



INDUSTRIAS TECHNOFLEX SA

<http://www.technoflex.es/>

Convertidores de "ALTA FRECUENCIA"

"HIGH FREQUENCY" Converters

Convertisseurs de HAUTE FRÉQUENCE

Conversores de "ALTA FREQUÊNCIA"



Manual de Instrucciones / Lista de Recambios

Instruction Manual / Spare Parts

Manuel d'instructions / Liste des pièces de rechange

Manual de instruções / Repostos

MAQUINARIA PARA LA CONSTRUCCIÓN Y OBRAS PÚBLICAS

BUILDING AND PUBLIC WORKS MACHINERY

MACHINERIE POUR LA CONSTRUCTION ET LES TRAVAUX PUBLICS

MAQUINARIA PARA A CONSTRUÇÃO E OBRAS PÚBLICAS

Este manual está compuesto por los siguientes capitulos:
This manual is divided into the sections listed below:
Ce manuel contient les chapitres suivants:
Este manual está composto dos seguintes capítulos:

1A- Utilización

1B- Operation

1C- Utilisation

1D- Utilização

2.- Recambios Convertidor (Español, English, Français,Portugués)

Este manual contiene información y procedimientos que son necesarios para utilizar y mantener este Convertidor modelo **CRF-**. Para su propia seguridad y protección, por favor lea cuidadosamente, entienda y observe todas las instrucciones de seguridad descritas en este manual. LOS DATOS CONTENIDOS EN ESTE MANUAL SON CORRECTOS EN EL MOMENTO DE SU EDICIÓN. NO OBSTANTE EL FABRICANTE SE RESERVA EL DERECHO DE MODIFICAR LAS CARACTERÍSTICAS, SIN PREVIO AVISO A FAVOR DEL COMPROMISO DE MEJORA CONTINUA.

*This manual provides information and procedures to safely operate and maintain this converter **CRF-** model. For your own safety and protection from injury, carefully read, understand and observe the safety instructions described in this manual. THE INFORMATION CONTAINED IN THIS MANUAL ARE CORRECT FROM THE MOMENT OF EDITING. HOWEVER THE MANUFACTURER RESERVES THE RIGHT TO MODIFY THE CHARACTERISTICS, WITHOUT PRIOR NOTICE IN CONSIDERATION OF CONTRACT COMMITMENT OF CONTINUOUS IMPROVEMENT.*

Ce manuel contient les informations et les procédés qui sont nécessaires à l'utilisation et à l'entretien du modèle de vibreur **CRF-**. Pour votre propre sécurité et protection, lisez attentivement, observez et appliquez toutes les instructions de sécurité décrites dans ce manuel. LES DONNÉES CONTENUES DANS CE MANUEL SONT CORRECTES AU MOMENT DE L'ÉDITION. CEPENDANT LE FABRICANT SE RÉSERVE LE DROIT DE MODIFIER LES CARACTERISTIQUES, SANS AVIS PRÉALABLE EN VUE DE L'AMÉLIORATION CONTINUE.

*Este manual contém informação e procedimentos que são necessários para utilizar e manter este vibrador, modelo **CRF-**. Para a sua própria segurança e protecção, faça o favor de ler com cuidado, entender e observar todas as instruções de segurança descritas neste manual. OS DATOS QUE ESTE MANUAL CONTÉM SÃO CORRECTOS NO MOMENTO DA SUA EDIÇÃO. MAS O FABRICANTE RESERVA-SE O DIREITO DE MODIFICAR AS CARACTERÍSTICAS SEM ANTES AVISAR, A FAVOR DO COMPROMISSO DA MELHORA CONTÍNUA.*

Mantenga este manual ó una copia de él con la máquina. Si se pierde ó Ud. desea un ejemplar adicional haga el favor de comunicarse con INDUSTRIAS TECHNOFLEX S.A. Esta máquina fue fabricada con la seguridad del usuario en mente; sin embargo, situaciones peligrosas pueden presentarse si la máquina es utilizada inapropiadamente. Siga las instrucciones de utilización cuidadosamente. Si Ud. tiene preguntas ó dudas acerca de la utilización o mantenimiento de este equipo, haga el favor de comunicarse con INDUSTRIAS TECHNOFLEX S.A.

Keep this manual or a copy of it with the machine. If you lose this manual or need an additional copy, please contact INDUSTRIAS TECHNOFLEX S.A. This machine is built with user safety in mind, however, it can present hazards if improperly operated and serviced. Follow operating instructions carefully! If you have questions about operating or servicing this equipment, please contact INDUSTRIAS TECHNOFLEX S.A.

Gardez ce manuel ou une copie avec la machine. En cas de perte ou si vous désirez un exemplaire supplémentaire veuillez vous adresser à INDUSTRIAS TECHNOFLEX S.A. Cette machine a été fabriquée en pensant à la sécurité de son utilisateur; toutefois, des situations dangereuses peuvent se présenter si la machine n'est pas utilisée convenablement. Suivez les instructions attentivement. Si vous avez des questions ou des doutes, au sujet de l'utilisation ou l'entretien de cet équipement, adressez-vous à INDUSTRIAS TECHNOFLEX S.A.

Mantenha este manual ou uma cópia dele com a máquina. Se o perder ou se o senhor desejar um exemplar adicional faça o favor de se comunicar com INDÚSTRIAS TECHNOFLEX, S.A. Esta máquina foi fabricada pensando na segurança do usuário; mas se a máquina for utilizada imprópriamente poderiam se apresentar em situações perigosas. Siga as instruções de utilização cuidadosamente. Se o senhor tiver perguntas ou dúvidas sobre a utilização ou mantimento de este equipe, faça o favor de se comunicar com INDÚSTRIAS TECHNOFLEX, S.A.

CONTENTS

<u>Chapter</u>	<u>Page</u>
1.1 SAFETY NOTES	1B-2
1.2 WARNING AND SAFETY INSTRUCTIONS	1B-2
1.3 TECHNICAL DATA	1B-4
1.4 GENERAL CHARACTERISTICS	1B-4
1.5 SAFETY AT WORK	1B-5
1.6 CONDITIONS OF USE	1B-5
1.7 TABLE OF THERMAL REGULATION	1B-5
1.8 INSTRUCTIONS OF USE	1B-7
1.9 MAINTENANCE INSTRUCTIONS	1B-8
1.10 INSTRUCTIONS FOR ORDERING SPARE PARTS	1B-9
1.11 TRANSPORT AND STORAGE	1B-9
1.12 GUARANTEE	1B-9
1.13 TROUBLESHOOTING	1B-10
1.14 WIRING SCHEMATICS	1B-11
2.1 CRF-10TT CONVERTER	2-1
2.2 CRF-20TT CONVERTER	2-3
2.3 CRF-22TT CONVERTER	2-5
2.4 CRF-30T/2 CONVERTER	2-7
2.5 CRF-30T/2A CONVERTER	2-9
2.6 CRF-10G CONVERTER	2-11
2.7 CRF-20G CONVERTER	2-13
2.8 CRF-30D CONVERTER	2-15
2.9 ETF-08 CONVERTER	2-17
2.10 ETF-10 CONVERTER	2-19
2.11 ETF-20 CONVERTER	2-21
2.12 ETF-60 CONVERTER	2-23

1.1 Safety Notes

This manual contains CAUTIONS and WARNINGS which must be followed to prevent the possibility of improper service, damaged to the equipment, or personal injury. Read and follow all the CAUTIONS and WARNINGS included in this instructions manual.



WARNING: Warnings warn of conditions or practices which could lead to personal injury.

1.2 Warning and Safety Instructions



WARNING

Read All Instructions!

When using electric tools, basic safety precautions should always be followed, to reduce the risk of fire, electric shock, and personal injury.

Guard against electric shock!

- | | |
|---|---|
| <p>1. Never operate motor with damaged or worn electrical cords! When using an extension cord be sure to use one heavy enough to carry the current load. See Table 1.8-1 for correct cable size to use.</p> | <p>3. When motor is used outdoors, use only extension cords intended for and marked for outdoor use.</p> |
| <p>2. Prevent body contact with grounded surfaces, such as pipes, metal railings, radiators and metal ductwork.</p> | <p>4. Always keep power cord away from heat, oil and sharp edges which can damage it.</p> |
| | <p>5. Make certain motor is in good working order and properly <u>grounded</u> before starting, as well as the <u>connection plug</u> where this will be connected.</p> |

Save these instructions!

1B OPERATION

Read All Instructions



WARNING

Familiarity and proper training are required for the safe operation of this equipment! Equipment operated or serviced improperly or by untrained personnel can be dangerous! Read all operating instructions and the safety notes below. Familiarize yourself with the proper use of this equipment before operating it.

1. Keep your work area clean and free of clutter.
2. Keep your work area well lit.
3. DO NOT allow children or people other than the operator to handle power cables, extension cords or the equipment.
4. DO NOT allow non-essential personnel or visitors in the work area.
5. NEVER carry Converter by cord or pull on it to disconnect it from receptacle. Keep cord away from heat, oil and sharp edges.
6. Stay alert! Watch what you are doing. Use common sense. NEVER operate the vibrator motor when you are tired or while under the influence of drugs, alcohol, or medication.
7. Keep hands, feet, hair and loose clothing away from moving parts. They can be caught in moving parts.
8. DO NOT operate equipment if switch does not operate properly.
9. DO NOT overreach! Keep proper footing and balance at all times. Make sure any supporting structures are strong enough and stable enough to support your weight and the weight of any equipment on it.
10. Wear protective clothing when operating equipment. Goggles or safety glasses will protect against eye damage caused by flying debris.
11. DO NOT force tool. Use the correct tool for which it is designed.
12. NEVER allow untrained personnel to operate or service the equipment.
13. Maintain tools with care. Keep vibrator unit clean for better and safer performance. Inspect Converter cord periodically and if damaged, have it repaired by an authorized service facility.
14. NEVER use the Converter with a defective switch. If the switch does not turn the motor "ON" or "OFF", have it repaired by an authorized service facility before using the motor.
15. Replace worn or damaged parts with replacement parts designed and recommended for use by **INDUSTRIAS TECHNOFLEX S.A.**
16. Any servicing, other than that covered in this instruction manual, should be performed by an authorized **INDUSTRIAS TECHNOFLEX S.A** Service Representative.

Save these instructions!

1.3 Technical Data

Type	Input Tension and Frequency	Fuel	KVA	Output Voltage A.	Outlets	Output Tension and Frequency	Weight Kg. (lbs.)
CRF-10TT	220/380 V. 50 Hz. Three-Phase	-----	1,0	15	1	42 V. 200 Hz.	18 (40)
CRF-20TT	220/380 V. 50 Hz. Three-Phase	-----	2,0	30	2	42 V. 200 Hz.	24 (53)
CRF-22TT	220/380 V. 50 Hz. Three-Phase	-----	2,2	37	2	42 V. 200 Hz.	30 (66)
CRF-30T/2	220/380 V. 50 Hz. Three-Phase	-----	3,0	45	3	42 V. 200 Hz.	36 (79)
CRF-30T/2A	220/380 V. 60 Hz. Three-Phase	-----	3,0	40	3	42 V. 180 Hz.	36 (79)
CRF-10G	-----	Gasoline 95	1,0	15	1	42 V. 200 Hz.	28 (62)
CRF-20G	-----	Gasoline 95	2,0	30	2	42 V. 200 Hz.	31 (68)
CRF-30D	-----	Diesel-Oil	3,0	45	3	42 V. 200 Hz.	75 (165)
ETF-08	220 V. 50 Hz. Single-Phase	-----	0,8	10	1	42 V. 200 Hz.	8 (18)
ETF-10	220 V. 50 Hz. Single-Phase	-----	1,0	15	1	42 V. 200 Hz.	11 (24)
ETF-20	220 V. 50 Hz. Single-Phase	-----	2,0	30	2	42 V. 200 Hz.	17 (37)
ETF-60	380/400 V. 50 Hz. Single-Phase	-----	6,0	65	4	42 V. 200 Hz.	58 (129)

- ♦ The Converters: CRF-10TT, CRF-20TT, have an external protection in Polyamide Red color.
- ♦ The Converters: ETF-60, CRF-22TT, CRF-30T/2, CRF-30T/2A, CRF-10G, CRF-20G, CRF-30D, have a frame iron of external protection in White color.
- ♦ The Converters: ETF-08, ETF-10, ETF-20- are assembled in a metal box painted in Red color.

MAXIMUM NUMBER OF TRANSMISSIONS TO CONNECT														
CONVERTER TRANSMISSION	ETF-08	ETF-10	ETF-20	ETF-60	CRF-10TT	CRF-20TT	CRF-22TT	CRF-30T/2	CRF-30T/2A	CRF-30D	CRF-10G	CRF-10GR	CRF-20G	CRF-20GR
Transmission VAF-38LT	1	3	4	10	3	4	4	6	6	6	3		4	
Transmission VAF-50CT	1	2	3	8	2	3	3	4	4	4	2		3	
Transmission VAF-50LT	-	1	2	6	1	2	2	3	3	3	1		2	
Transmission VAF-60T	-	1	2	6	1	2	2	3	3	3	1		2	
Transmission VAF-60LT	-	-	1	4	1	1	1	2	2	2	1		1	
Transmission VAF-70T	-	-	1	4	1	1	1	2	2	2	1		1	
Transmission VAF-70LT	-	-	1	3	-	1	1	2	2	2	-		-	

1B OPERATION

1.4 General Characteristics

The Converters will be used by personnel trained for this job, it will only be used in specific jobs for which it has been technically developed, after having read the instructions contained in this manual and which must be followed correctly.

The manufacturer or authorised distributor must be consulted about any doubts.

*The manufacturer **Industrias Technoflex S.A.**, will not accept any responsibility derived from incorrect installation, manipulation, or misuse of the vibrator.*

1.5 Safety at work

*The **HIGH FREQUENCY** Converters **CRF-** model, fulfils the E.C. regulation of safety at work, low voltage and vibration in portable machines or hand driven, as well as ISO 6081 regulation, regarding noise at the place of work. However the use of hearing protection and rubber boots during the vibrating time.*

However, remember that it is obligatory make use of instalation where the machine will be connected of a differential with a sentivity of 300 μ A.

The manufacturer will not accept responsibilities for accidents if they derive from structure modification.

In addition to our recommendations the safety regulations of each country in force.

1.6 Conditions of Use

*The **HIGH FREQUENCY** Converters **CRF-** model, is designed to give maximum satisfaction to the user and be used under the hardest conditions, both environmental as well as use as long as the instructions of use and maintenance contained in this manual.*

The Converters are composed of an electrical motor, that may be Single-Phase or Three-Phase. Of internal combustion engine in both versions, Petrol and Diesel, and with a rotor of permanent magnets, maintenance-free.

To the exit of Generator are found the plugs for connecting the Transmissions, the number of the plugs depend on the model.

All the Three-Phase Converters, have thermal switch automatic It switch off once the motor reaches the maximum intensity allowed.

Although the motor is equiped with protector of motor does not mean that it not may burn, it would burn in the case that the thermal are higher than the especificated or would be broken down.

*The electronic converters **ETF** has composeded by one electronic circuit frequency variator and threephase transformer.*

1.7 Table of Thermal Regulation

Type	CRF-10TT	CRF-20TT	CRF-22TT	CRF-30T/2	CRF-30T/2A
Regulation of Thermal Switch 380 V.	4 A.	4 A.	5 A.	7 A.	7 A.
Regulation of Thermal Switch 220 V.	7 A.	7 A.	9 A.	12 A.	12 A.

Table 1.7-1

1.8 Instructions of Use

Put the Converter the most move away possible of the zone to vibrate, to avoid possible projections of concrete, in the event of taking place they must be wiped with a wet cloth before that they are dry.

The electrical cable must be protected from electric heat, oils, grease. Objects with sharp edges, heavy machines and others objects which may cause its rupture.

*The Converter must **NEVER** be stopped while it is introduced into the concrete, to stop it must be taken out the needles of the concrete and proceed to stops.*

Under any circumstance the Converter must be moved pulling for the electric cable.

- **Starting of the “Electric Motors”**

*The **HIGH FREQUENCY** Converters are designed to connect the High Frequency Transmissions of 42 V. 200 Hz. Not connect it Transmissions of different tensions.*

Before starting, the electric cable must be totally checked, as well as, plugs an tension line of the Transmissions, if there were some defect, it would nbe repaired. Check paying special attention, that the network tension coincides with the Converter voltage.

Once it has been revised, check that the Transmission is in position “0”, connect the plug up to the connection base of the converter and may be started moving the switch to the position “I”, and later you can starting the vibrant needle, moving the switch from the Transmission to the position “I”

***NOT** use converter’s plug for starting up or stopping it, always must be used with the corresponding switch.*

*Under **ANY** circumstances, have the arrange switch of the needle in position “I” (starting position) before that the Converter has been started, it means that the first the Converter must be started and then the vibrating needle, because it starts on loud may produce a fault in the motor of the Converter.*

*The Converter must **NOT** be started with the Transmissions connected or with the switch of them in position “I”.*

*The Converter must **NOT** be stopped before the **HIGH FREQUENCY** Transmissions connected to it.*

1B OPERATION

Under **ANY** circumstances made any kind of operation or part substitution with the machine switch plugged in the network.

DO NOT allow personnel not capable to make use of the vibrator or manipulate the electric parts.

- **Starting of the “Petrol and Diesel Engines” (First time):**

A) **For measuring of security in the transport of shipment, all the machines ARE GIVEN WITHOUT OIL AND WITHOUT FUEL IN THE TANKS.**

B) **Fuel:** Filling the tank of fuel, all the petrol engine of the Converters, they use gasoline for automobile that is clean of 95 unleaded octanes. The Diesel engine it use Diesel-Petrol for automobile.

C) **Oil:** Filling the tank of oil of the motor, following the instructions of respective lubrication of the maker of the motor that are attached to this manual.

D) From factory, the motors are send with a regulation of output voltage of 50 V. (No load), check before starting that the voltage is correct.

E) **ATTENTION:** Under any circumstance, the engine must not be speeded up, a higher turning speed, invove an increase of voltage and the frequency, if this exceed 10% of nominal value, it would produce the destruction of the vibrating needle.

- **Starting of the “Electronic Converters”:**

These Converters don't require any attention neither maintenance, however the connection cable from the network must be verified and it not have any rupture.

Only a fault on the Converter or on the network, will produce a stopping, for knowing the reason because the Electronic Equipment disposes one LED, that according to the number of sparkles that makes, it will show to the operation of the circuit or its posible error.

Nº Sparkles	Explanation
1	Don't alarms
2	Failure control 1 limits feeding tension
3	Failure control 2 limits feeding tension
4	Failure control 3 limits feeding tension
5	Motor failure (from the signal the gives the power module)
6	Phase failure (from extreme difference square, channel 2)
7	Failure overloads motor during the last minute.

- **All the failures stop the motor and disconnect the source of high tension, supposing that we are not pressing the pulser ON. The failures of feeding tension disconnect the source low tension. The rearms after to failure: it is necessary to press OFF and after again ON**

1.9 Maintenance Instructions



WARNING

Before performing any maintenance on this unit, ALWAYS MAKE CERTAIN that the switch is in the "OFF" position and the power cord is disconnected from the power source.

The Converter is free for maintenance, however the plug must be checked regularly as well as the electric cable.

*In case the Converter should be repaired, the magnet's rotor **MUSN'T** take any special precautions due to quality of these, when the magnet are taken the Converter out they don't demagnetize.*

*The parts which are seen to have excessive wearing the loose bearings, heat up or make too much noise, must be substituted and always remember **ORIGINAL SPARE PARTS MUST BE USED.***

*For safety reasons and so as to avoid accidental starting, **DO NOT** forget to disconnect the Converter from the network, when some kind of operation or part substitution is made.*

1.10 Instructions for Ordering Spare Parts

Spare parts are on sale through the official services and in the brand distributors in your locality.

When you order spares do not forget to indicate:

- *Type of Converter: if is electrical, petrol engine, Diesel engine or electronical.*
- *Units ordered, code and description of parts requested, and whenever possible, the series number of the machines*
- *When spare parts are required for petrol engine or Diesel engine furthermore give the make, model and Serial number of the engine.*
- *When equipment or spare parts have to be returned to the factory its necessary to contact with **Industrias Technoflex S.A.** for prior agreement, "**AN ABSOLUTE NECESSITY FOR THEIR RECEPTION**".*

1.11 Transport and Storage

- **Conditions for transport and storage:**

The packaging of the **CRF-** Converter allows its easy transport without taking any special precaution.

Its storage the **CRF-** Converter if it is for a long period of time, its storage will be in a safe dry place.

Before store and after use the Converter must be perfectly clear outside with a wet cloth taking all the concrete leftovers off.

NEVER clear by hidro jet, neither leave in the open at night or when rain.

1.12 Guarantee

A) **Period of Guarantee**

Industrias Technoflex S.A., guarantees the products and components they manufacture, for a period of 6 months.

B) **Coverage of Guarantee**

The guarantee covers all the defects from manufacturing of the components of the product, as well as their replacement or substitution, on behalf of the Technical After Sales Service.

C) **Cancellation of Guarantee**

The guarantee does not cover the misuse or inadequate manipulation, on behalf of the use of the Converter, nor the incorrect connection, knocks, maltreatment or repairing by unauthorised personnel.

During the period of guarantee the breakdowns must be repaired by personnel from **Industrias Technoflex S.A.**, authorised to do so, if this is not so the right given by the guarantee will be lost.

The equipment which has been dismantled or manipulated previously by personnel unauthorised by **Industrias Technoflex S.A.** will not be in guarantee.

In all the cases of application for guarantee, **prior notice** must send the equipment to **Industrias Technoflex S.A.** or where they indicate.

IMPORTANT NOTICE:

Industrias Technoflex S.A., are not responsible for damage caused to the product or persons due to their misuse or bad manipulation.

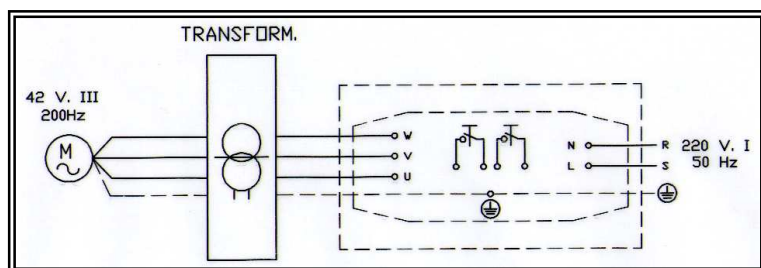
1.13 Troubleshooting

SYMPTOM	PROBABLE CAUSE	COUNTERMEASURE
The converter doesn't work.	-Fail of the line phase. -Electrical connections are let or broken. -Faulty switch.	-Checking and convert. -Checking and replace. -Replace.
The converter doesn't start and make noise.	-Fail of the line phase.	-Checking line, cable and plugs. -Replace if it is necessary.
The thermal switch, switch off.	-Fail of the line phase. -The generator has excessive charge.	-Checking cable and plug, replace if it is necessary. -Stop the some vibratin needle.
The general differential switch off.	-Fail of insulation, motor is burnt.	-Checking and stop.

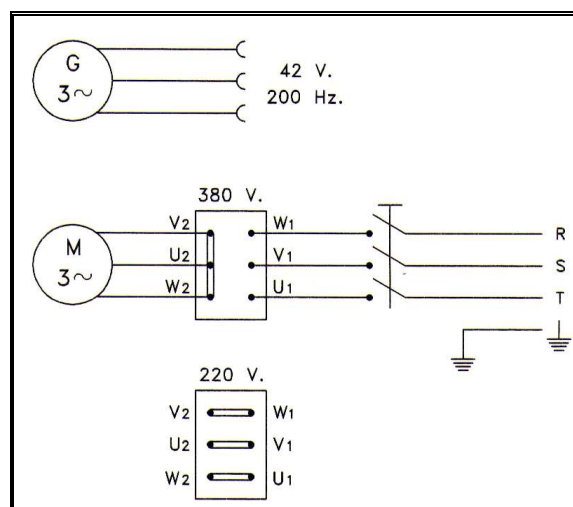
1.14 Wiring Schematics

Three-Phase Converters are send from factory connected to 380 V. for connecting to 220 V. the terminals plate must be operated on as is indicated in the wiring schematic, changing at the same time the regulation of the switch thermal according to table 1.7-1

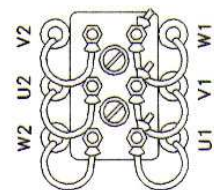
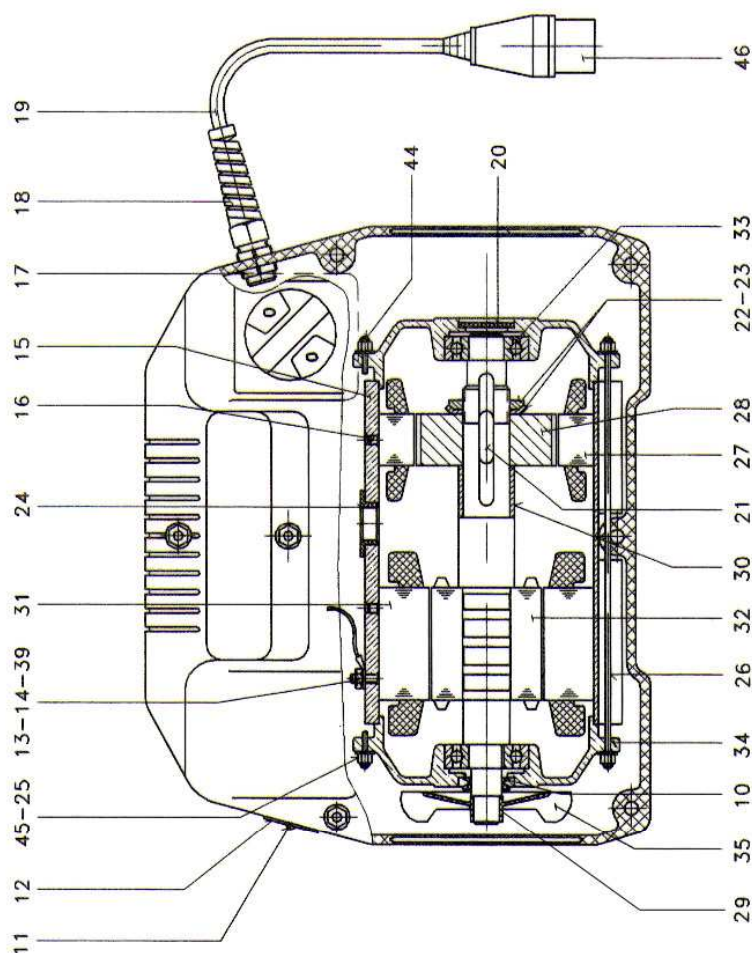
WIRING SCHEMATIC MONOPHASE



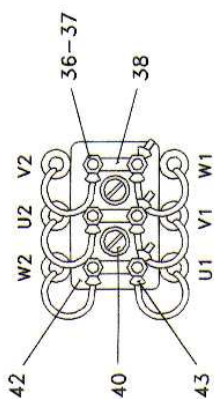
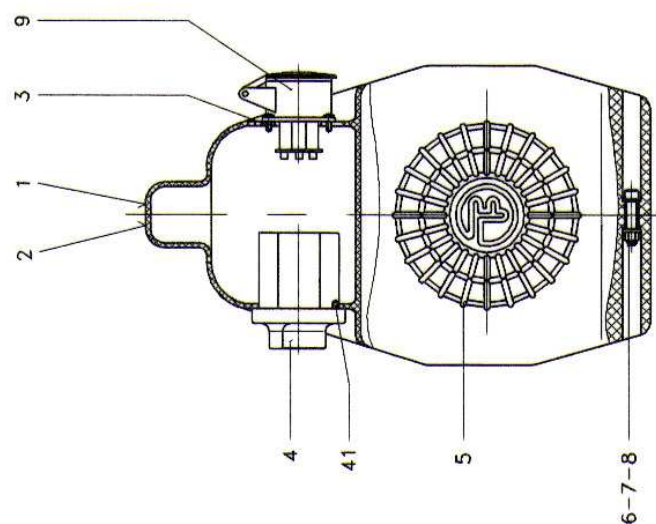
WIRING SCHEMATIC THREE-PHASE



2.1 Convertidor CRF-10TT / *CRF-10TT Converter* Convertisseur CRF-10TT / *Conversor CRF-10TT*



Conexion a 380 V.



Conexion a 220 V.

CONVERTIDOR
CONVERTISSEUR

CONVERTER
CONVERSOR 2

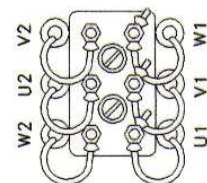
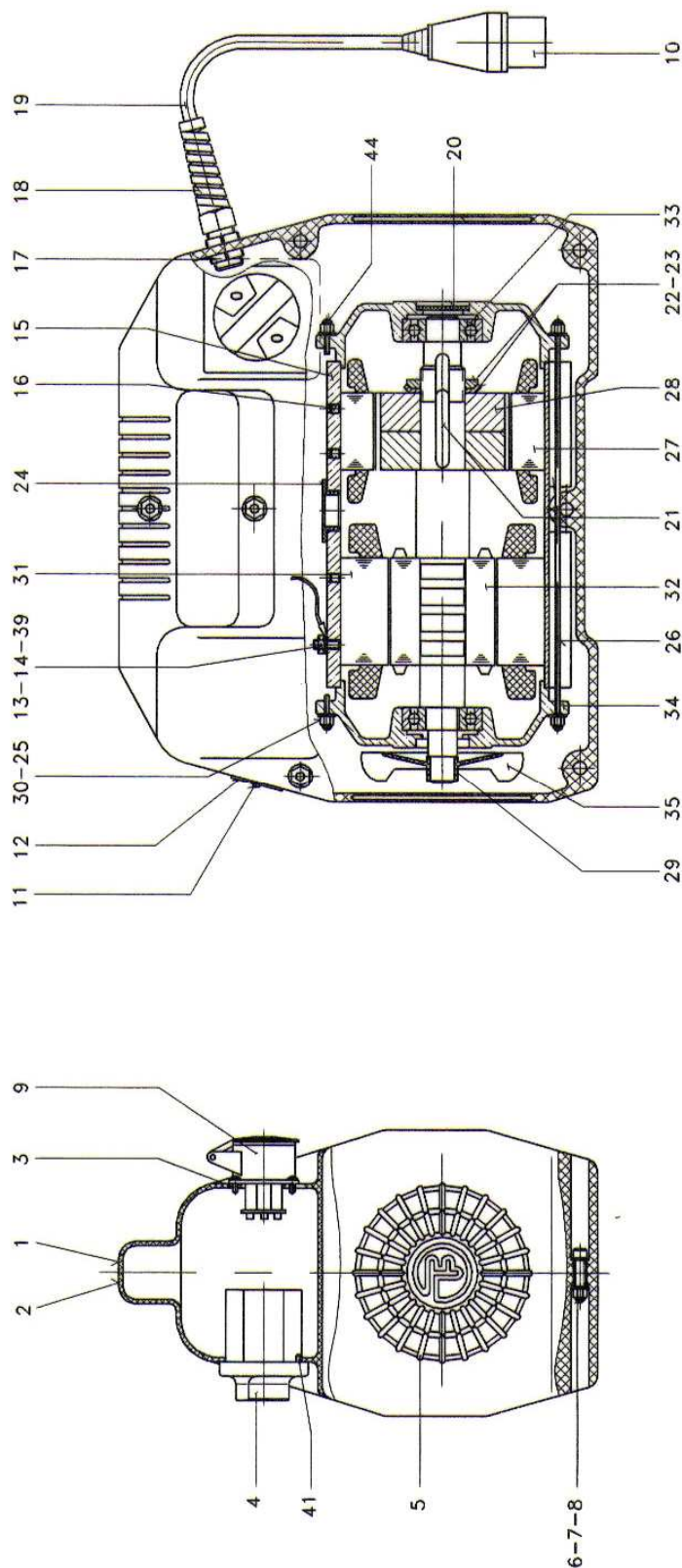
Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Repostos

Código Code	Pos.	Cant. Qty. Quant. Anz.
4060620502	33	2
120456R013	34	2
4080000013	35	1
3125400004	36	24
3934400004	37	12
4052090010	38	3
3934200006	39	1
3985204012	40	2
3985204010	41	2
4050791010	42	1
4025908014	43	9
3587000005	44	4
3127100005	45	8
4048032036	46	1

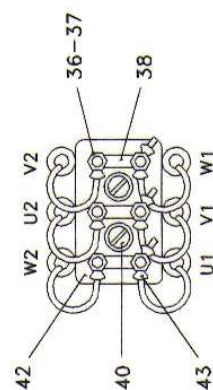
Código Code	Pos.	Cant. Qty. Quant. Anz.
4075001016	17	1
4048000056	18	1
4020000433	19	1
120467R014	20	1
4022080725	21	1
4013000006	22	1
4075000006	23	1
130667R014	24	1
3985200005	25	4
172937R024	26	4
172928R013	27	1
141055R014	28	1
130793R014	29	1
130669R014	30	1
172934R013	31	1
100355R013	32	1

Código Code	Pos.	Cant. Qty. Quant. Anz.
110361R013	1	1
110361R023	2	1
3985203012	3	4
4048000134	4	1
172954R013	5	2
3912105025	6	8
3125200005	7	16
3986200005	8	8
4048000080	9	1
4012009025	10	1
173124R014	11	1
3505203010	12	4
3913106015	13	1
4025908016	14	1
110349R012	15	1
3913106006	16	2

2.2 Convertidor CRF-20TT / *CRF-20TT Converter* Convertisseur CRF-20TT / *Conversor CRF-20TT*



Conexión a 380 V.



Conexión a 220 V.

CONVERTIDOR

CONVERTER

CONVERTISSEUR

CONVERSOR

2

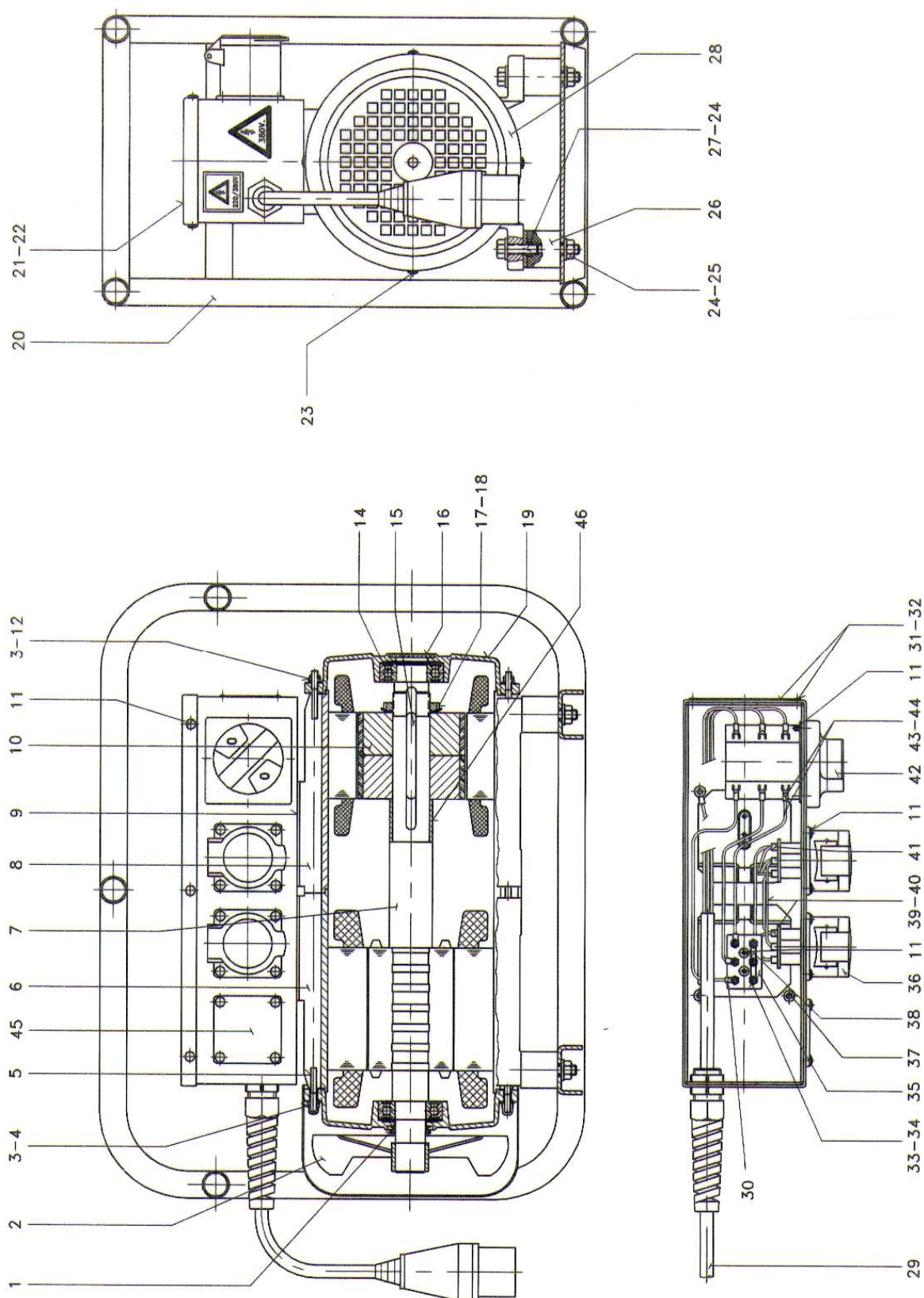
Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Reposos

Código Code	Pos.	Cant. Qty. Quant. Anz.
172934R013	31	1
100355R013	32	1
4060620502	33	2
120456R013	34	2
4080000013	35	1
3125400004	36	21
3934400004	37	9
4052090010	38	3
3934200006	39	1
3985204012	40	2
3985204010	41	2
4050791010	42	1
4025908014	43	6
3587000005	44	4

Código Code	Pos.	Cant. Qty. Quant. Anz.
3913106006	16	3
4075001016	17	1
4048000056	18	1
4020000433	19	1
120467R014	20	1
4022080760	21	1
4013000006	22	1
4075000006	23	1
130667R014	24	1
3985200005	25	4
172937R024	26	4
172929R013	27	1
141055R014	28	2
130793R014	29	1
3127100005	30	8

Código Code	Pos.	Cant. Qty. Quant. Anz.
110362R013	1	1
110362R023	2	1
3985203012	3	8
4048000134	4	1
172954R013	5	2
3912105025	6	8
3125200005	7	16
3986200005	8	8
4048000080	9	2
4048032036	10	1
173125R014	11	1
3505203010	12	4
3913106015	13	1
4025908016	14	1
110349R012	15	1

2.3 Convertidor CRF-22TT / CRF-22TT Converter
Convertisseur CRF-22TT / Conversor CRF-22TT



CONVERTIDOR
CONVERTISSEUR

CONVERTER
CONVERSOR 2

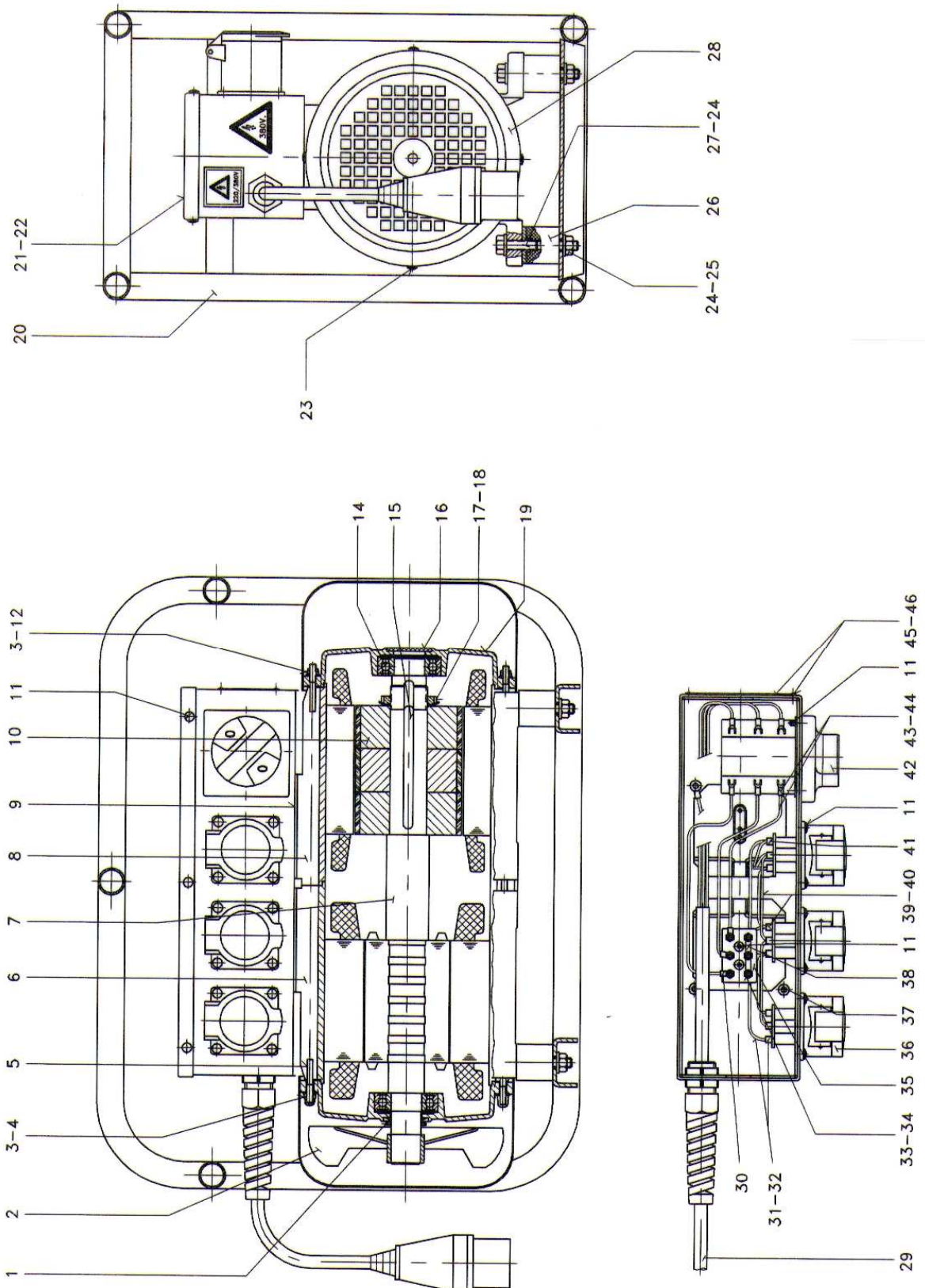
Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Reposos

Código Code	Pos.	Cant. Qty. Quant. Anz.
3125400004	33	9
3934400004	34	12
4050791010	35	1
4048000080	36	2
3912105010	37	4
4052090010	38	3
173169R014	39	6
4048000237	40	3
4048000225	41	3
4048000139	42	1
173170R014	43	3
4048000360	44	3
120521R014	45	1
130669R014	46	1

Código Code	Pos.	Cant. Qty. Quant. Anz.
4013000006	17	1
4075000006	18	1
120515R013	19	2
173141R012	20	1
172927R012	21	1
173161R014	22	1
3981235010	23	6
3125200008	24	8
3934200008	25	4
4070003031	26	4
3933208020	27	4
4074000094	28	1
141214R014	29	1
4025908014	30	9
173053R014	31	1
4058103256	32	4

Código Code	Pos.	Cant. Qty. Quant. Anz.
4012009025	1	1
4080000090	2	1
3127100006	3	8
3587000006	4	4
173173R014	5	4
141209R012	6	1
141207R012	7	1
141258R012	8	1
4042380112	9	2
141055R014	10	2
3985204010	11	22
3985200006	12	4
	13	
4060620502	14	2
4022080760	15	1
120517R014	16	1

2.4 Convertidor CRF-30T/2 / CRF-30T/2 Converter
Convertisseur CRF-30T/2 / Conversor CRF-30T/2



CONVERTIDOR

CONVERTER

CONVERTISSEUR

CONVERSOR

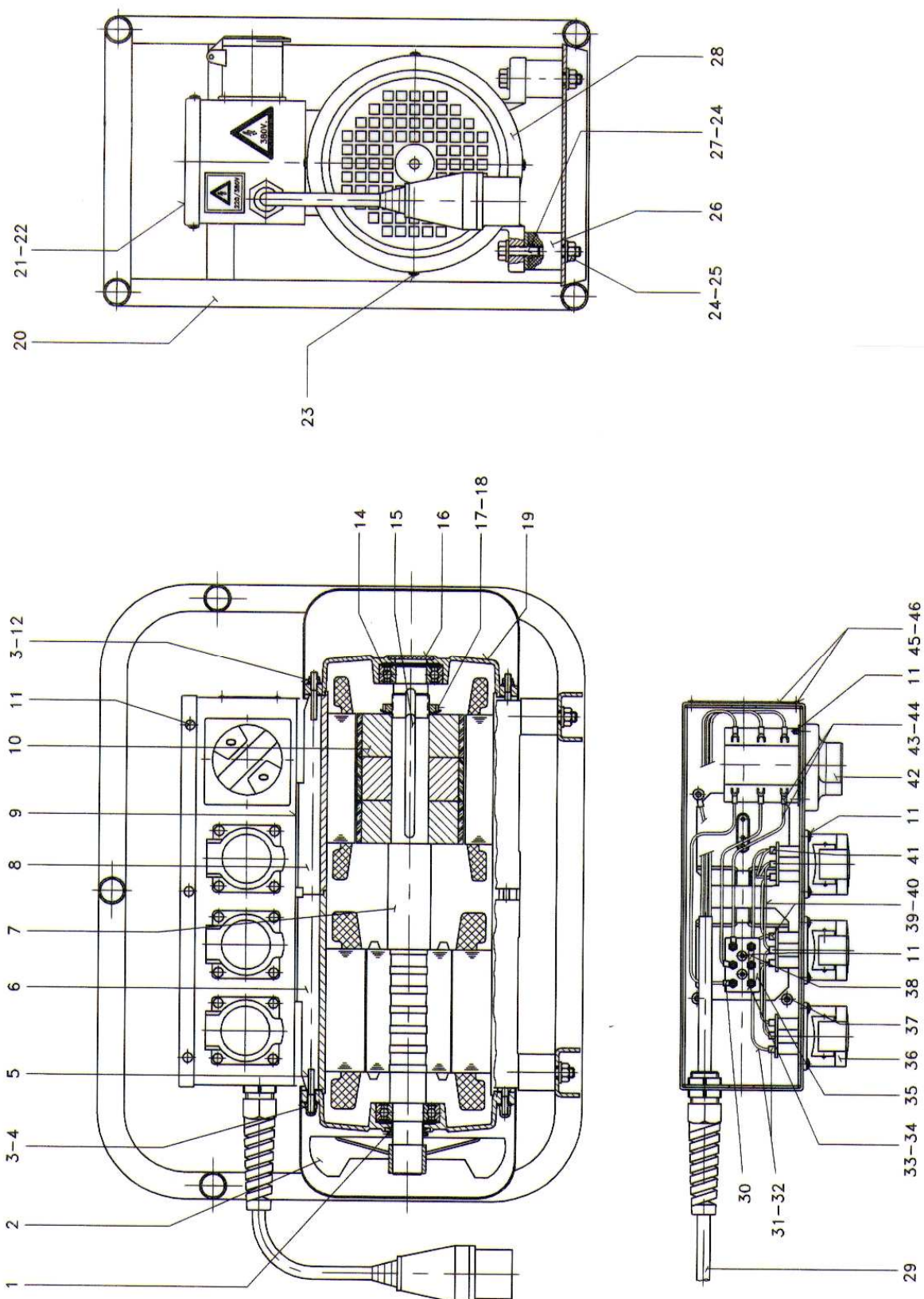
2

Código Code	Pos.	Cant. Qty. Quant. Anz.
3125400004	33	9
3934400004	34	12
4050791010	35	1
4048000080	36	3
3912105010	37	4
4052090010	38	3
173169R014	39	6
4048000237	40	3
4048000225	41	3
4048000139	42	1
173170R014	43	3
4048000360	44	3
173053R014	45	1
4058103256	46	4

Código Code	Pos.	Cant. Qty. Quant. Anz.
4013000006	17	1
4075000006	18	1
120515R013	19	2
173141R012	20	1
172927R012	21	1
173161R014	22	1
3505235010	23	6
3125200008	24	8
3934200008	25	4
4070003031	26	4
3933208020	27	4
4074000094	28	2
141214R014	29	1
4025908014	30	9
173168R014	31	3
4048000228	32	3

Código Code	Pos.	Cant. Qty. Quant. Anz.
4012009025	1	1
4080000090	2	1
3127100006	3	8
3587000006	4	4
173173R014	5	4
141209R012	6	1
141207R012	7	1
141208R012	8	1
4042380112	9	2
141055R014	10	3
3985204010	11	22
3985200006	12	4
	13	
4060620502	14	2
4022080792	15	1
120517R014	16	1

2.5 Convertidor CRF-30T/2A / *CRF-30T/2A Converter* Convertisseur CRF-30T/2A / *Conversor CRF-30T/2A*



CONVERTIDOR

CONVERTER

CONVERTISSEUR

CONVERSOR

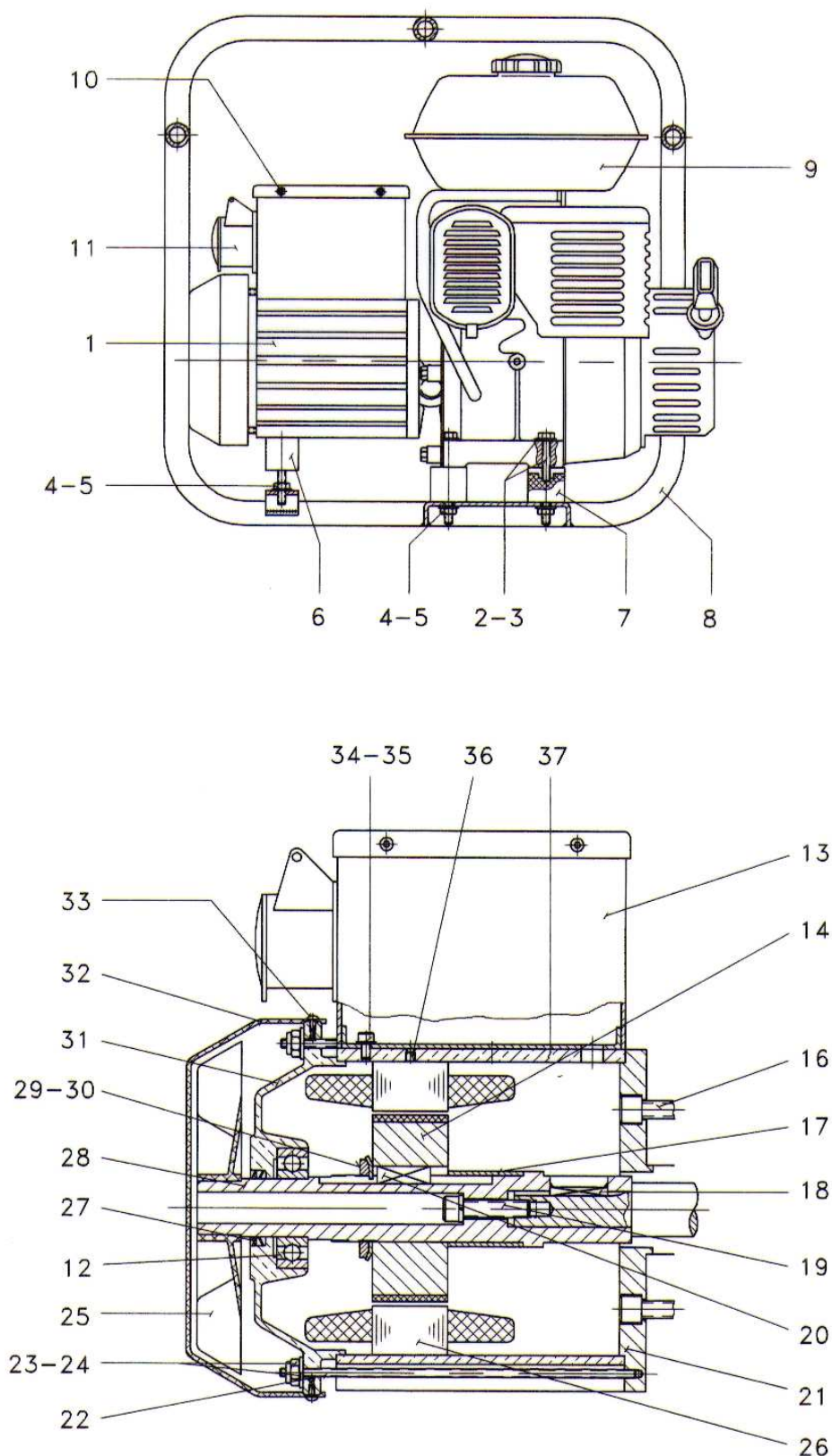
2

Código Code	Pos.	Cant. Qty. Quant.
3125400004	33	9
3934400004	34	12
4050791010	35	1
4048000080	36	3
3912105010	37	4
4052090010	38	3
173169R014	39	6
4048000237	40	3
4048000225	41	3
4048000139	42	1
173170R014	43	3
4048000360	44	3
173339R014	45	1
4058103256	46	4

Código Code	Pos.	Cant. Qty. Quant.
4013000006	17	1
4075000006	18	1
120515R013	19	2
173141R012	20	1
172927R012	21	1
173161R014	22	1
3505235010	23	6
3125200008	24	8
3934200008	25	4
4070003031	26	4
3933208020	27	4
4074000094	28	2
141214R014	29	1
4025908014	30	9
173168R014	31	3
4048000228	32	3

Código Code	Pos.	Cant. Qty. Quant.
4012009025	1	1
4080000090	2	1
3127100006	3	8
3587000006	4	4
173173R014	5	4
141209R022	6	1
141207R012	7	1
141208R022	8	1
4042380112	9	2
141055R014	10	3
3985204010	11	22
3985200006	12	4
	13	
4060620502	14	2
4022080792	15	1
120517R014	16	1

2.6 Convertidor CRF-10G / *CRF-10G Converter* Convertisseur CRF-10G / *Conversor CRF-10G*



CONVERTIDOR

CONVERTER

CONVERTISSEUR

CONVERSOR

2

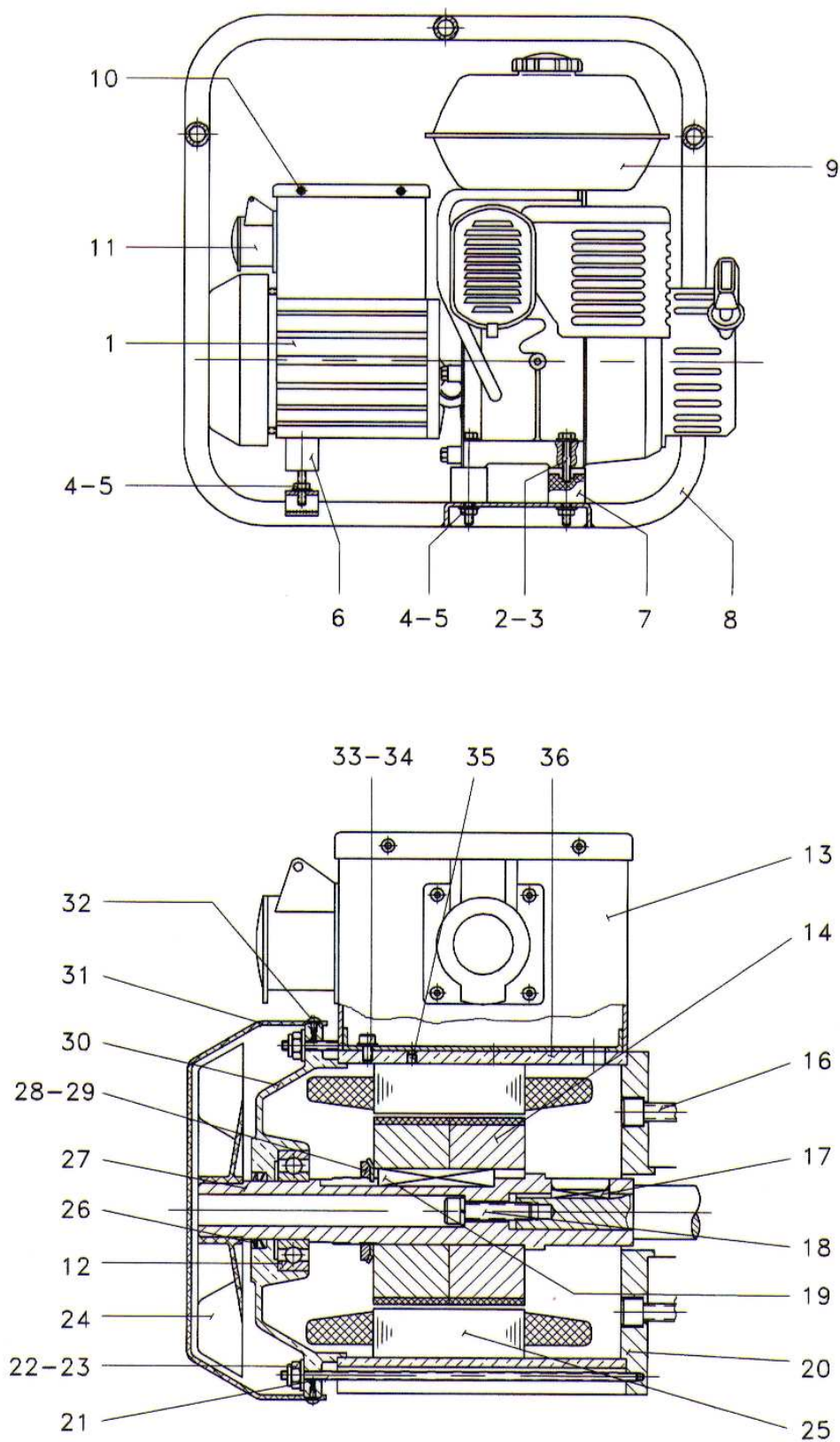
Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Repostos

Código Code	Pos.	Cant. Qty. Quant.	Ref.
4080000013	25	1	Honda Robin
172928R013	26	1	
4012009025	27	1	
100387R023	28	1	
100387R013	28	1	
4013000006	29	1	
4075000006	30	1	
120456R013	31	1	
120538R014	32	1	
3505204010	33	4	
3125200006	34	4	
3912106008	35	4	
3913106006	36	1	
110367R013	37	1	

Código Code	Pos.	Cant. Qty. Quant.	Ref.
173070R012	13	1	M-8x15 SAE 5/16 M-8x30 SAE 5/16
141055R014	14	1	
	15		
3912108015	16	4	
3912151615	16	4	
130669R014	17	1	
4022050525	18	1	
3912108030	19	1	
3912151630	19	1	
4022080725	20	1	
120503R013	21	1	
172937R014	22	4	
3125200005	23	4	
3985200005	24	4	

Código Code	Pos.	Cant. Qty. Quant.	Ref.
141285R022	1	1	Honda
141144R012	1	1	Robin
3127100008	2	5	Honda Robin
3933208035	3	4	
3125200008	4	5	
3934200008	5	5	
4070003030	6	1	
4070003031	7	4	
173071R012	8	1	
4047000160	9	1	
4047000015	9	1	
3985204010	10	8	
4048000080	11	1	
4060620502	12	1	

2.7 Convertidor CRF-20G / *CRF-20G Converter* Convertisseur CRF-20G / *Conversor CRF-20G*



CONVERTIDOR
CONVERTISSEUR

CONVERTER
CONVERSOR 2

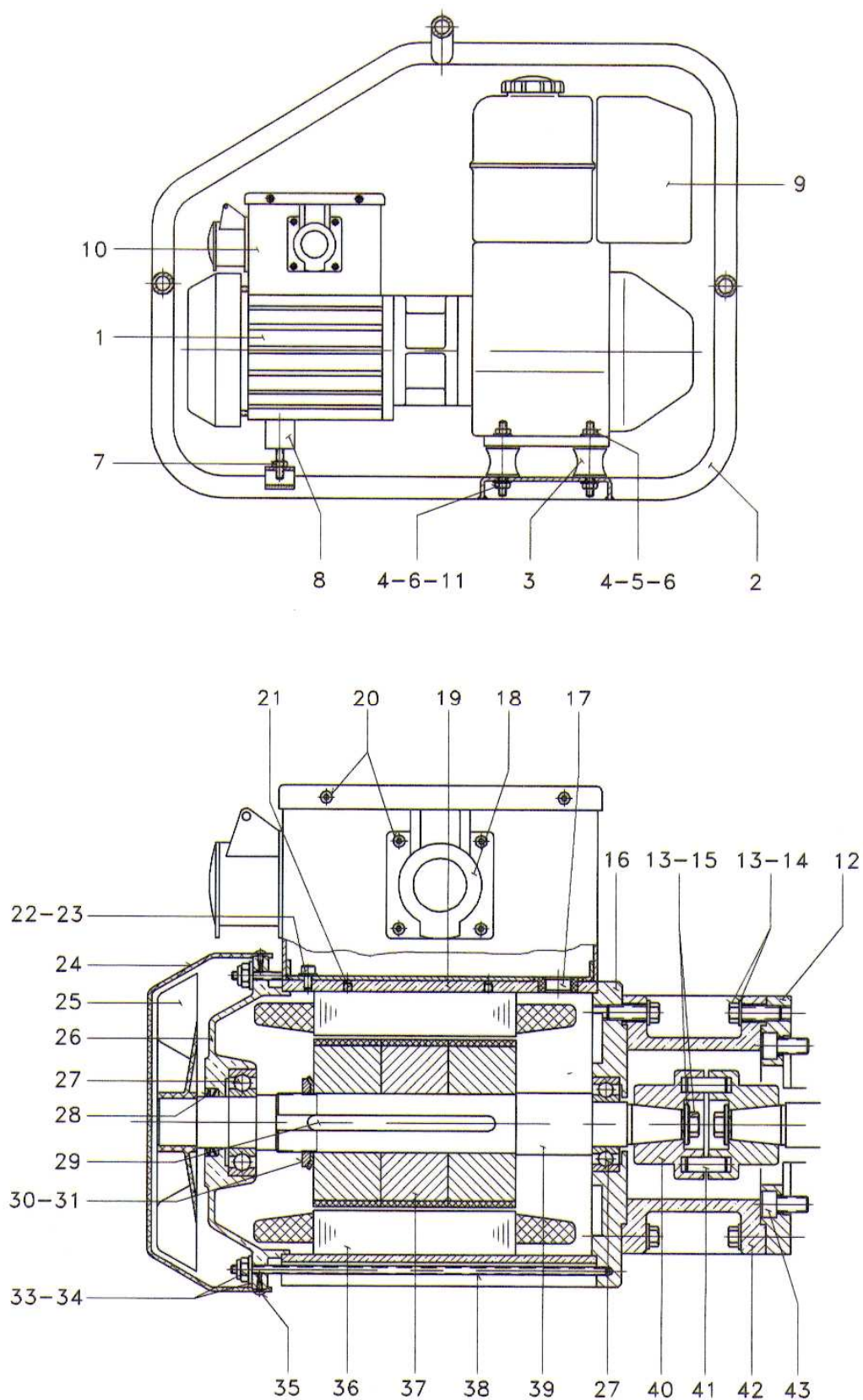
Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Reposos

Código Code	Pos.	Cant. Qty. Quant.	Ref.
172929R013	25	1	Honda Robin
4012009025	26	1	
100387R023	27	1	
100387R013	28	1	
4013000006	28	1	
4075000006	29	1	
120456R013	30	1	
120538R014	31	1	
3505204010	32	4	
3125200006	33	4	
3912106008	34	4	
3913106006	35	2	
110367R013	36	1	

Código Code	Pos.	Cant. Qty. Quant.	Ref.
173070R012	13	1	M-8x15 SAE 5/16 M-8x30 SAE 5/16
141055R014	14	2	
	15		
3912108015	16	4	
3912151615	16	4	
4022050525	17	1	
3912108030	18	1	
3912151630	18	1	
4022080750	19	1	
120503R013	20	1	
172937R014	21	4	
3125200005	22	4	
3985200005	23	4	
4080000013	24	1	

Código Code	Pos.	Cant. Qty. Quant.	Ref.
141286R022	1	1	Honda
141143R012	1	1	Robin
3127100008	2	5	Honda Robin
3933208035	3	4	
3125200008	4	5	
3934200008	5	5	
4070003030	6	1	
4070003031	7	4	
173071R012	8	1	
4047000160	9	1	
4047000015	9	1	
3985204010	10	12	
4048000080	11	2	
4060620502	12	1	

2.8 Convertidor CRF-30D / *CRF-30D Converter*
Convertisseur CRF-30D / *Conversor CRF-30D*



CONVERTIDOR

CONVERTER

CONVERTISSEUR

CONVERSOR

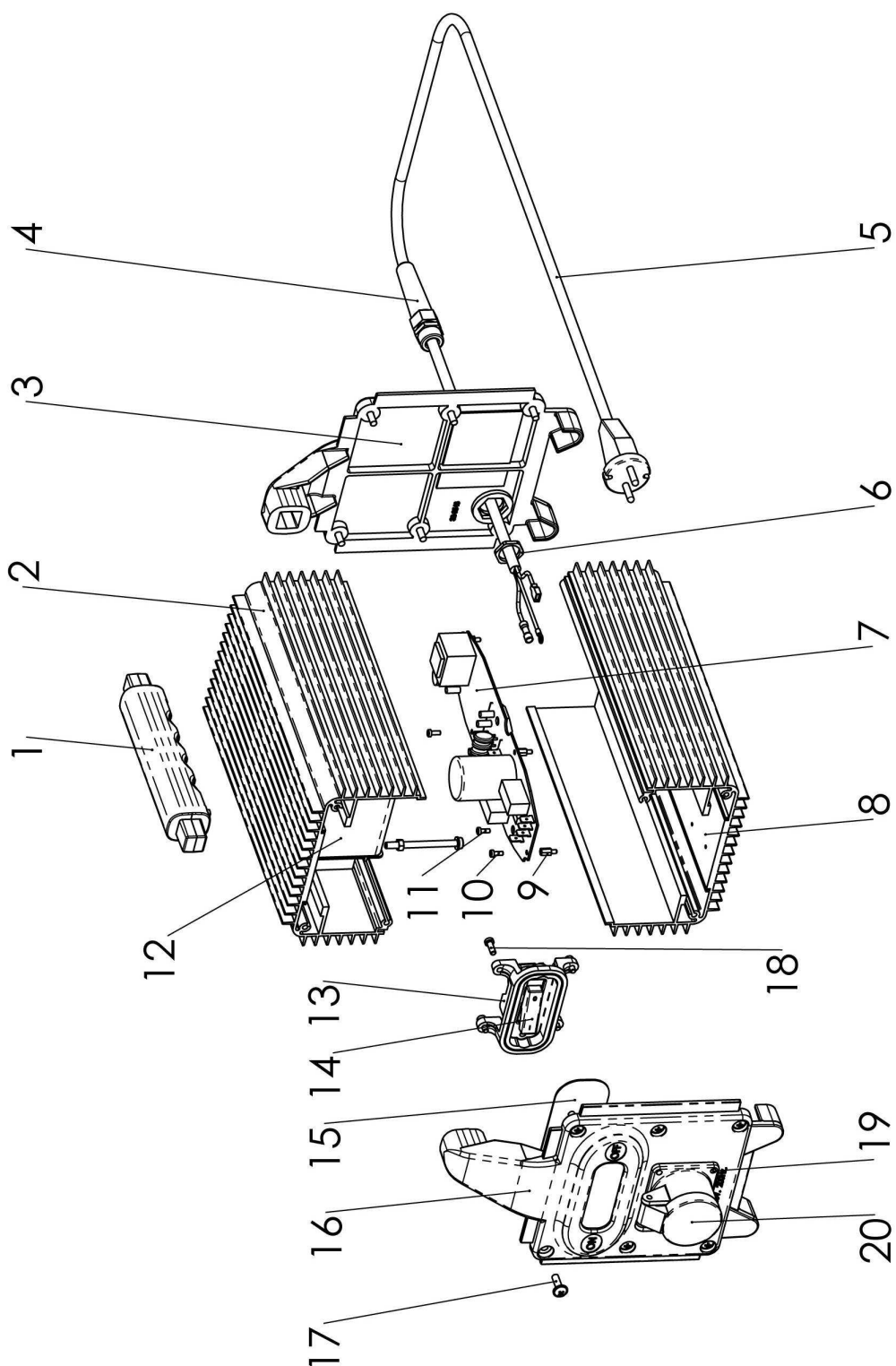
2

Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Reposos

Código Code	Pos.	Cant. Qty. Quant.
4075000006	31	1
	32	
3125200005	33	4
3985200005	34	4
3505204010	35	4
141208R012	36	1
141055R014	37	3
172937R054	38	4
100372R013	39	1
173021R014	40	2
4050111024	41	4
173022R013	42	1
3912251620	43	4

Código Code	Pos.	Cant. Qty. Quant.
120491R014	16	1
130667R014	17	1
4048000080	18	3
110358R013	19	1
3985104008	20	16
3913106006	21	2
3912106008	22	4
3125200006	23	4
120538R014	24	1
4080000013	25	1
120456R013	26	1
4060620502	27	2
4012009025	28	1
4022080792	29	1
4013000006	30	1

Código Code	Pos.	Cant. Qty. Quant.
141126R012	1	1
173023R012	2	1
4070006043	3	4
3125200010	4	4
3127100010	5	4
3985200010	6	4
3934200008	7	1
4070003535	8	1
4047000175	9	1
173020R012	10	1
3798100010	11	4
120540R013	12	1
3933208025	13	9
3125200008	14	8
150842R014	15	2

2.9 Convertidor ETF-08 / ETF-08 Converter
Convertisseur ETF-08/ Convector ETF-08

CONVERTIDOR

CONVERTER

CONVERTISSEUR

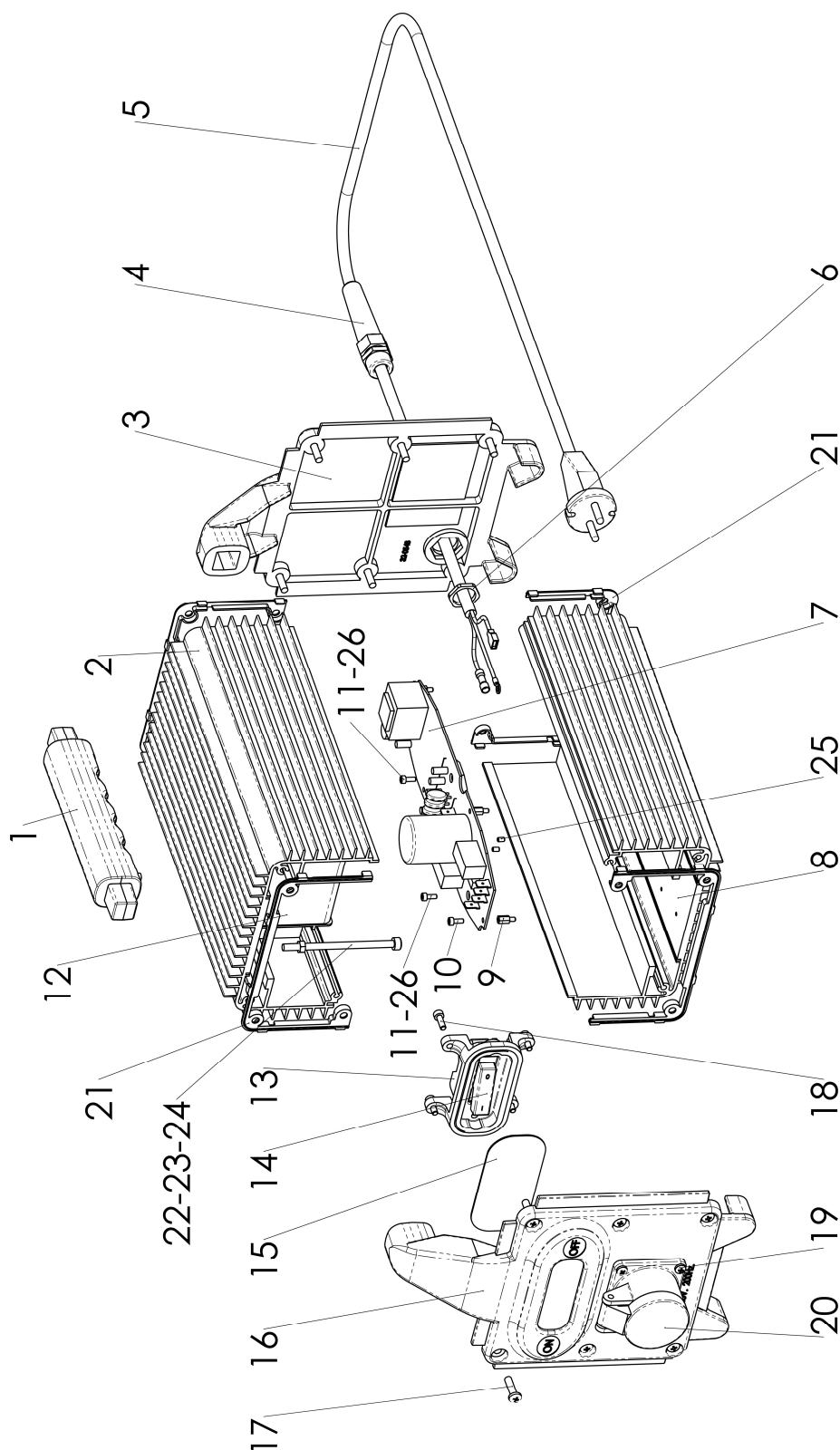
CONVERSOR

2

Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Repositos

Código Code	Pos.	Cant. Qty. Quant.
173639R014	15	1
120547R013	16	1
3985205025	17	12
3912304012	18	4
3985204010	19	4
4048000080	20	1

Código Code	Pos.	Cant. Qty. Quant.
173679R013	1	1
173683R013	2	1
120548R013	3	1
4048000052	4	1
141563R014	5	1
4075001011	6	1
141538R013	7	1
173682R013	8	1
4070050308	9	4
3912103006	10	1
3912103008	11	3
4074499060	12	1
173760R013	13	1
4048125201	14	1

2.10 Convertidor ETF-10 / ETF-10 Converter
Convertisseur ETF-10 / Conversor ETF-10

CONVERTIDOR

CONVERTER

CONVERTISSEUR

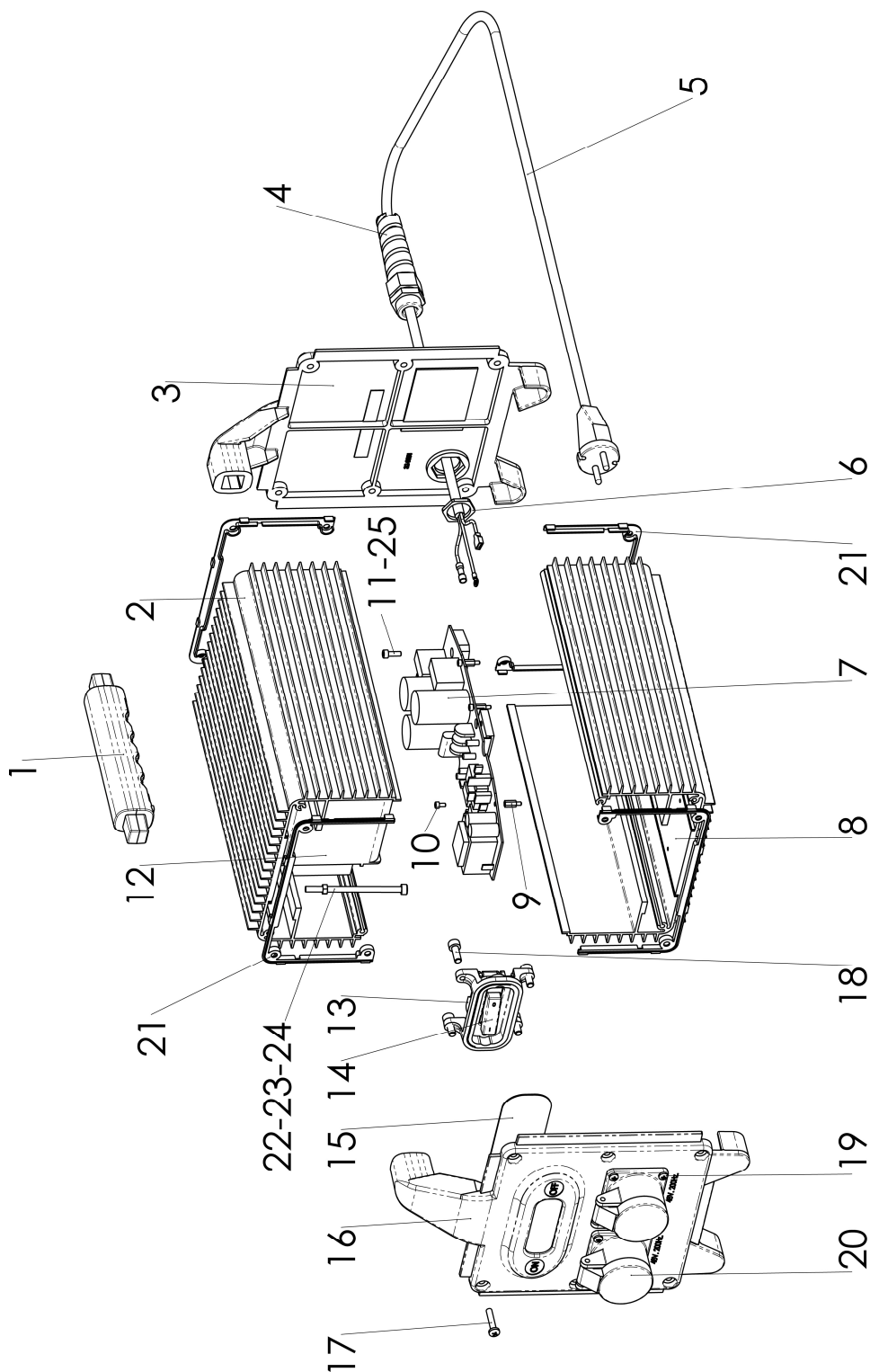
CONVERSOR

2

Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Repostos

Código Code	Pos.	Cant. Qty. Quant..	Código Code	Pos.	Cant. Qty. Quant.
173679R013	1	1	173639R014	15	1
173683R013	2	1	120547R013	16	1
120548R013	3	1	3505245030	17	12
4048000052	4	1	3912304012	18	4
141563R014	5	1	3985204010	19	4
4075001011	6	1	4048000080	20	1
141648R013	7	1	173777R013	21	4
173682R013	8	1	3912105060	22	4
4070050308	9	4	3125200005	23	4
3985203006	10	4	3934200005	24	4
3125200003	11	3	3913303005	25	2
4074499080	12	1	3985203010	26	3
173760R013	13	1			
4048125201	14	1			

2.11 Convertidor ETF-20 / *ETF-20 Converter* Convertisseur ETF-20 / *Conversion ETF-20*



CONVERTIDOR

CONVERTER

CONVERTISSEUR

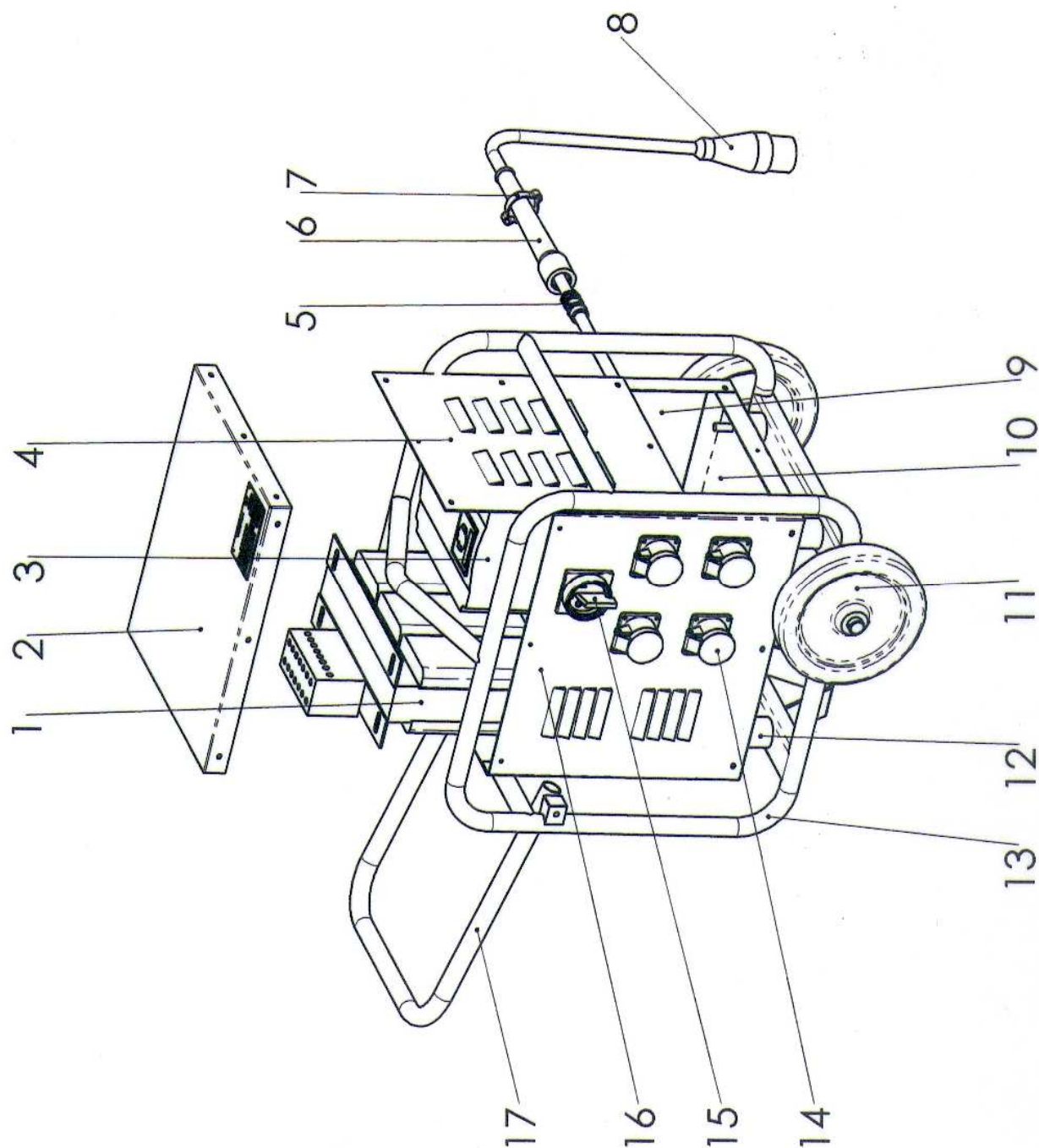
CONVERSOR

2

Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista de Reposos

Código Code	Pos.	Cant. Qty. Quant.
120550R013	16	1
3505245030	17	12
3912304012	18	4
3985204010	19	8
4048000080	20	2
173778R013	21	4
3933105080	22	4
3125200005	23	4
3934200005	24	4
3125200003	25	3

Código Code	Pos.	Cant. Qty. Quant.
173679R013	1	1
173698R013	2	1
120551R013	3	1
4048000025	4	1
141563R014	5	1
4075001120	6	1
141415R013	7	1
173697R013	8	1
4070050308	9	5
3985203006	10	5
3985203010	11	3
4074499180	12	1
173760R013	13	1
4048125201	14	1
173639R014	15	1

2.12 Convertidor ETF-60 / *ETF-60 Converter*
Convertisseur ETF-60 / *Conversor ETF-60*

CONVERTIDOR

CONVERTER

CONVERTISSEUR

CONVERSOR

2

**Lista de Recambios / Spare Parts / Liste de Pièces de Rechange / Lista
Reposos**

Código Code	Pos.	Cant. Qty. Quant.
4070014040	12	4
173692R013	13	1
4048000080	14	4
4048000212	15	1
173693R013	16	1
173687R014	17	1
	18	
	19	
	20	
	21	
	22	

Código Code	Pos.	Cant. Qty. Quant.
4074499600	1	1
120549R013	2	1
4081001075	3	1
173695R013	4	2
4048000016	5	1
173132R013	6	1
4000000436	7	1
141562R014	8	1
173694R013	9	1
173690R013	10	1
4058000200	11	1

INDUSTRIAS TECHNOFLEX, S.A.

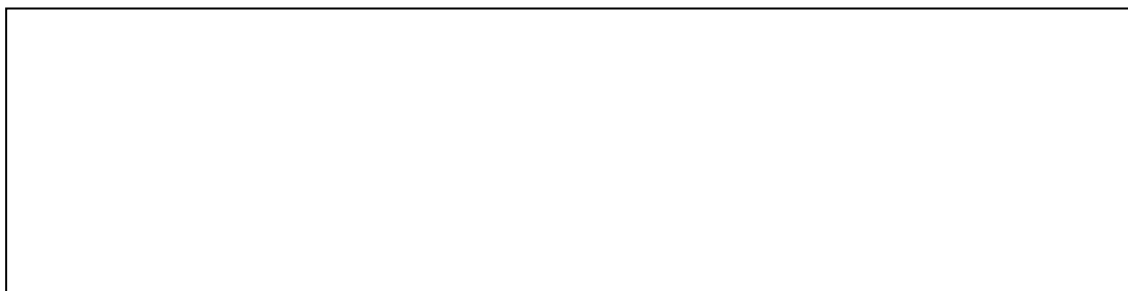
C/Josep Pujol, s/n. Ctra. d'Ullastrell s/n
Apartado de correos, 43
E-08191 RUBÍ (Barcelona)-SPAIN

Tel. (+34) 93 588 53 37

Fax (+34) 93 697 37 54

e-mail: technoflex@ficsa.com

Internet: <http://www.technoflex.es>



Cód.:404660007 05/12



INDUSTRIAS TECHNOFLEX SA