



**Operator's Manual**  
**Concrete Vibrator-Drive Unit**  
**CCVR Series**  
**CCVS Series**



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Manufacturer

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Original instructions

This Operator's Manual presents the original instructions. The original language of the Operator's Manual is English.

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## **Foreword**

This manual contains important instructions for this machine. These instructions must be followed during installation, operation, and maintenance of the machines.

This manual provides information and procedures to safely operate. For your own safety and to reduce the risk of injury, carefully read, understand, and observe all instructions described in this manual.

We reserves the right to change any of the contents in this manual without notice.

## **Warranty**

Our products are covered by warranty for a period of twelve (12) months from the date of purchase against defects in material or workmanship provided that:

- The product concerned has been operated and maintained in accordance with the operating instructions.
- Has not been damaged by accident, misuse or abuse.
- Has not been tampered with or repaired by any unauthorized person.

Any evidence of failure to meet these conditions may result in a denial of the warranty claim.

The owner is responsible for the cost of transportation to and from the authorized repairer and the unit is at the owners risk while in transit to and from the repairer.

Impact damage is not covered under warranty. Clutches are not covered under any warranty.

Engines are officially guaranteed by engine manufacturer. Please refer to the annex for engine warranty.

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# 1. SAFETY INFORMATION

## 1.1 Operating Safety

- Only trained personnel are permitted to start, operate, and shut down the machine. They have received instruction on how to properly use the machine and are familiar with required safety devices.
- Read, understand, and follow procedures in the Operator's Manual before attempting to operate the machine.
- The machine must not be accessed or operated by children and people impaired by alcohol or drugs.
- NEVER operate this machine in application for which it is not intended.
- NEVER allow anyone to operate this equipment without proper training. People operating this equipment must be familiar with the risks and hazards associated with it.
- Do not operate the machine with unapproved accessories or attachments.
- Do not allow anyone to stank or lean on the unit during operation.
- Do not run the machine indoors or in an enclosed area such as a deep trench unless adequate ventilation, through such items as exhaust fans or hoses, is provided. Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell. Exposure to carbon monoxide can cause loss of consciousness and CAN KILL YOU IN MINUTES.
- Do not touch the engine or muffler while the engine is on or immediately after it has been turned off. These areas get hot and may cause burns.
- ALWAYS wear protective clothing, safety glassed, hearing protection, safety-toed footwear to the job site while operating the machine.
- ALWAYS close fuel valve on engines equipped with one when machine is not being operated.
- ALWAYS store the machine properly when it is not being used. The machine should be stored in a clean, dry location out of the reach of children.
- This poker can be used only under the applications for which it has been designed and according to these safety instructions.
- Please assure that the end piece of the transmission is correctly connected to the motor's coupling.
- Make sure that the poker is correctly screwed to the transmission before using it (Hold the shaft and screw on the left).
- Do not over bend the transmission.
- Do not apply too much grease to the inner core, it can damage the oil seal from the poker.
- Do not maintain the poker out of the concrete more than 5 minutes.
- Do not limit the movement of the poker and transmission during the work.
- Do not stop the poker when the motor is running.
- Do not connect the transmission to the motor while is running.
- When you connect the machine to a petrol engine, make sure that the revolutions of the motor don't increased 3000 rpm.
- If the poker doesn't vibrate correctly, knock softly the cap on the floor.

- Replace the external parts (if worn out see table) in order not to damage internal components.
- Realize the operations of maintenance with the recommended types and quantities of lubricants.
- Do not allow inexperienced or not trained personal to use the poker alone.
- The vibration than transmits to the operator does not exceed 2.5m/2 of acceleration.

## **1.2 Operator Safety while using Internal Combustion Engines**

- Do not smoke when refueling the engine or during any other fuel handling operation.
- Do not run the engine near sparks or open flames.
- Do not start the engine if fuel has spilled or a fuel odor is present. Move the machine away from the spill and wipe the machine dry before starting.
- Do not refuel a hot or running engine.
- Do not refuel the engine near sparks or open flames.
- Do not spill fuel when refueling the engine.
- Do not touch the engine or muffler while the engine is on or immediately after it has been turned off. These areas get hot and may cause burns.
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place. Do not operate the unit if fuel or oil leaks exist-repair immediately.
- NEVER operate this equipment in an explosive atmosphere.
- NEVER operate any gas powered equipment in a poorly ventilated or enclosed area.
- NEVER perform any work on the unit while it is running. Before working on it, stop the engine and disconnect the spark plug wire to prevent accidental starting.
- Avoid prolonged breathing of exhaust gases. You may be hurt by harmful exhausted gases.
- Avoid contact with hot exhaust systems and engine parts.
- Allow engine to cool before performing any repairs or service.
- ALWAYS transport and handle fuel only when contained in approved safety containers.
- ALWAYS keep the area around the muffler free of debris such as leaves, paper, cartons, etc. A hot muffler could ignite the debris and start a fire.

### 1.3 Service Safety




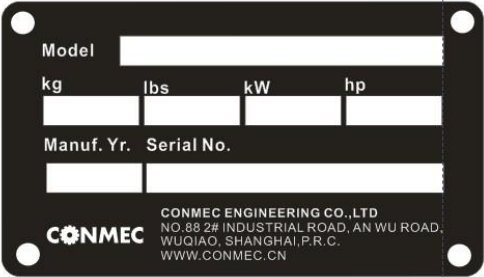
- Read and understand the instructions contained in the manual delivered with the machine before servicing or maintaining
- Familiarize yourself with the location and proper use of all controls and safety devices before servicing or maintaining.
- Contact local dealer for additional training if necessary.
- Do not allow improperly trained people to service or maintain the machine. Personnel servicing or maintaining the machine must be familiar with the associated potential risks and hazards.
- Do not attempt to clean or service the machine while it is running. Rotating parts can cause severe injury.
- Do not remove blades while the machine is hanging overhead.
- Disconnect the spark plug on machines equipped with gasoline engines, before servicing, to avoid accidental start-up.
- When replacement parts are required for this machine, use only our replacement parts or those parts equivalent to the original in all types of specifications, such as physical dimensions, type, strength, and material.

### 1.4 Label Location



## 1.5 Label Meanings

Our machines use international pictorial labels where needed. These labels are described below:

| Label   | Meaning   |
|---|---|
|    | <p><b>DANGER!</b><br/>Engines emit carbon monoxide; operate only in well-ventilated area. Read the Operator's Manual for machine information. No sparks, flames, or burning objects near the machine. Shut off the engine before refueling. Use only clean, filtered unleaded gasoline.</p> |
|    | <p><b>WARNING!</b><br/>Hot surface!</p>   |
|  | <p><b>WARNING!</b><br/>Always wear hearing and eye protection when operating this machine.</p>  |
|  | <p>A nameplate listing the model number and serial number is attached to each unit. Please record the information found on this plate so it will be available if the nameplate lost or damaged. When requesting service information, the serial number should be specified of the unit.</p> |



## 2. OPERATION

### 2.1 Application

Send the movement to an internal concrete vibrator through a flexible shaft

### 2.2 Extension Possibilities

Vibrator Pokers ..... CVP32, CVP38, CVP45, CVP50, CVP60

Extension to the Inner Core ..... Score / Finger / Thread

Extension to the Transmission ..... Bayonet

### 2.3 Motor Connection to Flexible Shaft

The motor is intended to connect the transmissions quickly and safety.

#### Connection procedure :

1. Connect the cross driver of the motor in the shaft. Raise the handle of the location pin and introduce the coupling up to the pin is in the slop.
2. Please make sure that the poker hose joint coincide with the outer cladding. Then, push against the internal spring and release with a quick location 90 turn.

### 2.4 Flexible Shaft Connection to Power Unit

Power unit is designed to facilitate a quick and safe connection to flexible shaft.

#### Connection procedure:

1. Introduce power unit hexagonal axle into the provided shaft housing.
2. Screw plastic nut of shaft to aluminium thread of power unit . (Be aware of nut turns left and not tool is required)

### 2.5 Inspection

1. Before starting the work, check the correct working of all handling and safety devices.
2. Do not work in closed rooms. The exhaust fumes may be toxic. Check the gas level. Check the oil level, it must be in maximum level (See the instruction manual).
3. If defects are found in the safety devices or other defects which could reduce the safe handling of the equipment, stop working and do the maintenance.

### 2.6 Recommendations of Use of Concrete Vibrator

1. Choose the type of vibrator adequate to the dimensions of the structure to vibrate, 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 use and it works correctly. Use the means of safety and protection.
3. Pour the concrete in the structure avoiding high heights. Try to pour levelled the concrete. The thickness of every layer should be less than 50 cm, it is recommendable between 30 and 50cm.
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 time in vibrating the different layers should not be big to avoid cold joints. Do not push or force the vibrator into the mass, it could be stuck in the reinforcements.

5. The time of vibration in each point depends on the type of the 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 to be well vibrated when the surface around the poker is shiny and compact and there is no more air bubbles, as well a change in the noise of the vibrator is produced. So much defects in structures are produced due to perform the vibration in an immethodically way and 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. Do not switch off until you stop the vibration completely. See speed of removing is 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 superficies with mass is bigger and the compacting effect is better.
9. Do not keep the concrete vibrator out of the concrete during 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.

### **3 MAINTENANCE**

#### **3.1 Engine**

##### **Daily (8 hours)**

Clean the motor, check the nuts and bolts, check and fill with oil the motor's reservoir.

##### **Weekly (50 hours)**

Change the motor oil (first 20 hours), clean the sparking plugs and the air filter.

##### **Monthly (200 hours)**

Clean the oil filter, clean and adjust the sparking plugs.

##### **500 hours**

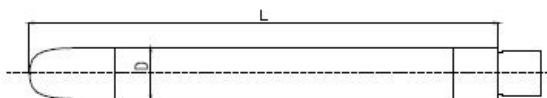
- Clean and set the carburettor, clean the cylinder's head, set the valves.
- Always use original parts by every maintenance operation.
- The safety fittings have to be checked after every maintenance operation.
- The equipment has to be sent to a authorized workshop for service every 12 months or more frequently according to the intensity of the usage.
- Do not fill the petrol reservoir while smoking or near any potential source of danger. Lock the petrol admission key while filling, use unleaded gas, clean the gas spelt.
- The maximum speed of the motor must not exceed 3.000 rpm (standard set). By every maintenance operation, the motor speed has to be checked and adjusted at 3.000 rpm. See the motor's manual to set the motor's speed, starting and stopping.

### 3.2 Flexible Shaft and Pokers

1. To do the maintenance works in the transmission and poker, firstly disconnect of the motor.
2. In all maintenance operations, original parts will be used.
3. To check the wear of the poker controlling the outside diameter and length of the poker.  
Replace the housing or cap when the diameter or length in the least point is less than the specified in the table according to the model.

#### DIMENSIONS OF WEAR FOR DIAMETERS AND LENGTHS OF THE POKERS HEAD

| Model   | Diameter (mm) | Length (mm) |
|---------|---------------|-------------|
| CVP32-H | 30.5(32)      | 578(583)    |
| CVP38-H | 36.5(38)      | 575(580)    |
| CVP45-H | 43.5(45)      | 578(583)    |
| CVP50-H | 48.5(50)      | 578(583)    |
| CVP60-H | 58.5(60)      | 572(577)    |



- A. The minimum dimensions are bold printed
  - B. The dimensions into brackets are the original dimensions
  - C. Replace the housing when reach the minimum diameter
  - D. Replace the cap when reach the minimum length
4. Lubricate the shaft every 100 working hours.  
A way to lubricate the shaft is to grasp some grease in the palm of the hand and run the close hand with the lubricant over the length of the shaft, leaving on the shaft a light coating of the lubricant on the entire length of the shaft, The recommended quantity is 25 g per metre. Do not over lubricate, it could cause the grease penetrate into the poker, Do not clean the shaft with solvent.
  5. When the length of the shaft is not equal to the hose (+-10 mm) it is necessary to repair before producing a bigger breakdown.
  6. Every 300 hours of working is recommended to clean the poker. To clean the poker dismount the cap. Hold the housing on a vise and tap the cap with a plastic hammer. This will help to break the seal and to loosen the threads. Take out the old oil and fill the cavity of the cap with a light oil non-foaming SAE40 or equivalent. Mount according to the recommendations of the following point. If inspection reveals that the oil is thick, heavy, sticky mixture, then the grease of the flexible shaft has penetrated into the head, and the seals have to be replaced. Follow the steps of the point 7 to replace it.
  7. To do a maintenance follow the following steps:
    - Flush the parts with solvent and wipe all part.
    - Examine bearings, seals and hex driver. If inspection reveals that grease of transmission has penetrated into the head, the oil seals need replacement. When replacing seals, mount them back to back (neoprene seal lips face away from each other).
    - The purpose of the seals is to keep the oil of the head in, and the flexible shaft grease out. Be careful not to damage the polished surface where the seals goes. When the seals are dismounted it is recommended to change it.
    - Fill the cavity of the cap with a light oil non-foaming SAE40 or equivalent.
    - Apply sealant before assembling and fix the O ring. Tighten and clean the excess sealant. It is important all the parts are tightened to avoid water and cement try to get into the head.
  8. After maintenance job and service, all the parts must be assembled correctly.

9. Every 12 months or more frequently, depending on the usage conditions. It is recommended an inspection be done by an authorized dealer.

### 3.3 Storage

When the converter has not been used for long periods of time, it should always be stored in clean, dry, and protected areas.

### 3.4 Transportation

When transporting by vehicles, ensure the converter is safe against slipping, overturning and blows.

### 3.5 Trouble Shooting

#### 3.5.1 Engine

| PROBLEM                | CAUSE / SOLUTION   |
|------------------------|--|
| The motor doesn't work | <ul style="list-style-type: none"> <li>● Check the gas level</li> <li>● Check the gas admission key is open</li> <li>● Check the choke position</li> </ul> |
| The motor works slowly | <ul style="list-style-type: none"> <li>● Poker or inner core is damaged</li> </ul>   |

#### 3.5.2 Flexible Shaft and Poker

| PROBLEM                                | CAUSE / SOLUTION   |
|--|--|
| The motor works overload and overheats | <ul style="list-style-type: none"> <li>● Head is over lubricated</li> <li>● Too much grease in shaft or too little</li> <li>● Failure of seal and the transmission grease has gone into the head or the head oil has gone out</li> <li>● Head movement is restricted</li> <li>● Transmission with extreme bents</li> <li>● Transmission in bad condition, broken hose</li> </ul> |
| Bearing failure                        | <ul style="list-style-type: none"> <li>● Not enough oil in the head</li> <li>● The head has been working out of the concrete for a long time</li> <li>● Water has penetrated the head</li> <li>● The housing has received strong stroke</li> </ul>   |
| The poker doesn't vibrate              | <ul style="list-style-type: none"> <li>● Grease or water has penetrated the head</li> <li>● The pendulum or the cone is damaged</li> </ul>   |

#### 4. TECHNICAL SPECIFICATION

##### 4.1 Concrete Vibrator Drive Unit

|             |        |                  |                          |                  |                  |
|-------------|--------|------------------|--------------------------|------------------|------------------|
| Model       |        | CCVR-1<br>CCVS-1 | CCVR-2<br>CCVS-2         | CCVR-3<br>CCVS-3 | CCVR-4<br>CCVS-4 |
| Engine type |        | Diesel, KM170F   | Chinese Petrol<br>Engine | Robin EX17       | Honda GX160      |
| Power       | kw(hp) | 3.2(4.2)         | 4.0(5.5)                 | 4.2(5.7)         | 4.0(5.5)         |
| Weight      | kg(lb) | 32(70)           | 20(44)                   | 20(44)           | 20(44)           |

##### 4.2 Flexible Shaft and Poker

| Model | Vibrator Head<br>Dia.*Length mm | Vibrator<br>Amplitude mm | Frequency<br>Hz | Dia. Of<br>Flexible<br>Hose mm | Dia. Of<br>Flexible<br>Shaft mm | Net Weight<br>with 6m<br>Hose kg |
|-------|---------------------------------|--------------------------|-----------------|--------------------------------|---------------------------------|----------------------------------|
| CVP32 | 32*583                          | 0.82                     | 220             | 30                             | 10                              | 15.0                             |
| CVP38 | 38*580                          | 1.20                     | 200             | 30                             | 10                              | 15.6                             |
| CVP45 | 45*583                          | 1.20                     | 200             | 32                             | 12                              | 18.6                             |
| CVP50 | 50*583                          | 1.20                     | 200             | 36                             | 12                              | 20.2                             |
| CVP60 | 60*577                          | 1.25                     | 200             | 36                             | 12                              | 21.0                             |

**EC DECLARATION OF CONFORMITY  
CE-KONFORMITÄTSERKLÄUNG  
DECLARACIÓN DE CONFORMIDAD DE LA CE  
DÉCLARATION DE CONFORMITÉ C.E.**

**CONMEC ENGINEERING CO., LTD  
NO.88, 2# INDUSTRIAL AVENUE, AN WU ROAD, WU QIAO COUNTY,  
FENG XIAN, SHANGHAI, P.R.C**

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certifica que la máquina de construcción/atteste que le matériel :

1. Category / Art / Categoría / Catégorie:  
Concrete Vibraotr
2. Type / Typ / Tipo / Type:  
CCVR-1, CCVR-2, CCVR-3, CCVR-4  
CCVS-1, CCVS-2, CCVS-3, CCVS-4

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2006/42/EC  
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