Maintenance free
- Safe



Certifications

- CE: Community Directives and subsequent modifications: 2006/42/EC – 2006/95/EC

USAGE CONDITIONS WARNING!

READ AND UNDERSTAND EVERY INSTRUCTION.

WORKING AREA

KEEP your working area clean and well lit. Cluttered benches and dark areas invite accidents.

KEEP AWAY from standers, children, and visitors while operating a power tool. Distractions can cause to loose control.

PERSONAL SAFETY STAY ALERT - watch what you are doing and use common sense when operating a power tool.

DO NOT USE THE TOOL while tired or under the influence of drugs, alcohol, or medication. DRESS properly.

DO NOT WEAR loose clothing or jewellery.

CONTAIN long hair. KEEP your hair, clothing, and gloves away from moving parts. Loose clothes, jewellery, or long hair can be caught in moving parts.

AVOID accidental starting. REMOVE adjusting keys before turning the tool on.

DO NOT overreach. KEEP properly fed and balanced at all times.

USE safety equipment. ALWAYS WEAR eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE USE clamps or other practical way to secure and support the work piece to a stable platform.

DO NOT FORCE the tool.

USE the correct tool for your application. The correct tool will do the work better and safer at the rate for which it is designed.

DO NOT USE the tool if the switch does not turn it on neither off.

STORE idle tools out of the reach of children and other untrained persons.

MAINTAIN tool with care. CHECK for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using again. USE only accessories that are recommended by the manufacturer for your model.

SERVICE Tool service MUST BE PERFORMED only by qualified repair personnel. When servicing a tool, USE only identical replacement parts.

SPECIFIC SAFETY RULES For your own safety, as well as for the others one, and in order not to cause any damage to this equipment, please read carefully the instructions that are explained as follows: 1.- For the proper use of this device, please assure that the operator has been correctly informed of the content of this manual before using it. 2.- 3.- This device can be used only under the applications for which it has been designed and according to these safety instructions. Before starting to work, please make sure that the air

coupling is connected to the handle and that the valve of the handle is closed. 4.- 5.- 6.- 7.- 8.- Please make sure all the threads are properly screwed and tighten.

Please do not curve the hose excessively so that it could cause an obstruction in the air input.

Do not run the machine out of the concrete.

Do not impede the movement of the bottle when operating in the concrete mass.

Do not stop the poker until the concrete mass is fully vibrated.

OPERATION AND MAINTENANCE

CONNECTION OF THE AIR COUPLING TO THE ADMISSION VALVE: The valve is fitted out with a standard quick-coupling that ensures a quick and safe connection to any compressor or air intake.

Connection procedure:

Connect the valve coupling of the poker to the coupling of the compressor or the air intake. Make sure that the intake (air central, compressor) is suitable for the consumption of the poker.

INSPECTION Please ensure before working that all the safety and use devices are effective. Inspect daily the condition of the air filter in the valve. Do not hesitate to change the filter and the outer housing regularly in order to ensure a convenient running.

As soon as a defective part is detected, change it to avoid major damage. As soon as any defect that may endanger the running of the device is detected, please do the correspondent repair or maintenance.

PERIODIC MAINTENANCE

1. The poker has to be disconnected from the air intake and the valve has to be in the off position.
2. Check and refill if necessary every day the oil reservoir located in the handle. Always fill the reservoir with a non detergent oil with a viscosity from 20 to 30 SAE.
3. Every maintenance has to be done with original ENAR spare parts.
4. Check the diameter and length of the bottle in order to measure its wearing and its state. The bottle must be replaced when the measures are less than the specified standard ones, the part must be replaced.
5. Before having the poker unused during a long period of time, the following maintenance has to be done: - Open the handle and introduce from 2 to 5 cm³ of petrol with oil in the air intake, then connect the handle to the air source and make the poker run 5 minutes without load. - Always stock the vibrator hanging from the head with the admission valve of the handle open. - When the poker is about to be used again, repeat the same operation introducing from 2 to 5 cm³ of petrol in the air intake and make the poker run a few minutes for self-cleaning. Then, introduce 3cm³ of oil with a viscosity from 20 to 30 SAE in the air intake and make the poker run for a few minutes to lubricate the turbine again. Finally, fulfil de oil reservoir of the valve body and the poker is ready for working again.
6. Always follow these steps in order to make a proper maintenance: - Clean all the parts with solvent and dry them to remove the solvent excess. - Examine all the parts carefully. The parts that are excessively worn should be replaced. - When re-assembling the parts together, apply sealant on the threads and replace the "O" rings. Then, screw all the threads tight and remove the excess of sealant,

after having checked that the ensemble is water-proof. When the vain is worn and it is necessary change it, take it to a technical service or follow the following steps:

DISMOUNTING THE VAIN:

1.- DISASSEMBLE THE ADMISSION VALVE

1. 1 Unscrew the valve body with a 32mm end wrench, right thread.
1. 2 Remove circlip to free the internal hose connection rod.
1. 3 Make the connection slide into the valve body to let the internal tube turn when removing the rear cap.

2.- Rear cap: unscrew it with a 45 or 52mm end wrench holding the tube, right thread.

3.- Tip: unscrew it holding the tube with an end wrench, left thread.

4.- FREEING THE PNEUMATIC MOTOR.

4. 1 Push the pneumatic motor from the tip side and make it fall from the tube to the rear cap side.
4. 2 Pull out the front baffle from the shaft.
- 4.3 Remove cylinder.
- 4.4 Remove vain. Mind the position of the vain to assemble the new one correctly!

5. MOUNTING THE NEW VAIN (inverting the process):

5.1 Insert the new vain in the shaft IN THE RIGHT POSITION!!.

5.2 Insert the cylinder, then front baffle on the shaft IN SAME POSITION THAN IN POINT 4.2 FROM DISMOUNTING THE VAIN!.

5.3 Insert the pneumatic motor into the tube applying pressure and screw the tip (left thread) in the tube. Then screw the rear cap (right thread) in the tube.

5.4 Put the connection in position over the valve body and assemble the circlip.

5.5 Screw throttle on valve body, right thread.

7 LOCATING MALFUNCTIONS

PROBLEM	CAUSES/SOLUTIONS
The poker doesn't vibrate	1.- Knock the head slightly.
	2.- Check the air filter in the intake of the valve is not obstructed.
	3.- If the maintenance hasn't been done, the parts may be seized up.
	4.- Make sure that the pipes are not damaged.
	5.- The pipe may suffer some kind of strangulation and impede the air to action the turbine.
	6.- The bottle may have suffered big shocks that impede the turbine from rotating.
	7.- Check the wearing from the internal parts.

RECOMENDATIONS OF USE OF CONCRETE VIBRATOR

1. Choose the type of vibrator suitable to the dimensions of the structure to be vibrated, the distance among the reinforcement and the slump cone. It is recommendable to have an additional concrete vibrator.
2. Before starting, check that the concrete vibrator is in good condition and it works correctly. Use the equipment of safety and protection.
3. Pour the concrete in the structure avoiding doing it from high heights. Try to pour the concrete as levelled as possible. The thickness of every layer should be less than 50 cm, it is recommendable between 30 and 50 cm.
4. Introduce the vibrator vertically in the concrete mass without moving it horizontally. Do not use the vibrator to push the concrete horizontally. The concrete vibrator should be introduced into the mass at regular intervals. The interval should be from 8 to 10 times the diameter of the poker. See the concrete in the process of vibrating to determine the field of action of the vibrator. This field should be overlapped to avoid areas without vibrating. To obtain an optimum compacting of the concrete, plunge it 10 cm into the precedent layer to assure a good adherence. The vibrating time of the different layers should not be too long to avoid cold joints. Do not push or force the vibrator into the mass, it could get stuck in the reinforcements.
5. The time of vibration for each point depends on the type of concrete, the size of the vibrator and other factors. This time can be from 5 to 15 seconds after the immersion in each point. The time is shorter for a fluid mass, a vibration in excess can produce segregation. It is considered the concrete is well vibrated when the surface around the poker is shiny and compact and there is no more air bubbles. Besides, a change in the noise of the vibrator is produced. Many defects in structures are produced due to the perform of the vibration has been made in an unmethodically way and/or in a hurry.
6. Do not push or force the vibrator against the reinforcement. Keep a distance of 7cm minimum from the walls.
7. Always remove the poker vertically with movements upwards and downwards so the concrete fills the empty space again. The speed of removing the poker from the concrete must be approximately 8 cm per second. When the vibrator is nearly out, extract quickly to avoid shaking the surface.
8. In order to vibrate slabs, the poker has to be kept oblique so that the contact surface with the concrete mass is bigger and the compacting effect is better.
9. Do not keep the concrete vibrator out of the concrete for long periods. If you do not continue vibrating stop it.
10. Follow the maintenance instructions. The concrete has to be carefully prepared to get the best effects of the vibration in terms of consistency and resistance.