

INSTRUCTION MANUAL SOY BEAN EXTRACT PROCESSOR

Model
KIT-EPV 30

PRODUTOS

SKYMSSEN®



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- ALÉM DESTAS MÁQUINAS, FABRICAMOS UMA LINHA COMPLETA DE EQUIPAMENTOS. CONSULTE SEU REVENDEDOR.
- ESTE PRODUTO CONTA COM ASSISTÊNCIA TÉCNICA, REPRESENTANTES E REVENDEDORES EM TODO TERRITÓRIO NACIONAL.
DEVIDO À CONSTATANTE EVOLUÇÃO DOS NOSSOS PRODUTOS, AS INFORMAÇÕES AQUI CONTIDAS PODEM SER MODIFICADAS SEM AVISO PRÉVIO.

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SUMMARY

1. INTRODUCTION	01
1.1 Reception Check In	01
1.2 Safety	01
1.3 Main Components	02
1.4 Technical Characteristics	03
2. INSTALLATION and PRE OPERATION	04
2.1 Installation	04
2.2 Pre Operation	04
3. OPERATION	06
3.1 Starting Operation	06
3.2 Cleaning	06
3.3 Production Process	06
4. GENERAL SAFETY RULES	07
4.1 Operation Fundamentals Practices	07
4.2 Cares and Observations before to Switch On Processor	08
4.3 Routine Inspection	08
4.4 Operation	09
4.5 After the Work Ends	09
4.6 Maintenance	09
4.7 Notices	09
5. PROBLEMS ANALYSIS and SOLUTIONS	09
5.1 Problems , Causes and Solutions	09
5.2 Electrical Diagram EPV-30	10
5.3 Exploded Drawing EPV-30	11
5.4 Spare Parts List EPV-30	12
6. EQUIPMENT	13
6.1 Beverage and Vitaminic Food	13
6.2 Health Benefits	13

6. EQUIPMENT

The equipment is compact and very easy to operate , including into the same machine , the cooking , crushing and centrifuge operation steps . It needs approximately only one hour to obtain an artificially flavoured extract and residues , that could be used to produce breads , soups , cakes , and cookies rich with fibres and proteins . The electric source is a normal 220V AC socket . The equipment needs nothing more than a fresh water source nearby at disposal, and has a low cost and easy maintenance .

6.1 Beverage and Vitaminic Food

The equipment allows to produce the soy beans extract , or soy " milk " and a residue or " okara " , which are excellent aliments , obtained from soy beans cooking , crushing and centrifuge operations . Each 1 kg (2.25 pounds) to be used , will give 8 litres (8 quarts) of extract and 2.4 kg of wet residues , capable to substitute animal proteins such as : meat (cattle, chickens or fish) , milk, cheese or eggs . Therefore being a nutritive wealthy optional food source, cholesterol and lactose (milk sugar) free , containing also isoflavones, and not to be underestimate, very little expensive .

6.2 Health Benefits

Soy is a legume known by the Chinese since about 5000 years . At the present moment it is widely used , mainly , by the aliments industry where it is employed as an ingredient to manufacture stuffed foods , chocolates , pastas , cookies , beverages and others . The use of soy beam has been encouraged , because the bean has high nutritional quality proteins , and it is considered one of the more important functional aliments , not only because its nutritive properties , but also because its scientifically proved benefits . It does reduce the risks and prevents all a sequence of chronic diseases such as : different cancer types , cardiovascular diseases, osteoporosis, improvement of menopause symptoms, diabetic, among others . Just as an example in case of cardiovascular diseases it is recommended to ingest daily 25g of soy bean proteins , equivalent to 50g beans . For menopause the recommendation is 60g soy beans at least, daily .

5.4 Spare parts List EPV-30

CODIGO DESCRICAO DO COMPONENTE	UM	CODIGO DESCRICAO DO COMPONENTE	UM
00267-4 PINO ELAST.6x50 DIN 1481	CE	19179-5 BORRACHA VEDAC.TPA EXTER.	PC
00872-9 CORREIA A 33	PC	19181-7 BORRACHA VEDAC.TPA INTER.	PC
01103-7 LAMP.LP-11C 110/220V VERM	PC	19182-5 MANCAL DA TI	PC
01137-1 TERM. ELET. AN-2450	MI	19183-3 BUCHA DO MANCAL	PC
02729-4 PCA M8 DIN 934 ZB	CE	19184-1 ENCOSTO DA MOLA	PC
02730-8 ARR.L.A8,4 DIN 125 ZB	CE	19185-0 ANEL RETENCAO Di.18mm	CE
02949-1 TERM. PRE-ISOL.NA-4503	MI	19186-8 MOLA DE COMPRESSAO	PC
03090-2 REBITE PRESSAO AD-429-S	MI	19191-4 ESFERA DIAM.5mm INOX	CE
03099-6 PCA M6 DIN 934 ZB	CE	19195-7 CJ TAMPA EXTERNA/INTERNA	PC
03656-0 CB.3x2,5mm2C/PG90 2PR1FTF	PC	19196-5 TAMPA INTERNA	PC
03678-1 CAPINHA DE NYLON CN-4478	MI	19251-1 VALVULA DE SEGURANCA	PC
03793-1 PFS M8x30 DIN 933 ZB	CE	19253-8 PUXADOR DO FILTRO	PC
03856-3 PFS M6x16 DIN 916 FOSF.	CE	19445-0 BASE P/CONTATORA	PC
03927-6 MOTOR 0,5CV 60Hz	PC	19593-6 ANEL VEDACAO RJT EPDM 1"	PC
03950-0 ARR.L.A6,4 DIN 125 ZB	CE	19595-2 CS TUBO DE SAIDA	PC
03988-8 PFS M6x16 DIN 933 ZB	CE	19765-3 CS ESPELHO DO COMANDO	PC
04035-5 PCA ACAB UNC 1/4" LATAO	CE	19858-7 CS TUBO	PC
04474-1 PFS M8x20 DIN 933 ZB	CE	19863-3 ARRUELA 1/4"	PC
09533-8 TUBO TERMO ENCOL.1/8x20mm	PC	19940-0 SUPORTE DO MOTOR T	PC
10044-7 REED SWITCH NA Sm1001	PC	19941-9 SUPORTE DO MOTOR C	PC
10045-5 IMA ENCAPSULADO SM1000	PC	19942-7 CS GABINETE ELS	PC
10336-5 PFS M3x10 DIN 963 INOX	CE	19949-4 CS EIXO GUIA	PC
10769-7 ANEL 30x1,5 DIN 471	CE	19950-8 TAMPAO M20	PC
12384-6 PFS M6x12 DIN 933 INOX	CE	19972-9 PRESILHA INOX	PC
12442-7 ARR.L.A6,4 DIN 125 INOX	CE	20118-9MOLA	ELS
12445-1 PCA M8 DIN 934 INOX	CE	20119-7 TAMPA DO FLANGE	PC
12448-6 PCA M6 DIN 934 INOX	CE	20262-2 MOLA DO PUXADOR DO FILTRO	PC
12460-5 ARR.L.A8,4 DIN 125 INOX	CE	20284-3 CHAPA DE ENGATE SUPERIOR	PC
12491-5 PFS M3x10 DIN 84 INOX	CE	20287-8 EIXO DE ARTICULACAO	PC
12945-3 CORREIA A 22	PC	20378-5 ANEL V/RING 16,5x10,5x5,5	PC
13106-7 POLIA MOTORA MSK/MSKL	PC	20379-3 ARRUELA TEFLON 20x13x0,7	PC
13238-1 PFS M8x16 DIN 933 INOX	CE	20476-5 ANEL O'RING 88x80x4mm	PC
14463-0 PFS M4x10 DIN 84 INOX	CE	20910-4 ROLAMENTO 6015 2RS1	PC
14624-2 ANEL V/RING 16,5x10,5x5,5	PC	20911-2 IMA DIAM.8x4mm	PC
14654-4 ARRUELA FIBRA 20x13x0,7	PC	20912-0 ROLAMENTO 6006 2RS1	PC
14660-9 PCA ACAB.M10x1,25 RE INOX	CE	20913-9 CURVA 90oC/ROSCA 1"TIGRE	PC
14697-8 HELICE TRITURACAO LAR/LB	PC	20914-7 ANEL O'RING D.3,5x459mm	PC
16081-4 CONJ. TERMOST.GTLU-0018	PC	20916-3 CHAVE ROTATIVA ECR 02.4.3	PC
17456-4 CHAPEU LAR/LS-04 A 25	PC	20927-9 PINO DE ESCAPE	PC
17729-6 BUCHA CILINDRICA 33mm LAR	PC	20929-5 CONECTOR SINDAL 6mm2-112	PC
17845-4 PFS M6x12 DIN 916 FOSF.	CE	24280-2 PORCA 3/8" NPT	PC
18275-3 VALVULA ESFERA 1"	PC	24293-4 ARRUELA DE VEDACAO 17,5mm	PC
18358-0 CONT.CW07.10 220V 50/60Hz	PC		
18893-0 RODIZIO GIRATORIO 2" CELE	PC		
18894-8 RODIZIO FIXO 2" CELERON	PC		
18895-6 MOTOR 1,5CV 60Hz NORM.2P	PC		
18896-4 ROLAMENTO 6015	PC		
18897-2 RE.80x115x10R5Ni.A.31950V	PC		
18898-0 ROLAMENTO 6006	PC		
18899-9 RET.35x55x8R2Ni.A.31089VE	PC		
18901-4 CS GABINETE	PC		
18906-5 POLIA MOTORA	PC		
18907-3 CS TANQUE	PC		
18913-8 MANCAL DO TANQUE FIXO	PC		
18915-4 ARVORE DA CENTRIFUGA	PC		
18917-0 PINO DE ARRASTE	PC		
18918-9 CS ARVORE DO LIQUIDIFIC.	PC		
18921-9 POLIA MOVIDAA	PC		
18922-7 POLIA MOVIDA B	PC		
18923-5 RESISTENCIA 4000W 220V	PC		
18925-1 FLANGE FIXACAO GABINETE	PC		
18929-4 CS FILTRO	PC		
18932-4 ACOPLAMENTO DA CENTRIFUGA	PC		
18933-2 CS EIXO CENTRAL	PC		
18936-7 TAMPA DA RESISTENCIA	PC		
18940-5 CHAVETA 4,8x35	PC		
19174-4 CS TAMPA EXTERNA	PC		

1. INTRODUCTION

1.1 RECEPTION CHECK IN

A CAREFULL INSPECTION SHALL BE DONE WHEN THE MACHINE IS RECEIVED , TO DETECT DAMAGES , IF ANY , THAT COULD HAVE HAPPENED DURING TRANSPORTATION , SUCH AS ;

- Damaged parts
- Parts missing
- Liquids or other products infiltration

ANY DAMAGE DETECTED SHALL BE INFORMAED WITHOUT DELAY , TO THE TRANSPORTER AND TO THE DEALER , WHO SHALL HAVE TO INFORM THE MANUFACTURER .

1.2 SAFETY

The Soy Bean Extract Processor Mod. EPV-30 is a simple to operate machine, and easy to clean , however for safety read the below instructions to avoid accidents :

1.2.1 Take the electric plug off its socket , before to withdraw any moving part , before cleaning or any other maintenance operation .

1.2.2 Never use any kind of tools , not belonging to the machine to help operation .

1.2.3 Never use water sprays directly on the machine .

1.2.4 Never start the machine with wet clothes or wet feet .

1.2.5 The machine shall be operated only by duly trained persons .

1.3 MAIN COMPONENTS



5.3 Exploded Drawing EPV 30

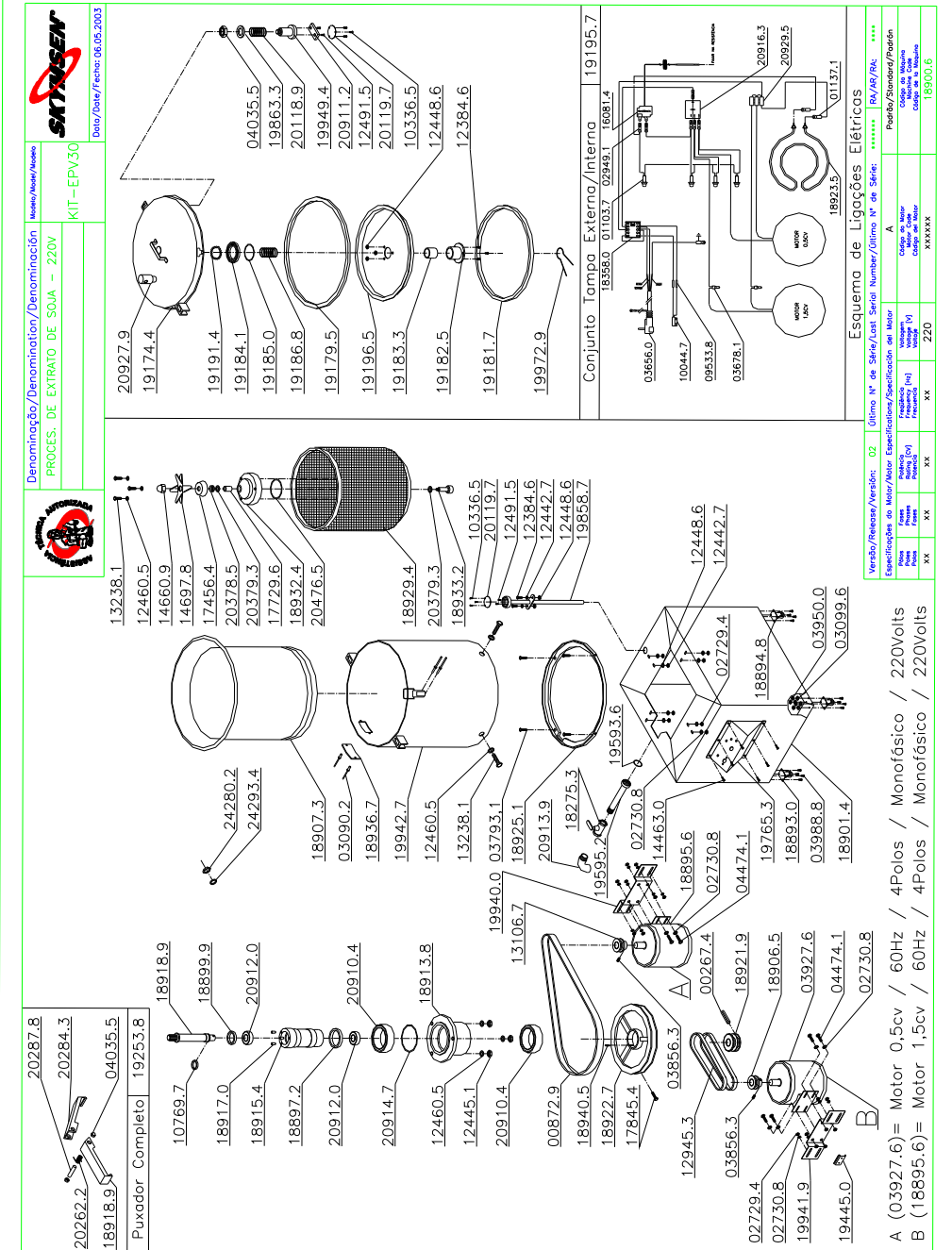
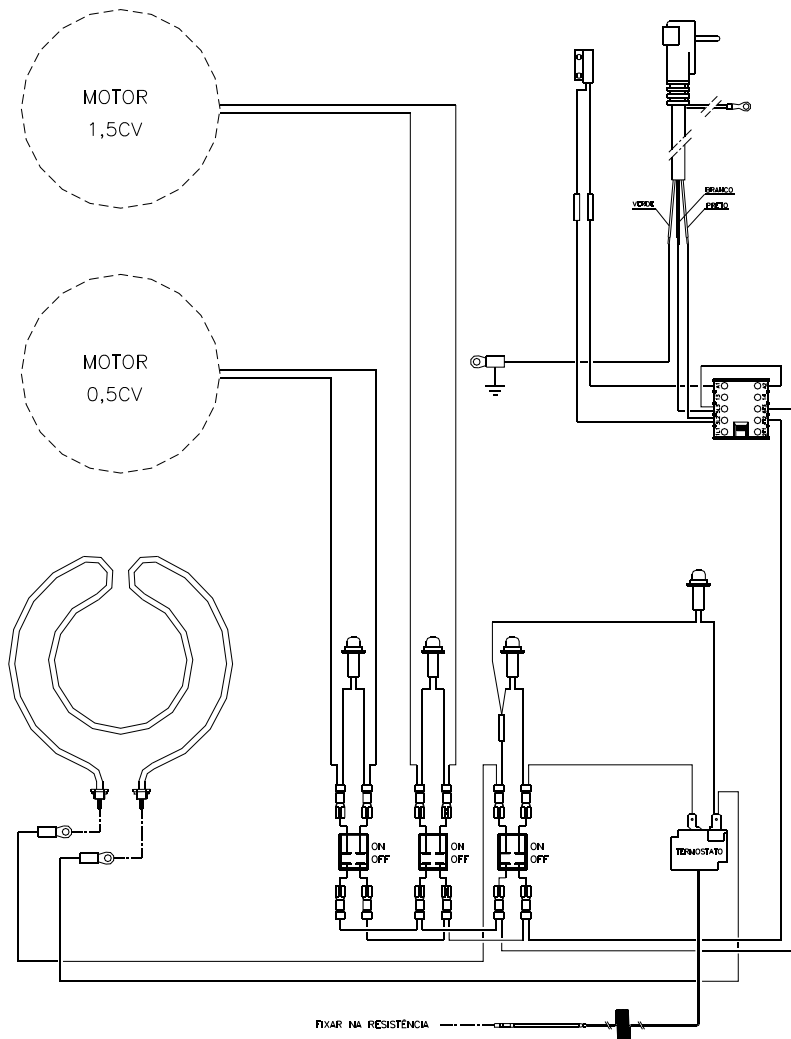


Table - 03

Problems	Causes	Solutions
* The machine does not start.	* Electricity shortage, or the machine is unplugged.	* Control electricity shortage, and if the cord is plugged on the socket.
	* The lid is not correctly placed.	* Place the lid correctly into its right position

5.2 Electrical Diagram EPV-30



1.4 TECHNICAL CHARACTERISTICS

TABLE 01

Characteristics	Unit	EPV-30
Voltage	[V]	220
Frequency	[Hz]	60
Resistance	[W]	4000
Height	[mm]	1105
Width	[mm]	640
Depth	[mm]	700
Net Weight	[kg]	106
Gross Weight	[kg]	126
Consumption	[kW.h]	4
Crushing Motor Rating	[HP]	1,5
Centrifuge Motor Rating	[HP]	0,5

TABLE - 02

Bowl				
Model	Production Capacity	Soy Bean Quantity	Water Quantity	Outflow Faucet
EPV-30	30 l/h	4 kg	30 l	1" BSP

2.INSTALLATION AND PRE OPERATION

2.1 Installation

2.1.1 Setting

- * The machine shall be installed in a fresh and airy environment , far from children and other persons not entitled to operate it .*
- * Do not lean it on any wall , or other equipments , a 20 cm minimum space allowance shall be provided.*
- * The machine shall be perfectly leveled .*

NEVER MOVE THE EQUIPMENT WHILE IN OPERATION .

2.1.2 Electric Circuit

- * Electricity supply is necessary to feed the heating , crushing and centrifuging , operation steps .*
- * A single phase two pin 20 Amp. socket is necessary to plug in the cord .*
- * Electric supply shall be 220 V 60 Hz .*

2.2 Pre Operation

Before to use the Soy Bean Extract Processor be sure all the above mentioned recommendation have been obeyed . Remember never to move the processor during operation .

2.2.1 - Cleaning the Bowl

Before the first operation is started , we advise to clean the Bowl and the filter.

To clean them , proceed with a first boiling process , observing the following instructions :

- * Control the electrical installation in accordance with item 2.1.2*
- * Close the outflow faucet.*
- * Control if the thermostat handle is on 0 C , and if the thermostat switch position is OFF .*

4.4 Operation

4.4.1 Advices

Be sure your hair is not loose in order to avoid getting caught by turning parts which could lead to a serious accident. Tie your hair up well and/or cover your head with a scarf.

The operation performed by not trained or skilled personnel shall be forbidden.

Never touch turning parts with your hands or in any other way.
NEVER operate machine without all original safety devices under perfect conditions.

4.5 After Finishing The Work

4.5.1 Precautions

Always **TURN THE MACHINE OFF** by removing the plug from the socket before cleaning the machine.

Never clean the machine unless it has come to a complete stop. Put all components back to their functional positions before turning it **ON** again. Check level of oil, if any .

DO NOT place your fingers in between belts and pulleys nor chains and gears.

4.6 Maintenance

4.6.1 Danger

Any maintenance with the machine in working situation is dangerous. **TURN IT OFF BY PULLING THE PLUG OFF THE SOCKET DURING MAINTENANCE.**

4.6.2 Advice

Electrical or mechanical maintenance has to be undertaken by qualified personal.

Person in charge has to be sure that the machine is under **TOTAL SAFETY** conditions when working .

5. Analysis and Problems Solving

5.1 Problem, causes and solutions

The Soy Bean Extract Processor were designed to operate with the need of minimum maintenance but the natural wearing caused by long use of the equipment may occasionally cause some malfunctions.

If such problem occurs with your extractor refer to Table 03 in which the most common situations are listed with recommended solutions.

4.2 Safety Procedures and Notes Before Turning Machine ON

IMPORTANT

Carefully read ALL INSTRUCTIONS of this manual before turning the machine ON. Be sure to be familiar with the set and that you have well understood all information contained in this manual. If you have any question contact your supervisor or your nearest Dealer.

4.2.1. Danger

An electric cable or electric wire with damaged insulation could cause electrical shocks as well as electrical leak. Before use check conditions of all wires and cables.

4.2.2 Advices

Be sure ALL INSTRUCTIONS in this manual have been thoroughly understood. Every function and operational procedure have to be very clear to the operator. Any manual command (switch, button, or lever) shall be given only after to be sure it is the correct one .

4.2.3 Precautions

The electric cable has to be compatible with the power required by the machine, Cables touching the floor or close to the machine need to be protected against short circuits.

Oil reservoirs if any have to be full up to the required level as indicated. Check level and add oil if necessary.

4.3 Routine Inspection

4.3.1 Advice

When checking the tension of the belts or chains, DO NOT introduce your fingers between the belts , the chains, nor the gears.

4.3.2 Precautions

Check if motors, belts, chains or gears and the turning or sliding parts of the machine produce abnormal noises .

Check the tension of the belts and chains and replace the set when belt, chain or gears show signs of being worn out.

When checking tensions of belts or chain DO NOT introduce your fingers between belts and pulleys , nor between the chains and gears. Check protections and safety devices to make sure they are working properly.

* Control if the filter is placed into its right place inside the Bowl .

* Fill the Bowl with 30 litres of water .

* Place the lid and tight the loops.

* After this , put the thermostat handle on 100 C position, and switch ON the thermostat .

* Await one hour, and let the water flow out through the Outflow Faucet .

* Using a clean and wet cloth , dry the Bowl and the Filter.

3. OPERATION

3.1 Operation Process

Observation : To start the heating the Bowl shall be full of Water .

* Control the electric installation in accordance with item 2.1.2

* Close the Outflow Faucet .

* Control whether the thermostat handle is placed on 0 C position , and if the thermostat, the crushing and the centrifuge command switches are on position OFF .

* Control if the filter is correctly placed inside the bowl.

* To insert or withdraw the filter use the Filter Handle.

* Next step will depend on the chosen process .

* The command key has four positions , as follows :
OFF , heating, crushing and centrifuge
When the key is placed on one of the four position, the chosen position will be working , the other three are excluded.

* To start the heating process , place the key on the heating position, and place the thermostat handle on the desired temperature .

Observation : only start the heating process with the bowl full of water or other liquid.

* Crushing and centrifuge steps may be started without previously go through the heating step .

* Place the lid into its right position and tight the loops .
Observation : If the lid is not placed right, the machine will not start .

3.2 Cleaning

After switching OFF the machine and unplug it , withdraw the filter using the filter handle , open the outflow faucet and using clean water wash inside the bowl and dry it with a clean and dry cloth .

To wash the filter withdraw the stopper from the bowl bottom , and wash it with clean water and dry it with a clean and dry cloth .

3.3 Production Process

- Before to Start the Production Process place 3.75 Kg (8.25 pounds) soy beans into a bowl full of water during 6 hours to HYDRATE them .

- After the above mentioned 6 hours , the water must be drained and the beans washed and placed inside the bowl , together with 15 litres (15 quarts) of filtered water and cooked during 15 minutes , after the waters has started to boil .

- After the end of the cooking time, more 15 litres of filtered water must be added , before to start the crushing step that will produce the protean extract , or soy "milk" .

- The crushing step shall last 10 minutes , when with the machine still switched ON the crushing step , the outlet faucet shall be opened and let the soy extract flow out .The centrifuge step will be switched ON after the soy extract outflow will start to slow down , turning the control knob towards the centrifuge position .

- When the process is ended 30 litres of soy protean extract , also known as "soy milk " , and about 9 kg of protean residues or " okara " (remaining dough) are obtained .

4. General Safety Practices

The following safety instructions are addressed to both the operator of the machine as well as the person in charge of maintenance. The machine has to be delivered only in perfect conditions of use by the Distributor to the user. The user shall operate the machine only after being well acquainted with the safety procedures described in the present manual. **READ THIS MANUAL WITH ATTENTION.**

4.1 Basic Operation Practices

4.1.1 Dangerous parts

Some areas of the electric device have parts that are connected or have parts connected to high voltage. These parts when touched may cause severe electrical shocks or even be fatal.

Never touch manual commands such as switches, buttons, keys and knobs with your hands wearing wet clothes and/or wet shoes. By not following these instructions operator could be exposed to severe electrical shocks or even to a fatal.

4.1.2 Warnings

The operator has to be well familiar with the position of ON/OFF Switch to make sure the Switch is easy to be used when necessary. Before any kind of maintenance, physically remove the plug from its socket .

Provide space for a comfortable operation thus avoiding accidents.

Water or oil spilled on the floor will turn it slippery and dangerous. Make sure the floor is clean and dry.

Before to give any manual command (switch, buttons, turn keys or lever) be sure the command is the correct one . Check this manual for further details if necessary.

Never use a manual command (switch , buttons , lever) unadvisedly. If any work is to be made by two or more persons, coordination signs will have to be given for each operation step . Every step of the operation shall be taken only if a sign has been made and responded.

4.1.3 Advices

In case of power shortage, immediately turn the machine OFF.

Use recommended or equivalent lubricants, oils or greases .

Avoid mechanical shocks as they may cause failures or malfunction.

Avoid penetration of water, dirt or dust into mechanical or electrical components of the machine.

DO NOT MODIFY original characteristics of the machine.

DO NOT REMOVE, TEAR OFF OR MACULATE any safety or identification labels . If any labels has been removed or is no longer legible contact your nearest dealer for replacement.