ENAR

DINGO, AX, TDX

DINGO MOTOR - FLEXIBLE SHAFT AND POKERS

es
en
fr
de
pt

Instruction manual

INDEX

en

1 INTRODUCTION

Thank you for trusting the ENAR brand.
For the maximum performance of the equipment, we recommend to read carefully the safety recommendations, maintenance, and usage listed in this manual
Defective parts should be replaced immediately to avoid major problems.
The effective longevity of the equipment will increase if the manual instructions are followed.
We will glad to help you with any comments or suggestions in reference to our equipment.

2 POWER UNIT CHARACTERISTICS

MOTOR TYPE.....	UNIVERSAL SINGLE PHASE
ELECTRIC INSULATION TYPE	DOUBLE INSULATION, IP 44
HOUSING…….....	POLYAMIDE 6.6 + 26% GF
POWER.....	1500 W.
VOLTAGE	230V OR 115 V 50/60 HZ
(Make sure working voltage is according with stated in characteristics plate).	
LOADING CONSUMPTION.....	6,5 A (220 V) / 13 A (115 V)
UNLOADED SPEED.....	18.000 RPM
LOADED SPEED.....	12.000 RPM
WEIGHT.....	5,8 KG
FUNCTION.....	Transmites rotation power to aninternal vibrator by a flexible shaft
CONECTION TO FLEXIBLE SHAFT.....	FEMALE SQUARE 7
CONECTION TYPE.....	LEFT THREAD

3 CHARACTERISTICS OF FLEXIBLE SHAFT AND POKERS

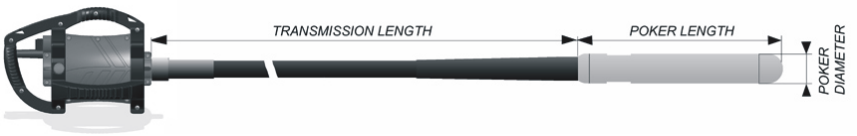
The flexible shaft connected to the **DINGO** power unit sends the movement to an eccentric placed in the poker, and so it is produced the vibration for the compacting of the concrete.

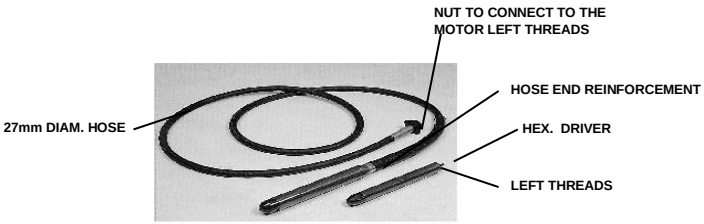
MODEL	DIÁMETER (mm)	LENGTH (mm)	WEIGHT (Kg)	CENTRÍFUGAL FORCE (Kg)	V.P.M	CAPACITY (m^3/h)	Acc. (m/s^2)*	Sound pressure (dB A)**	Sound power (dB A)**
AX 25	25	285	0,8	90	14.000	UP TO 10	1,24	85	93
AX 32	32	366	1, 7	210	13.750	UP TO 14	1,41	86	94
AX 40	40	335	2,2	380	13.500	UP TO 17	1,38	88	95
AX 48	48	335	3, 2	550	12.500	UP TO 28	1,42	88	95
AX 58	58	344	4, 5	660	12.000	UP TO 35	1,67	88	95

*According to ISO5349, flexible shaft to 1m. of the poker and running unload K=2
**Test measured with motor Dingo, flexible shaft and poker unloaded K=1,5 at 1,5meters of vibrator.

MODEL	LENGTH (m)	WEIGHT (Kg)	AX 25	AX 32	AX 40	AX 48	AX 58
TDX 0,6 m	0,6	2,6	14.300	14.100	13.800	12.800	12.300
TDX 1 m	1,0	3,0	14.250	14.000	13.750	12.750	12.250
TDX 1,5 m	1,5	3,5	14.000	13.750	13.500	12.500	12.000
TDX 2 m	2,0	4,0	13.750	13.500	13.250	12.250	11.750
TDX 2,5 m	2,5	4,5	13.600	13.350	13.100	12.100	11.600
TDX 3 m	3,0	5,0	13.500	13.250	13.000	12.000	11.500
TDX 4 m	4,0	6,0	13.000	12.750	12.500	11.500	11.000
TDX 5 m	5,0	7,0	13.000	12.500	12.000	11.000	10.500
TDX 6 m	6,0	8,0	12.000	11.500	11.000	10.500	10.000

Pokers AX25 y AX32 only be connected in the TDXE flexible shaft.





4 GENERAL AND SPECIFIC SAFETY RULES

WARNING! Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury**.**

Save all warnings and instructions for future reference

The term “power tool” in the warnings refer to your mainsoperated (corded) power tool or battery operated (cordless) power tool.

4.1 WORK AREA SAFETY

a) Keep work area clean and well lit. Cluttered and dark areas invite accidents.

b) Do not operate power tools in environments with explosive materials such as flammable liquids and gases. Power tools create sparks which may ignite the liquid or fumes.

c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

4.2 ELECTRICAL SAFETY

a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.

b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, oven ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.

e) When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.

f) If operating a power tools in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an rcd reduces the risk of electric shock.

NOTE the term “residual current device (RCD)” can be replaced by the term “ground fault circuit interrupter (GFCI)” or “earth leakage circuit breaker (ELCB)”.

4.3 PERSONAL SAFETY

a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A lapse in concentration while operating power tools may result in serious personal injury.

b) Use safety equipment. Always wear eye protection. Safety equipment such as a dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

c) Prevent unintentional starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.

d) Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.

h) Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

4.4 USE OF POWER TOOL

a) Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.

b) Do not use the power tool if the switch does not turn it on and off. Any power tool

that cannot be controlled with the switch is dangerous and must be repaired

c) Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) Store power tools out of the reach of children and do not allow people unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.

e) Look after your power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from intended could result in a hazardous situation.

h) Keep the handles and surfaces free dry, clean and grip of oil and grease. Slippery handles and gripping surfaces do not allow secure grip and control of the tool in unforeseen situations.

4.5 SERVICE

a) Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

4.6 SPECIFIC SAFETY RULES

For the proper operation of the motor, MAKE SURE that operators have been instructed in the proper management of this machine.
The motor SHOULD ONLY BE USED in the specific jobs for with it the help of this manual.
Before connecting the motor to the electrical system, MAKE SURE that the voltage and frequency coincide with the ones stated in the characteristics equipment plate, located in the top part of the plastic housing.

DO NOT WORK CLOSE To flammable liquids or in areas exposed to flammable.
ENSURE that all frame screws are tight before starting work.
TO AVOID the flattening of the cable by heavy machinery with could cause breakage.
DO NOT CONNECT THE FLEXIBLE SHAFT TO THE MOTOR WHEN THIS IS WORKING.
DO NOT OPERATE in the motor shaft when this is working and without transmission.
DON NOT WORK with transmission or poker in bad conditions, the motor overheats.
DO NOT WORK with the plastic housing broken.
DO NOT PERMIT untrained personnel to operate the motor or connections.
MAINTAIN free ventilation of air.
The motor plug should not be used to start or stop the equipment.
The electrical feeding cable should not be used to remove the plug from the socket.
MAKE SURE that the electrical cable is with the proper section and functioning properly
Before doing any type of repair, DISCONNECT the motor from the electrical system.
When connecting to a generator, MAKE SURE that the out tension and frequency is stable, right, and has the proper power, (the motor's feeding voltage should not vary more than ± 5% as stated on the motor's plate).
When finishing the job or when taking a break, the operator SHOULD UNPLUG, disconnect it from the electrical system, and have it placed in such a way that it should not fall or tip.

4.7 PERSONAL PROTECTIVE EQUIPMENT

Use approved protective equipment. Operators and all other persons in the working area must wear protective equipment:
Helmet, hearing and eye protection, gloves and boots.

5 USAGE CONDITIONS

For your own safety, as protection for others, and to avoid damage to the equipment, read carefully the usage recommendations.

1. Before working, to be sure the hose joint nut is fastened to the motor (screwed to left).
2. Be sure the poker is well screwed to the flexible shaft (screwed to left).
3. Do not work with flexible shaft with big bends.
4. Do not overlubricate the shaft.
5. Do not keep working the poker out of the concrete more than 5 minutes.
6. Do not restrict the movement of the poker during the work.
7. Do not stop the poker inside the concrete.
8. Change the wear parts to avoid damage to the internal parts. (Check wearing table for the poker)
9. Do the maintenance with the kinds and quantities of recommended lubricants.

IN ADDITION, LOCAL COUNTRY ESTABLISHED ORDINANCES SHOULD BE RESPECTED.

6 OPERATION AND MAINTENANCE

6.1 GETTING STARTED

Read item 5 USAGE CONDITIONS

6.2 SHAFT CONECTION TO POWER UNIT

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

CONNECTION PROCEDURE:

1. Connect the transmission shaft to the square motor connection
2. Screw plastic nut of shaft to aluminium thread of power unit . (Be aware of nut turns left and not tool is required)

CONNECTION CHOICES:

FLEXIBLE SHAFT LENGTH:
UP TO 6 MTS (TDX 1M, TDX 1,5M, TDX 2M, TDX3M, TDX 4M, TDX5M AND TDX6M)
VIBRATOR DIAMETER:
UP TO 58 MM DIAMETER (AX25, AX32, AX40, AX48 AND AX58).

6.3 ELECTRIC MOTOR CONECTION TO THE SYSTEM

Turn off (position 0) the motor switch before connecting it.

6.4 EARTH CONNECTION

On motors that have plug with earthing, to protect the user from an electrical shock, the motor should be correctly connected to earth.

6.5 EXTENSION CABLES

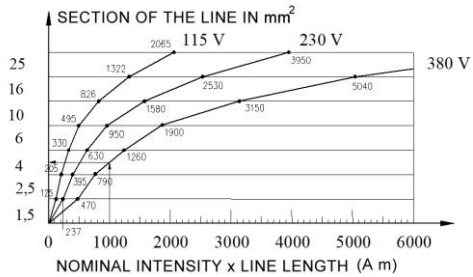
On motors that have plug with earthing, always use extension cables with earth wire and its respective plug with earth in the female and male switches, those which will use the male switch on the motor.
Do not use damaged or worn out cables.
Avoid heavy loads on top of cables.
To determine the transversal section, follow the following procedure.

6.6 PROCEDURE TO DETERMINE THE NECESSARY TRANSVERSAL SECTION IN CABLE EXTENSION

Do the following verifications and take the highest section of cable:
1. The ohmic resistance and inductive cable with the permitted voltage of 5%, cosphi=0,8 trough the frequency and voltage curve

I.e.: Voltage nominal:..... 1- 220 V 50 Hz
Nominal intensity:..... 10 A
Cable length:.....100 m

Entering the curve with the product: Intensity x Length=10x100=1000 Am We obtain a 4 mm^2 section
2. The permitted heating of the cable according to VDE (minimum transversal section table required).
I. e. For 10 A, according to table for 15 A or inferior, the section is of 1 mm^2.
Therefore, the section chosen = 4mm^2, Always chose the highest transversal section of the two verifications.



MINIMUM SECTION ACCORDING VDE RULES		
Line	Maximum	Max fuse
mm²	A	A
1	15	10
1,5	18	10 / 3 – 16 / 1
2,5	26	20
4	34	25
6	44	35
10	61	50
16	82	63
25	108	80

6.7 POKER CONNECTION TO FLEXIBLE SHAFT

The flexible shafts **TDX** are intended to connect the pokers: **AX40**, **AX48** and **AX58**.
Allowing to interchange of a poker to other quickly and without a special tool. The model **AX25, AX32** due to the diameter need a special transmission. (**TDXE**).

CONNECTION PROCEDURE:

1-Introduce the hexagonal driver of the poker in the shaft.

2-Aply sealant or LOCTITE 243 on the thread hose.

3-Screw the poker on the screwed end of the transmission up to fasten with spanner (left threads).

6.8 INSPECTION

1.Before starting the job , check the correct working of all handling and safety devices

2.Inspect regularly the good condition of the feeding cables

3.Inspect regularly the good condition of the transmission. When the hose is broken, repair it or replace it to avoid damaging the shaft or the poker.

4.When notice wear parts, replace it.

5.If defects are found in the safety devices or other defects which could reduce the safe handling of the equipment, notify immediately to proper responsible person.

7 DIMENSIONS OF WEAR FOR DIAMETERS AND LENGTHS OF THE POKERS

MODEL	DIAMETER (mm)	LENGTH (mm)
AX 25	**23,5** (25)	**280** (285)
AX 32	**30,5** (32)	**361** (366)
AX 40	**38,5** (40)	**330** (335)
AX 48	**45,5** (48)	**330** (335)
AX 58	**55,5** (58)	**339** (344)

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 tip when reach the minimum length.

8 PERIODIC MANTENANCE OF MOTOR

1. Only an expert shall work on the electrical parts.
2. Make sure that the plug is disconnected during repairs.
3. In all maintenance operations, original parts will be used.
4. A periodic lubrication of the motor bearings is not necessary.
5. Every 50 hours carbon brushes should be inspected. They should be changed if effective length is under 8 mm. Change the brushes:

a) With a screwdriver remove the side cap of the housing, introducing the screwdriver between the cap and the housing and lever it.

b) We find the brush retainer 103652, this is a threaded part, with a screwdriver remove it, we can see the brush 103653 or 103654(115 V), turn the motor and the brush goes out or introduce a thin tool to remove it.

c) To assemble introduce the new brush and thread the retainer and finally close the housing with the cap.

d) After change brushes, running motor at least 5 minutes without shaft neither poker.

6. Clean the ventilation vents in the front and back part of the motor periodically to avoid overheating.
7. Check that the filter is situated in the air intake, under the switch. If it is dirt, change it. To do this, press with both hands on the rear grating in the place where it says “PRESS”, take out the grating (96207) and the filter (96203) and replace with another new one. Then mount the grating, firstly inserting the bottom into its guide and then the upper part whilst pressing the “PRESS” indications.
8. After maintenance job and service, all safety devices should be assembled correctly.
9. Tighten the bolts.
10. Every 12 months or more frequently, depending on the usage conditions, it’s recommended a inspection be done by an authorized dealer.
11. Clean the filter on a regular basis or replace if necessary.

9 PERIODIC MAINTENANCE OF FLEXIBLE SHAFT AND POKERS

1.-To do the maintenance job in the transmission and poker, firstly disconnect 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.

4.-Lubricate the shaft every 100 working hours. Refer to utilize grease.

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 20 grames per metre. Afer connect to the motor, running flexible shaft without poker during 5 minutes. Do not overlubricate, it could cause the grease penetrate into the poker, Do not clean the shaft with solvent.

5.-When the length of the shaft is more than 55 mm than the hose. it is neccesary to repair before producing a bigger breakdown.

6.-Every 300 hours of working is recommended to change the lubricant of the poker. To change the oil in the poker dismount the cap. Hold the housing on a vise and tap the cap with a 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 0W30 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:

- After dismantling the poker.
- 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 0W30 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.

9.1 STORAGE

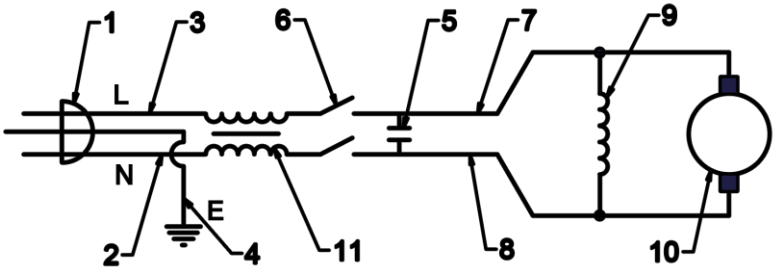
When the DINGO motor has not been used for long periods of time, it should always be stored in a clean, dry, stable and protected area.

9.2 TRANSPORTATION

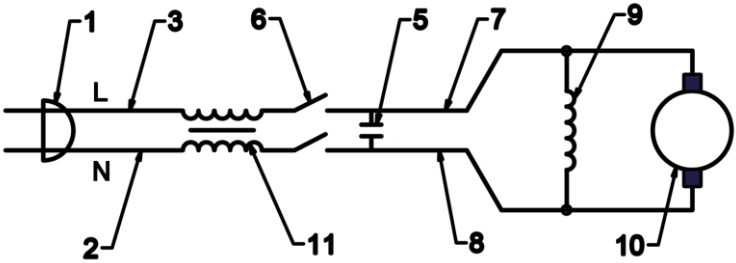
When transporting by vehicles, ensure the DINGO motor is safe against slipping, overturning and blows.

10 DINGO ELECTRICAL DIAGRAM

EARTHING CONNECTION



WITHOUT EARTHING



NOTE:

All cables should be properly adapted to the housing provided in the housing before closing the two sells.

ELECTRICAL DIAGRAM			
1	Plug	6	Switch
2	Switch cable 1.5 mm^2 section	7	Motor-switch cable 1.5 mm^2 section
3	Switch cable 1.5 mm^2 section	8	Motor-switch cable 1.5 mm^2 section
4	Earth cable (green - yellow/ green -UL-)	9	Winding field
5	Capacitor	10	Connection to brushes
		11	Filter

11 LOCATING MALFUNCTIONS OF MOTOR

PROBLEM	CAUSE / SOLUTION
The unit is not working	1. Make sure power is on
	2. Carbon brushes defect
	3. Defective switch
The motor works but it overheats	1. Clean the air intake and output openings in the housing and/or change filter.
	2. Make sure nuts and bolts fixing outer housind are properly fixed
The motor works slowly and it overheats	1. Verify voltage of electrical system
	2. Check the cable specification
	3. Defective poker or shaft
The motor becomes too noisy	1. Defective carbon brushes
	2. Defective bearings
	3. The rotor might be touching the stator
	4. Outer housing is broken or has loose bolts

12 LOCATING MALFUNCTIONS OF FLEXIBLE SHAFT AND POKERS

PROBLEM	CAUSE / SOLUTION
The motor works overload and overheats	1.- Head is overlubricated.
	2.- Too much Grease in shaft or too little.
	3.- Failure of seal and the transmisión Grease have gone into the head or the head oil have gone out.
	4.- Head movement is restricted.
	5.- Transmission with extreme bents.
	6.- Transmission in bad condition, broken hose.
The bearing fails	1.- Not enough oil in the head.
	2.- The head has been working out of the concrete during a long time.
	3.- Water has penetrated the head.
	4.- The housing has recieved strong stroke.

13 INSTRUCTIONS TO ORDER SPARE PARTS

13.1 INSTRUCTIONS TO ORDER SPARE PARTS

1.All spare parts request must include PART CODE NUMBER AS STATED IN THE PART LIST. We recommend to include ITEM´S MANUFACTURE NUMBER.

2.The identification plate with manufacture and model number is located in the top part of the motor`s plastic frame. The transmission and pokers have the manufacture number engraved outside.

3.Let us to know the correct shipping instructions, including the wished route and the address and consignee`s complete name.

13.2 WARRANTY CONDITIONS

Enarco S.A.U. for its products, it grants one year warranty from the date of purchase of the product subject to the following conditions:

1. In accordance with the conditions indicated here (No. 2-7), we will repair non-conformities in the product free of charge, if it is verified that they are a consequence of a defective component and/or manufacturing fault, and provided that the same is notified without delay after its appearance.

2. The warranty will not apply to damage resulting from improper use. Likewise, the guarantee will not apply to defects in the product caused by damage in transport for which we are not responsible.

The warranty will be void if repairs or interventions are carried out by persons not authorized by the manufacturer. The same will happen for machines in which the periodic maintenance recommended in the instruction manual has not been carried out.

3. The application of the guarantee means that defective components are repaired or replaced free of charge by components without faults. Consumables and wear parts are excluded from the warranty except in cases of excessive or premature wear not attributable to normal use of the machine.

The replaced components will become our property.

4. In the case of sealed original spare parts, returns will not be accepted once the seal is removed.

5. To exercise the rights derived from this warranty, you must contact our Technical Assistance Service. Therefore, the following contact options are available to the client:

- Telephone: (+34) 976 464 094
- Email: sat@enar.es

**For Mexico, Colombia and Poland, please review the page (Contact Addresses) of the document.*

In the event that the guarantee assessment is positive, Enarco will adopt the most convenient option:

- Carrying out the repair at ENARCO.
- Replacement with a new machine.
- Sending the defective part for repair to an authorized workshop.

Enarco will assume the shipping of machines or components in any of the above cases. Enarco will never assume downtime costs, rental costs for replacement equipment or other responsibilities for equipment failure during the warranty period.

If it is considered non-guarantee, it will be treated as a normal repair, issuing a quote for approval by the client. In this case, the round trip shipping costs will be borne by the customer, as well as the cost of the repair or the cost of preparing the estimate if the customer does not accept it.

6. Warranty repair of a machine does not extend the initial warranty period.

7. If for any reason any of the conditions for having a guarantee on a product conflict with any regulation of any country or locality, said condition will be nullified and the local regulation will prevail, but the rest of the conditions will remain in force.

The different contact addresses for each market/country are detailed at the end of this manual.

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

14 RECOMENDATIONS 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 recomendable 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 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 unmethodically way and in a hurry.

6. Do not push or force the vibrator against the reinforcement. Keep a distance of 7 cm 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. Se 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 superficy 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

DIRECCIONES DE CONTACTO / CONTAC ADDRESSES

(ES) A continuación se detallan las diferentes direcciones de contacto para cada mercado/país:
(EN) Please, find below the different contact addresses for each market/country:
(FR) Vous trouverez ci-dessous les différentes adresses de contact pour chaque marché/pays:
(DE) Nachfolgend finden Sie die verschiedenen Kontaktadressen für die jeweiligen Märkte/Länder
(PT) Abaixo estão os diferentes endereços de contacto para cada mercado/país:

ENARCO, S.A. (G International):

- Teléfono/Phone: (+34) 976 464 090/091
- FAX: (+34) 976 471 470
- Email: comercial@enar.es

- Teléfono SAT/Phone Technical Assistance Service: (+34) 976 464 094
- Email SAT/Technical Assistance Service: sat@enar.es

- Address: Calle Burtina, 16 - 50197 Zaragoza (Spain)

ENARPOL:

- Telefon: (+48) 12 418-9151

- Telefon Serwis: (+48) 12 414-4141
- Email: serwis@enarpol.pl

- Adres: Portowa 22, 30-709 Kraków (Polska)

MOPYCSA, S.A. de CV

- Teléfono: (+52) 442 245 7915 / 442 210 9081 / 442 210 9082
- Email: comercial@mopycsa.com.mx

- Email SAT: sat@mopycsa.com.mx

- Dirección: Acceso II Nº5 INT. 1 -Complejo Santa Lucía - Fraccionamiento Ind, Benito Juárez - 76120 Santiago de Querétaro, Qro., (México)

ENAR COLOMBIA

- Teléfono: (+57) 313 851 0656
- Email sat: satcolombia@enar.es

WEB

- (ES) Para realizar cualquier consulta sobre los despieces y listas de piezas de nuestras máquinas consulte nuestra página web.
- (EN) For any requirement about the part list of our machines consult our web page.
- (FR) Pour consulter tous les renseignements des pièces detachees ou la liste de nos machines voir notre site.
- (DE) Um die verschiedene explosionszeichnungen so wie die ersatzteillisten einzusehen, besuchen sie bitte unsere internet-seite.
- (PT) Para fazer qualquer inquérito sobre as listas de peças e peças de nossas máquinas, consulte a nossa página web.

www.enargroup.com

UK CA

DECLARATION OF CONFIRMITY (DOC)

ENARCO, S.A. declare that the DoC is issued under our sole responibility and belongs to the following product(s)

SERIAL NR:

MANUFACTURED DATE:

It has been manufactured in conformity with the relevant **Statutory Requirements and standars**

- 2008 No. 1597	Supply of Machinery (Safety) Regulations 2008.
- 2001 No. 1701	Noise emission in the Enviroment by Equipment for use Outdoors Regulations 2001.
- 2016 No. 1091	Electromagnetic Compability REgulations 2016.
- 2012 No. 3032	The restriction of the Use of Certain Hardazus Substances in Electrical and Electronic Equipment Regulations 2012.
- **EN 60745-2-12 :2009**	Hand-held motor-operated electric tools. Safety. Particular requirements for concrete vibrators.
- **EN 62841-1:2015+A11:2022** - **EN IEC 62841-2-12:2024+A11:2024**	Safety of electric motor-operated hand-held tools, transportable tools and lawn and garden machinery.

TECHNICAL DOCUMENTATION RESPOSIBLE …… Jesús Tabuenca (ENARCO, S.A.U. Burtina, 16, 50197 Zaragoza)

Zaragoza, 10.02.2023

David Gascón
General Manager
ENARCO,S.A.U.

ENARCO, S.A.U.
C/ Burtina 16
Plataforma logística PLAZA
50197 ZARAGOZA
SPAIN

Tfno. (34) 976 464 090
(34) 976 464 091
Fax (34) 976 471 470

e-mail: enar@enar.es
Web: http://www.enargroup.com

CE

DECLARACIÓN DE CONFORMIDAD

CONFORMITY CERTIFICATE ~ CERTIFICAT DE CONFORMITÉ
INSTEMMING VERKLARING ~ KONFORMITÄTS BESCHEINIGUNG
KONFORMITETS BEVIS ~ CERTIFICATO DE CONFORMIDADE ~ CERTIFICATO DI CONFORMITA'
ATITIKTIES DEKLARACIJA ~ CERTYFIKAT ZGODNOŚCI ~ СЕРТИФИКАТ СООТВЕТСТВИЯ
CERTIFICAT DE CONFORMITATE~ СЕРТИФИКАТ ЗА СЪОТВЕТСТВИЕ

ENARCO,S.A.U.
certifica que la máquina especificada
hereby certify that the equipment specified bellow ~ atteste que le equipment
verklaart hierbij dat onderstaand gespecificeerde ~ bescheinigt, daβ das Baugerät
bekræfter, at følgende maskine ~ certifica que o equipamento especificaçao
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

ha sido fabricada de acuerdo con las siguientes normas
has been manufactured according to the following standards ~ est produit conforme aux dispositions des directives ci-apres
in overeenstemming met de voldenge voorschriften gefabriceerd is ~ in übereinstimmung mit folgenden richtlinien hergestellt worden ist
er blevet fremstillet i overenstemmelse 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 съответствие со следующими нормами
este fabricat cu respectarea urmatoarelor standarde ~ е произведено в съответствие със следните стандарти

2006/42/CE, 2000/14/CE, EN-12649, EN 62841-1:2015+A11:2022, EN IEC 62841-2-12:2024+A11:2024
2014/30/UE*, 2014/35/UE*, 2011/65/UE*, 2012/19/UE*,
***Aplicable for machines with electric motor**

RESPONSABLE DOCUMENTACIÓN TÉCNICA……. Jesus Tabuenca (ENARCO, S.A.U. Burtina, 16, 50197 Zaragoza
Technical documentation responsible ~ Responsable of the Documentation Technnique ~ zuständigen technishen Dokumentation

Zaragoza, 26.03.2021

David Gascón
General Manager
ENARCO,S.A.U.

ENARCO, S.A.U.
C/ Burtina 16
Plataforma logística PLAZA
50197 ZARAGOZA
SPAIN

Tfno. (34) 976 464 090
(34) 976 464 091
Fax (34) 976 471 470

e-mail: enar@enar.es
Web: http://www.enargroup.com