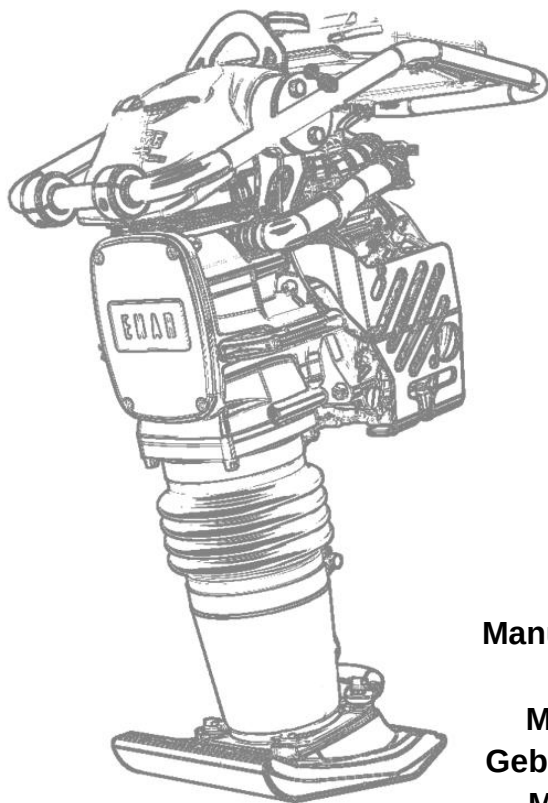




ENARCO, S.A.

PISONES
TAMPING RAMMERS
PILONNEUSES
STAMPFERS
PISÕES



Manual de instrucciones
Instruction manual
Manuel d'instructions
Gebrauchsanweisungen
Manual de instruções

PH60 – PH70 – PH80

es
en
fr
de
pt





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1 PREFACE

We would like to thank our customers for the trust placed in the ENAR brand.

It is important to read this manual to gain a full understanding of the characteristics and functions of the compactor. Before commencing work with this machine, or performing maintenance tasks on it, read, digest and observe all the safety instructions included in this manual.

In the event of this manual becoming lost or a further copy required, this can be ordered from ENARCO or printed out direct from the ENARCO website: <http://www.enar.es>.

Following the correct procedures for maintenance will guarantee the long life and excellent performance of this equipment.

Although this manual provides certain specifications for the motor, we recommend consulting the instruction manual for the motor for information on maintenance and repairs.

If information concerning the operation or maintenance of this machine is required, please contact the ENARCO customer service by telephone or fax, or by sending an email to sat@enar.es or through our website in the section entitled [Servicio ENAR](#).



2 SAFETY INFORMATION

2.1 SAFETY DURING THE OPERATION OF THE MACHINE



Improper use or maintenance of the equipment may lead to hazardous situations. Read and digest the instructions in this section before starting work with this machine. Machine operators should ensure that they know how to work the equipment safely. All queries should be dealt with by personnel familiar with the machine or else by contacting ENARCO directly.

- The motor gets very hot during operation: leave it to cool down before touching it.
- Never leave the machine unattended during operation.
- Operators should use protective clothing and ear muffs.
- Close off entry to the worksite for all unauthorised personnel.
- Make sure you know how to disconnect the machine before starting up the motor in case you get into difficulties.
- Make sure the machine has stopped before any attempt is made to move it.
- Do not attempt to lift the equipment unaided. Ask for help or use a lifting machine, taking hold of the equipment by the lifting handle incorporated in the assembly surrounding the compaction plate.
- Do not use the equipment if you are not in good physical shape.
- Store the equipment properly in a clean, dry place whenever it is not going to be used. Fuels and other consumables should be kept in marked containers in accordance with the manufacturer's instructions. All current legislation concerning the storage site should also be complied with.

2.2 SAFETY DURING OPERATION OF THE ENGINE



Owing to their high degree of inflammability, fuels are particularly dangerous. Improper use can cause serious damage to personnel and materials. Always observe the following safety regulations:

- Do not operate the machine inside a building or closed area without adequate ventilation. Failure to comply with this regulation may lead to intoxication from carbon monoxide with loss of consciousness, and even death.
- Before filling the fuel tank, stop the motor and leave it to cool down for a few minutes.
- Smoking is prohibited while the machine is in operation, or being refueled.
- Do not refill the tank near an open flame and remember to always refuel in an area that is well ventilated.
- If the fuel tank is not airtight, it should be replaced immediately, since it could lead to explosions.
- If any fuel is spilt while refueling, spread sand over the area. Change your clothes if any fuel is spilt on them.
- Make sure that the fuel tank is closed properly after refueling.
- Check that there are no cracks or leaks in the pipes or fuel tank.



2.3 SAFETY DURING SERVICE

- Do not clean or inspect the equipment during operation.
- Do not start the motor up with the cylinder flooded or if the spark plug in the petrol motors has been removed.
- Do not inspect the igniter plug to see if it is sparking correctly if the cylinder is flooded with petrol or in the presence of any petrol fumes.
- Do not use dissolvents or fuels to clean the equipment, particularly in closed spaces.
- Maintain the area around the silencer clear of inflammable materials.
- Before servicing petrol-driven machines, remove the spark plug to guard against the motor starting up accidentally.
- It is not permitted to use the equipment in explosive environments. The fuel tank should be shut tight. When being transported over long distances, it is highly recommended that the fuel tank be emptied beforehand.
- The transport accessory has not been designed for standing the compaction plate on it and should only be used to move the equipment.

3 WHICH MACHINE IS THE MOST SUITABLE FOR EACH APPLICATION?

MODEL APPLICATION	Reversible plates	Non-reversible plates	Tamping rammers
Patching areas	#		
Building foundations	+		
Paths and footways	#		
Tennis courts and sports areas	#		
Soil preparation	+	#	#
Final support for bridge and ramps	+	+	#
Railway junctions	+	+	#
Interlocking cement blocks	#	+	
Construction of mains	+	#	+
Construction of drainage	+		+
Compaction of ditches	+		+
Reparation of damage caused by broken piping, cables, etc.	#		+
Work around piping, cables, drainage	#	#	+
Filling with rocks			
Gravel	+	+	+
Sand or volcanic material	+	+	#
Mixed grounds	+	#	+
Mud	+		+
Clay	+		+
Layer thickness 0 – 25 cm	+	+	+
Layer thickness 20 – 40 cm	+		+
Hot mortar	#	+	#
Cold mortar	#	+	#
Subgrade 40 – 100 mm	+	#	+
Layer of boulders 25 – 60 mm	#	+	

Can be used

+ Recommended

TAMPING RAMMERS

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4 SOUND AND VIBRATION MEASUREMENTS

- Level of acoustic power according to ISO standard 3744: $L_{WA} \approx 108 \text{ dB(A)}$
- Level of acoustic pressure according to ISO standard 6081: $L_{pA} \approx 96 \text{ dB(A)}$
- Weighted real value of axial acceleration according to ISO 5349 Part 1: 5 - 10 m/s^2

5 STARTING, OPERATION AND MAINTENANCE OF THE MACHINERY

5.1 BEFORE STARTING WORK

5.1.1. The mechanisms of this machine are lubricated by means of an oil bath. Check the oil level using the visor situated at the rear beneath the bellow. If oil cannot be seen through the visor, add oil until half the visor is covered.

5.1.2. Fill the fuel tank with the appropriate type of fuel for the engine your machine is provided with, according to the table below:

ENGINE TYPE			
HONDA GXR120	HONDA GX100	LONCIN LC165F	YANMAR L48
GASOLINA SIN PLOMO			GAS-OIL A
TYPE OF FUEL			

When filling the tank, be sure to filter the fuel with a strainer. Do not forget to replace the fuelling cap and close it. Failure to do this is dangerous, as the vibration of the machine may cause spillages of fuel that then ignite and burn.

5.1.3 Be sure to check the tension of every bolt, nut or threaded area. A screw that has come loose due to vibration may unexpectedly cause a serious problem. Make sure that all screws are tightened.

5.1.4. Remove all dirt and dust. Pay special attention to cleaning the area adjacent to the starter and the leg.

5.2 STARTING UP THE MACHINE

5.2.1. Open the fuel tap by moving the air regulator lever downwards, and put the choke valve lever in the half-open position. To start the engine cold, move the air regulator lever to the closed position. When the engine is hot, the air regulator should be half-open or completely open. If it proves difficult to start the engine, make sure that the air regulator lever is half-open to prevent the carburettor from flooding due to excess fuel.

5.2.2. When pulling the starter rope, do not apply full pressure for the whole length, as this may damage the spring. Do not suddenly release the rope in order to repeat the process once the engine has started. Hold on to the rope, and slowly release until it has fully returned to position.



5.3 OPERATING THE MACHINE

5.3.1. After starting the engine, gradually re-open the air regulator lever completely. Allow the engine to warm up at minimum velocity for a period of 3 to 5 minutes. This procedure of warming up the engine at a minimum revolution level is particularly important during the cold period. While the engine is warming up, carry out a general revision of the machine to make sure that there are no anomalies.

5.3.2. The piston starts to operate when the accelerator lever is turned with a rapid movement a quarter of a revolution. If the lever is moved slowly, the action of the rammer will be irregular, possibly causing damage to the clutch, the spring and the leg.

5.3.3. After the machine has started to operate, adjust the movement of the vibration in such a way that it conforms to the particular condition of the ground, using the accelerator lever slightly as a control. This rammer has been designed in such a manner that when the engine works at a velocity of between 3,600 and 4,000 r.p.m., its leg hits the surface of the ground at a rate of 600 to 700 times per minute, thus ensuring the greatest efficiency of performance. An unnecessary increase in the velocity of the engine does not produce any increase in the force of compaction. Instead, the resulting resonance causes a reduction in the compaction force, damaging the machine.

5.3.4. In cold weather, as the oil in the machine is viscous, the resistance in the alternating part is greater, producing a somewhat irregular movement in the compacting rammer. For this reason, it is recommended that the machine should be run for a while before starting work to warm it up, moving the accelerator lever repeatedly between the positions 0 and $\frac{1}{4}$ turn.

5.3.5. The surface of the leg in contact with the ground is covered with a thermally treated metallic plate. Nonetheless, for the compaction of boulder it is advisable to use a filling of fine material such as sand so that the rear end of the leg's plane surface makes contact with the ground.

5.3.6. The compacting rammer has been designed to advance as it vibrates. To speed up the rate of advance, raise the machine by pulling it slightly in a backwards direction, in such a way that the rear end of the leg's plane surface makes contact with the ground.

5.4 STOPPING THE MACHINE

5.4.1. To stop work rapidly shift the accelerator lever from position $\frac{1}{4}$ to 0, the inverse of the movement for starting the machine.

5.4.2. Before stopping the engine, leave it ticking over for two to three minutes and then press the stop button until the engine stops completely.

5.4.3. Close the fuel tap by putting the lever in a horizontal position.



5.5 MAINTENANCE SERVICE AND STORAGE

5.5.1. Before undertaking any maintenance service on the compacting rammer, STOP THE ENGINE COMPLETELY.

5.5.2. Daily maintenance service:

Remove all dirt, dust or oil entirely from the machine. Check the air filter, cleaning it as necessary. Tighten up any areas where oil has leaked, and make sure that all other areas are tightened as necessary.

5.5.3. Weekly maintenance service (every 50 hours):

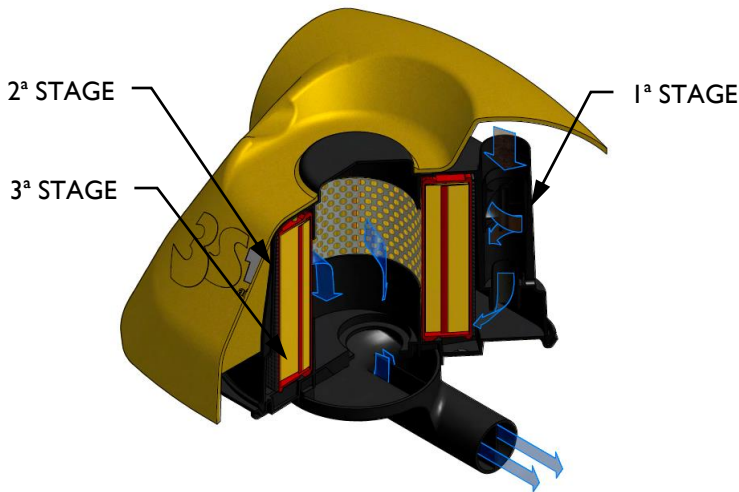
Remove the cap of the air filter and clean the internal element using a neutral cleansing solution. After drying, apply a fuel composed of a mixture of petrol and oil (if possible, utilize the fuel in use), and shake well. Then, gently squeeze the primary external element (sponge) and place it on the secondary internal element to cover it.

In the sparking plug, adjust the distance between electrodes to a value of between 0.7 and 0.8 mm. Remove the oil cap (situated above the oil-level visor), and put the machine in a horizontal position in such a way that the oil hole serves to drain off the used oil, placing the machine with the hole downwards in order to drain the oil completely.

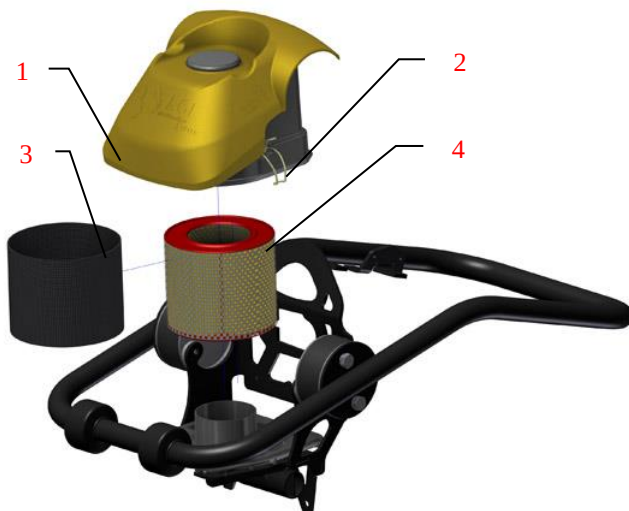
Place the machine upright again, and use the same hole to pour in new oil, until the correct level can be seen in the visor.

The first change of oil should be made after 50 hours in operation, from the second time onwards every 300 hours in operation.

5.5.4. Maintenance service fortnightly (100 hours) or with signal from air filter sensor (if it's present):



FILTERING STAGES



Release the retaining clips (2) Remove the air filter cover (1). Remove the second (3, sponge) and third stages of filtration (4, cartridge). Shake the third stage and blow it from inside to outside. Clean the second stage filter with a neutral cleaning solution. After drying, apply a mix of gasoline and oil, and shake it vigorously. Then, lightly squeeze the external primary element (sponge) and mount it on the third stage, mount the assembly in the filter lower housing, place and close the upper housing with mounting clips.

5.5.5. Monthly maintenance service (every 300 hours):

Clean the inside of the fuel tank. Carefully clean every part of the machine, and again make sure all the bolts and nuts are tightened up as necessary.

5.5.6. Correct storage:

For a prolonged period of storage after a particular job has been terminated, completely drain the fuel from the interior of the tank, the fuel tube and the carburettor.

Remove the sparking plug, pour a few drops of oil into the cylinder, and by hand get the engine to make a few revolutions in such a way that the oil reaches the whole area. As for the exterior, clean it with a cloth dampened with oil.

To store the machine, keep it under cover in a location free from humidity and dust and out of direct sunlight.

5.5.7. Air filter sensor maintenance:



If air filter sensor is present, as air filter dirties, the yellow body in sensor reaches the red zone indicating need for service. Do filter maintenance as indicated in point 5.5.4 and reset the sensor by pressing the yellow button.



5.5.8. Tachometer operation.



When the engine is shut off the display shows total run time, this time cannot be reset. When engine is started the display shows revolutions per minute.

To view partial job time press "SELECT". To reset job time push and hold "SELECT" button until display shows "RESET" and hours accumulated on the current job. When you release the button the counter will reset to 0.

With diesel engine:

SVC2 service alarm: after 50 hours working the tachometer will show SVC2 alarm. Perform prescribed maintenance. To reset press "RESET" three times and hold RESET until display shows "RESET".

SVC Service alarm: After 250 hours tachometer will show alarm SVC. Perform prescribed maintenance. To reset press "RESET" twice and hold RESET until display shows "RESET".

5.6 LOCALIZING AND REPAIRING FAULTS

PETROL ENGINE

Does not start:

- There is fuel, but the sparking plug does not produce a spark

- There is electricity in the high-tension cable
 - *Sparking plug flecked*
 - *Carbon deposit in the sparking plug*
 - *Short-circuit due to insufficient insulation of the sparking plug*
 - *Incorrect separation between electrodes*
- There is no electricity in the high-tension cable
 - *Switch of detention button short-circuited*
 - *Ignition coil defective*
 - *Insulation of condenser deficient or short-circuited*
 - *Ignition coil broken or short-circuited*
- Compression satisfactory
 - *Incorrect fuel*
 - *Water or dust has entered*
 - *Defective air filter*

- There is fuel, and the sparking plug does produce a spark

- Compression insufficient
 - *Inlet valve or exhaust valve stuck or defective*
 - *Piston ring or cylinder worn out*
 - *Cylinder head or sparking plug incorrectly fitted*
 - *Cylinder head joint or sparking plug joint defective*
- The clutch is blocked, causing vibrator to rotate when attempt is made to start
- There is no fuel in the carburettor
 - *Fuel tank is empty*
 - *Fuel tap is not correctly open*
 - *Fuel filter is blocked*
 - *Air ventilation opening in tank lid is blocked*
 - *Air retention in tube*
 - *Inlet valve of carburettor is stuck*



No power:

- Insufficient power

- Normal compression and no visible defect in ignition
 - *Air filter defective*
 - *Carbon deposit in cylinder*
 - *Incorrect fuel level in carburettor*
- Insufficient compression
 - *(See "Compression insufficient" above)*
- Compression is correct, but ignition is defective
 - *There is water in the fuel*
 - *Spark plug is dirty*
 - *Ignition coil is defective*
 - *Ignition coil keeps short-circuiting*
- Vibrator is full of excess oil

- Engine overheated

- Carbon deposit in fuel chamber or exhaust vent
- Incorrect heat-producing capacity in sparking plug
- Cooling fins are dirty

- Rotation velocity fluctuates

- Regulator incorrectly set
- Regulator spring faulty
- Deficient fuel flow
- Air entering tube suction system

Starter functioning defectively

- Rotating part clogged with dust
- Helical spring faulty

DIESEL ENGINE (AIR COOLED)

Problems with starting:

A.- Insufficient compression

- **No compression**
 - *Suction valve or exhaust valve defective*
 - *Decompression system incorrectly set*
- **There is little or virtually no compression**
 - *Contact of valve seating is defective*
 - *Piston ring is eroded*
 - *Cylinder is worn out*
 - *Surface of cylinder fitting and cylinder head defective*
 - *Seating of injector is loose*

B.- Fuel injection in the combustion chamber is not functioning properly

- **There is little or no flow of fuel**
 - *Air ventilation opening in tank lid is blocked*
 - *Pass of fuel filter is obstructed and the filter is blocked*
 - *Tap of fuel filter is closed*
 - *Air retention in tube (particularly when the tank is empty)*



- **There is no fuel injection in the combustion chamber**
 - Cylinder of injection pump or piston is stuck
 - Injector blocked
 - Injector needle is stuck
- Fuel tank is empty
- Water or dust has entered

C.- System of fuel and compression etc. as normal, yet nonetheless machine does not start

- Starting velocity is not reached
 - Incorrect starting procedure
 - High viscosity or excessive contamination of the oil in the engine
 - Air retention in tube

Insufficient power output. Insufficient compression:

- **Engine overheated and exhaust dirty**
 - Cooling fins are dirty
 - Water in fuel filter
 - Carbon deposit in combustion chamber or exhaust vent
 - Fume level incorrectly set
 - Overloading
 - Injection feed incorrectly set
 - Injector blocked
- **There are fluctuations in velocity**
 - Faulty contact between regulator fork and sleeve
 - Faulty regulator spring
 - Plate of rocker arm and other sliding parts are worn out or functioning imperfectly
- **The engine does not increase its velocity as it should**
 - Incorrect valve synchronization
 - Exhaust vent or silencer blocked
 - Overloading
- **Ignition defective accompanied by blank exhaust**
 - Piston, cylinder, ring worn out
 - Injector blocked
 - Upper and lower piston rings fitted the wrong way round
 - Injection feed incorrectly set.
 - Incorrect valve synchronization
 - Injection pump joint is loose
- **High fuel consumption (exhaust appears dark)**
 - Leak in fuel piping
 - Element of air filter is blocked
 - Fuel defective due to impurities
 - Overloading
- **Sliding part is excessively worn out, or piston ring is stuck**
 - Defective oil is being used
 - Regular replacement of oil is being neglected
 - Element of air filter is defective or dirty
- **Machine stops suddenly, making a strange noise**
 - Seize-up or damage of piston or connecting rod
- **Lubricating oil diluted, increasing its volume**
 - Body of injection pump piston is worn out
- **The engine does not stop even when the fuel supply is broken off (or it causes an overdrive)**
 - Excess oil
 - Regulator system incorrectly installed
 - Frame of injection pump is out of place



OPERATION OF THE MACHINE

**Transition velocity is slow and vibration weak.
Movement of machine is askew.**

- *The regulator does not open to the correct velocity of engine (see page 10)*
- *Insufficient power of engine*
- *Clutch slips*
- *Excess of oil on vibrator*
- *Internal parts of vibrator are defective*

Moves forwards or backwards, but cannot switch

- *Incorrect fitting of advance or return cable*
- *Vibrator is jammed*
- *Parts of motion-direction selector are defective*
- *Clutch lever incorrectly fitted*

Neither moves forwards nor backwards

- *Clutch slips*
- *Vibrator is jammed*
- *If there is vibration but no movement, it could be that the vibrator is on a moist or slippery surface. Try on the appropriate surface.*

6 IN CASE OF FAILURE

6.1 INTRUCTIONS FOR ORDERING PARTS

1. In all orders placed for parts, THE CODE NO. GIVEN IN THE LIST OF PARTS SHOULD BE INCLUDED FOR THE PART CONCERNED. It is advisable to include the MACHINE'S SERIAL NUMBER.
2. The specifications plate with the serial numbers and MODEL are on the top of the engine plate.
3. Please supply the correct instructions for transport, including the preferred route, address and complete name of the consignee.
4. Do not return parts to the factory unless you have been given written permission to do so. All authorized items should be returned carriage paid.

6.2 INTRUCTIONS FOR REQUESTING GUARANTEES

1. The guarantee is valid for one year from the date the machine was purchased. The guarantee covers the parts with manufacturing faults.
 - In no case will the guarantee cover a fault caused by improper use of the equipment.
2. In all requests for guarantees, THE MACHINE SHOULD BE SENT TO ENARCO, S.A. OR AN AUTHORIZED WORKSHOP, always indicating the complete name and address of the consignee.
3. The Technical Department (S.A.T.) will notify you if the guarantee has been accepted and, if requested, can also send out a technical report.
4. No piece of equipment will be covered by guarantee if it has been manipulated previously by personnel not connected to ENARCO, S.A.

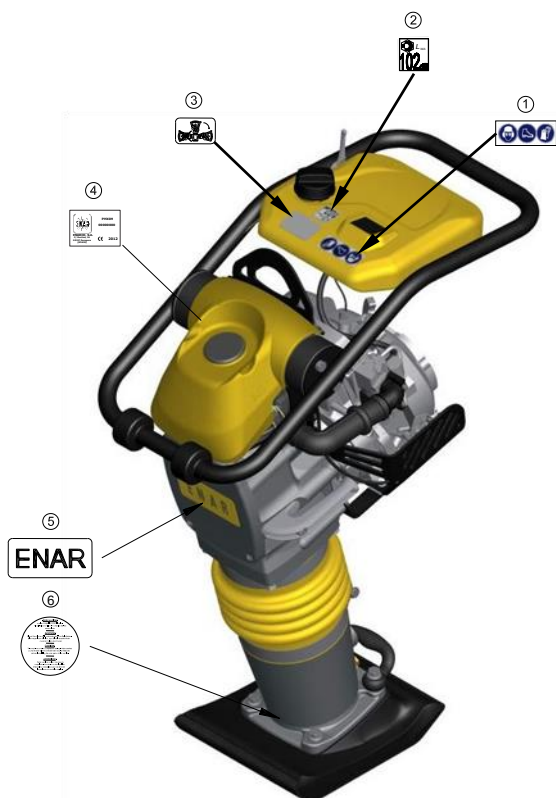
NOTA: ENARCO, S.A., reserves the right to modify any part of this manual without prior notice.

TAMPING RAMMERS

PH60, PH70, PH80



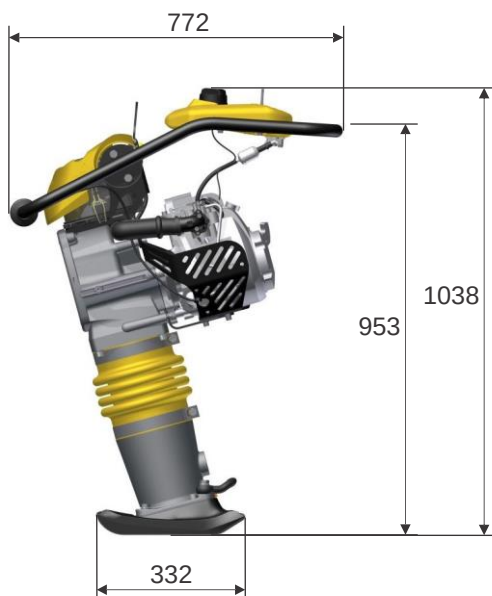
7 PLATES AND INDICATIVES



N°	REF.	DESCRIPCION	DESCRIPTION	DESIGNATION	BENENNUNG	DESCRIÇÃO
1	107228	ADHESIVO PROTECCION SEGURIDAD	SAFETY PROTECTION STICKER	ADHÉSIF PROTECTEUR SÉCURITÉ	SCHUTZKLEBSTOFF	ETIQUETA DE PROTEÇÃO DE SEGURANÇA
2	107402	ADHESIVO 104 Dba	104 dBA STICKER	ADHÉSIF 104 Dba	104 dBA KLEBSTOFF	ADESIVO 104 Dba
3	107284	ADHESIVO TUMBADO DERECHO	PLACE RIGHT SIDE STICKER	ADHÉSIF TOMBÉ À DROIT	RECHTGELEGENER KLEBSTOFF	ADESIVO DE COLOCAÇÃO DIREITA
4	RC6506	ANAGRAMA ENAR	ENAR STICKER	AUTOCOLANT ENAR	ENAR KLEBSTOFF	ANAGRAM ENAR
5		ADHESIVO CARÁCTERÍSTICAS	CHARACTERISTICS STICKER	AUTOCOLANT CARACTÉRISTIQUES	MERKMALE KLEBSTOFF	CARACTERÍSTICAS ADESIVAS
6	107225	ADHESIVO PRECAUCION MUELLES	STICKER PRECAUTION SPRINGS	ADHÉSIF PRECAUTION RESSORTS	KLEBSTOFF ACHTUNG SPRUNGFEDER	ADESIVO DE CUIDADO DE MOLA



8 TECHNICAL DATA



TAMPING RAMMERS

PH60, PH70, PH80



	HONDA GX100 DKR	HONDA GXR120 RT	LONCIN LC165F	YANMAR L48 AE
COMBUSTIBLE (L) FUEL (L) COMBUSTIBLE (L) BRENNSTOFF (L) COMBUSTIVEL (L)	SIN PLOMO (2,7)	SIN PLOMO (2,7)	SIN PLOMO (2,7)	GAS-OIL (2,7)
ACEITE MOTOR (L) ENGINE OIL (L) HUILE MOTEUR (L) MOTORENÖL (L) ÓLEO MOTOR (L)	SAE 10W/40 (0,6)	SAE 10W/40 (0,3)	SAE 10W/40 (0,4)	SAE 10W/40 (0,8)
POTENCIA NOMINAL NOMINAL POWER PUISSANCE NOMINALE NENNLEISTUNG POTENCIA NOMILA	3 kW (4 HP)	3 kW (4 HP)	3,2 kW (3,5 HP)	3,1 kW (4,1 HP)
BUJÍA SPARK PLUG BOUGIE ZÜNDKERZE VELA	NGK CR5HSB DENSO U16FSR-UB	NGK BP4ES DENSO W14EP-U	NGK CR5HSB DENSO U16FSR-UB	----
ENTREHIERRO GAP ENTREFER LUFTSPALT FOLGA	0,6 mm - 0,7 mm	0,7 mm - 0,8 mm	0,7 mm - 0,8 mm	----
R.P.M. R.P.M. TR-MN U-MN R.P.M.	4100 rpm ± 50	3700 rpm ± 50	3700 rpm ± 50	3650 rpm ± 50
RALENTI IDLING RÉGIME RALENTI LEERLAUFDREHZAH RALENTI	1700 ±150 r.p.m.	1500 ±150 r.p.m.	1800 ±150 r.p.m.	1500 ±150 r.p.m.

ESPECIFICACIONES	PH60H	PH70E	PH70LC	PH80YD
PESO SIN COMBUSTIBLE (Kg) WEIGHT WITHOUT COMBUSTIBLE (Kg) POIDS SANS COMBUSTIBLE (Kg) GEWICHT (Kg) PESO SEM COMBUSTÍVEL (Kg)	64	73	74	81
ELEVACIÓN DEL PISON (mm) IMPACT COURSE HEIGHT (mm) PARCOURS DE FRAPPE (mm) SPRINGWEG (mm) CURSO DE IMPACTO (mm)	60	70	70	70
NUMERO DE GOLPES POR MINUTO NUMBER OF BLOWS BY MINUTE FREQUENCE D'IMPACTS PAR MINUTE EINSCHLAGSFREQUENZ FREQUÊNCIA DE IMPACTO POR MINUTO	650	650	650	650
MOTOR ENGINE MOTEUR MOTOR MOTOR	HONDA GX100	HONDA GXR120RT	LONCIN LC165F	YANMAR L48AE
LUBRICANTE MAQUINA (L) MACHINE OIL (L) HUILE POUR MACHINE (L) MASCHINENOEL (L) LUBRICANTE MÁQUINA (L)	SAE 30 / ISO 100 (1.8 L.)			



	PAR DE APRIETE TORQUE COUPLE DREHMOMENT TORQUE						TAMAÑO DE LLAVE SPANNER SIZE DIMENSION DE LA CLEF GRÖSSE VON DEM SCHRAUBERSCHLÜSSEL TAMANHO DA CHAVE	
		 8.8	 10.9	 12.9				
MÉTRICA	Ft.Lb.	Nm	Ft.Lb.	Nm	Ft.Lb.	Nm	mm	mm
M4	*26	2.9	*36	4.1	*43	4.9	7	3
M5	*53	6.0	6	8.5	7	10	8	4
M6	7	10	10	14	13	17	10	5
M8	18	25	26	35	30	41	13	6
M10	36	49	51	69	61	83	17	8
M12	63	86	88	120	107	145	19	10
M14	99	135	140	190	169	230	22	12
M16	155	210	217	295	262	355	24	14

* = In.Lb.

1 Ft.Lb. = 1.357 Nm

1 Inch = 25.4 mm

TIPO TYPE TYPE TYP TIPO	COLOR COLOR COLEUR FARBE COR	USO USE USAGE GEBRAUCH USO	Nº PIEZA / TAMAÑO PART NUMBER / SIZE Nº PIECE / DIMENSION TEILNUMMER / GRÄSSE Nº PEÇA / TAMANHO
Loctite 222 Heron 420 Omnifit 1150 (50M)	Morado	Resistencia baja, para fijar roscas menores a M36. Resiste desde -54° a 149°C.	124151 – 10 ml
	Purple	Low strength, for locking threads smaller than M36. Temp. Range -54° to 149°C.	
	Violette	Peu de resistance pour fixer des filets plus petits que la M36. Elle resiste de -54° jusqu'à 149°C.	
	Dunkelviolet	Niedriger widerstandskraft, um Gewinde kleiner als M36 zu befestigen. Das widersteht von -54° bis 149°C.	
Loctite 243 Heron 423 Omnifit 1350 (100M)	Roxo	Baixa resistência, para fixar roscas menores que M36. Resiste de -54° a 149°C.	124152 – 0.5 ml 124155 – 50ml
	Azul	Resistencia media, para fijar roscas mayores a M36. Resiste desde -54° a 149° C.	
	Blue	Medium strength, for locking threads larger than M36. Temp. Range -54° to 149°C	
	Bleue	Resistance moyenne pour fixer des filets jusqu'à M36. Elle resiste de -54° jusqu'à 149°C.	
Loctite 292 Heron 920 Omnifit 790	Blau	Medium widerstandskraft, um grösser als M36 Gewinde zu befestigen. Das widersteht von 54° bis 149°C.	6 ml 50 ml
	Azul	Resistência média, para fixar roscas maiores que M36. Resiste de -54° a 149°C.	
	Blanco	Sellador de tuberías con Teflón. Resiste desde -54° a 149° C.	
	White	Pipe sealant with Teflon. Temp. Range -54° to 149° C.	
Loctite 495	Blanche	Colle de tuyauterie avec teflon. Elle resiste de -54° jusqu'à 149°C.	124156 – 1 oz.
	Weiss	Klebstoff mit teflon für Rohrleitungen. Das widersteht von -54° bis 149°C.	
	Branco	Selante de tubos com Teflon. Resiste de -54° a 149°C.	
	Transparente	Adhesivo estrutural para metal. Resiste desde -54° a 82° C.	
Loctite 495	Clear	Instant adhesive for metal. Temp. Range -54° to 82° C.	124156 – 1 oz.
	Transparente	Colle instantanée pour metal. Elle resiste de -54° jusqu'à 149°C	
	Deurchsichtig	Sofortiger Klebstoff für metal. Das widersteht von -54° bis 82°C	
	Transparente	Adesivo estrutural transparente para metal. Resiste de -54° a 149°C.	
Loctite 601	Verde	Producto anaeróbico de retención de alta resistencia, tolerante al aceite.	124154 – 6 oz.
	Green	High resistant product, wich doesn't need air to react and bears the oil.	
	Verte	Produit anaérobie de rétention d'haute resistance, tolérant au huile.	
	Grün	Stoff von grösser widerstandskraft, der ohne sauerstoff reagiert und das öl zulässt.	
Loctite 601	Verde	Produto de retenção anaeróbia de alta resistência, tolerante ao óleo.	124154 – 6 oz.
	Verde	Produto de retenção anaeróbia de alta resistência, tolerante ao óleo.	

TAMPING RAMMERS

PH60, PH70, PH80



PARA CUALQUIER REQUISITO SOBRE LA LISTA DE PIEZAS DE NUESTRAS MÁQUINAS, CONSULTE NUESTRA PÁGINA WEB.

FOR ANY REQUIREMENT ABOUT THE PART LIST OF OUR MACHINES CONSULT OUR WEB PAGE.

POUR TOUTES EXIGENCES CONCERNANT LA LISTE DES PIÈCES DE NOS MACHINES, VEUILLEZ CONSULTER NOTRE SITE WEB.

UM DIE VERSCHIEDENE EXPLOSIONSZEICHNUNGEN SO WIE DIE ERSATZTEILLISTEN EINZUSEHEN, BESUCHEN SIE BITTE UNSERE INTERNET-SEITE.

PARA QUAISQUER REQUISITOS SOBRE A LISTA DE PEÇAS DE NOSSAS MÁQUINAS, CONSULTE NOSSO SITE.

Web: <https://www.enar.es/>

**EC DECLARATION OF CONFORMITY**

DECLARACIÓN DE CONFORMIDAD CE ~ DÉCLARATION DE CONFORMITÉ CE
 EG-KONFORMITÄTSVERKLÄRUNG ~ EG-KONFORMITÄTSERKLÄRUNG
 EG-FÖRKLARING AV ÖVERENSSTÄMMELSE ~ DECLARAÇÃO DE CONFORMIDADE CE ~ DICHIARAZIONE DI CONFORMITÀ CE
 EB ATITIKTIES DEKLARACIJA ~ DEKLARACJA ZGODNOŚCI WE~ ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ
 DECLARAȚIA DE CONFORMITATE CE~ ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ НА ЕО

ENARCO, S.A.**HEREBY CERTIFY THAT THE EQUIPMENT SPECIFIED**

certifica que la máquina especificada ~ atteste que le equipment
 verklaart hierbij dat onderstaand gespecificeerde ~ bescheinigt, daß das Baugerät
 bekræfter, at følgende maskine ~ certifica que o equipamento especificação
 certifica che la macchina specificata ~ šiuo sertifikatu patvirtina, kad žemiau nurodytas prietaisas, t.y.
 Zaświadcza, że wyszczególniona maszyna ~ Подтверждает, что нижеописанная машина
 Certifica si declara ca echipamentul mentionat mai jos~ Потвърждаваме, че оборудването, описано по-долу

TYPE..... **Pisón compactador**
 TIPO~TYPE~TYPE~TYP~TYPE~TIPO~TIPO~TIPAS~TYP~ТИП~TIP~TIP
 Tamping çrammer / Pilonneuse
 / Stampfer / Pisões
BRAND..... **ENAR**
 MARCA~MARQUE~MERK~FABRIKMARKE~PRODUCENT
 ~PRÉKYBINIS~MARKA~МАРКА~МАРКА
MODEL..... **PH**
 MODELO~MODÈLE~MODEL~MODEL~MODEL~MODELO
 MODELLO MODELIS~MODEL~МОДЕЛЬ~MODEL~МОДЕЛ
CODE..... **PH60*, PH70*, PH80***
 CODIGO~CODE~CODE~CODE~CODE~CODIGO~CODICE~KODAS~KOD
 КОД~ COD ~ КОД

has been manufactured according to the following standards

ha sido fabricada de acuerdo con las siguientes normas ~ est produit conforme aux dispositions des directives ci-apres
 in overeenstemming met de volgende voorschriften gefabriceerd is ~ in übereinstimmung mit folgenden richtlinien hergestellt worden ist
 er blevet fremstillet i overensstemmelse med følgende retningslinier ~ é fabricado conforme as seguintes normas
 è stata fabbricata secondo le norme vigenti ~ buvo pagamintas laikantis toliau išvardintų standartų
 została wyprodukowana zgodnie z następującymi normami ~ Произведена в соответствии со следующими нормами
 este fabricat cu respectarea urmatoarelor standarde ~ е произведено в съответствие със следните стандарти

2006/42/CE, 2000/14/CE, 2005/88/CE, EN 500/1, EN 500/4**SOUND LEVELS**

Potencia acústica medida (LWA) Gemessene Schalleistung (LWA) Puissance acoustique mesurée (LWA) Measured acoustic power (LWA) Potência acústica medida (LWA) Moc akustyczna srednia (LWA)	104 dB (A)	Potencia acústica garantizada (LWA) Garantierte Schalleistung (LWA) Puissance acoustique garantie (LWA) Guaranteed acoustic power (LWA) Potência acústica garantida (LWA) Moc akustyczna gwarantowana (LWA)	106 dB (A)
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Conformity Assessment Procedure

According to ANNEX VI

Notified Body

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