

**CARMEN PLUS INOX**  
**JET VAC ULTIMA**







**USING INSTRUCTION**

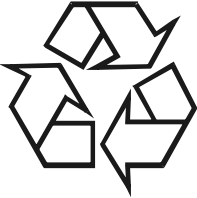
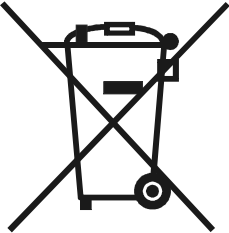

**ENGLISH**



## Interpretation of the symbols placed on the unit

<p><b>BEFORE USING THE STEAM GENERATOR, READ AND FOLLOW THIS INSTRUCTION MANUAL.</b></p> <p><b>IT IS RECOMMENDED TO KEEP THIS INSTRUCTION MANUAL TO CONSULT IT LATER OR TO GIVE IT TO THE FOLLOWING OWNERS.</b></p> <p><b>PLEASE READ THE SAFETY INSTRUCTIONS ON THIS HANDBOOK BEFORE PROCEEDING ON THE FIRST USE.</b></p> <p><b>EVENTUAL DAMAGES DUE TO THE CARRIAGE MUST BE COMUNICATED AS SOON AS POSSIBLE TO YOUR OWN RETAILER.</b></p>	
	<p><b>ATTENTION!!</b></p> <p><b>STEAM.... BURNING DANGER</b></p>
	<p><b>ATTENTION !</b></p>
	<p><b>READ THE OPERATING MANUAL</b></p>
	<p><b>OPRATING MANUAL;</b></p> <p><b>ISTRUZIONI PER IL FUNZIONAMENTO</b></p>

## ENVIRONMENT PROTECTION

	<p>ALL THE PACKINGS ARE RECYCLABLE, PACKINGS DO NOT HAVE TO BE THROWN IN THE DOMESTIC WASTE BUT THEY HAVE TO BE DELIVERED TO THE CENTERS SPECIALIZED FOR THE DISPOSING OF THE WASTE.</p>
	<p>ALL DEVICES NOT USED ANYMORE CONTAIN PRECIOSUS RECYCLABLE MATERIALS THAT SHOULD BE DELIVERED TO THE CENTERS SUITABLE FOR THE DISPOSING OF THE WASTE. ELECTRIC AND ELECTRONIC EQUIPMENT, BATTERIES, OIL AND SIMILAR SUBSTANCES MUST BE RECYCLED IN THE PROPER RECYCLING CENTERS AND MUST NOT BE LEFT IN THE ENVIRONMENT.</p>
	<p>SUBSTANCES SUCH AS OIL FOR MOTORS, DIESEL OIL, PETROL MUST NOT BE LEFT IN THE ENVIRONMENT AND MUST BE RECYCLED IN THE PROPER RECYCLING CENTERS ACCORDING TO THE ENVIRONMENTAL REGULATIONS.</p>

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## 2. SAFETY REGULATIONS

- The electric supply connection shall be made by a qualified electrician and comply with IEC 60364-1.
- It is recommended that the electric supply to this machine should include either a residual current device that will interrupt the supply if the leakage current to earth exceeds 30ma for 30ms or a device, which will prove the earth circuit.
- **SAFETY VALVE** This machine is equipped with two safety valves, able to ensure the safety of the machine itself in case other primary control devices are inefficient (due to a failure). Due to the extreme importance of these components and as not to compromise the safety of the machine, it is recommended to provide to check them and to substitute them through an authorized service center every 2 years starting from the purchasing date.
- **PRESSURE SWITCH** This machine is equipped with a pressure switch able to check and to maintain the pressure under certain preset limits (ref. "rated pressure" on the technical label underneath the machine). In case there would be a steam leakage on the lower side of the machine, it means that the functioning of this device has been compromised and the safety valve has been involved as to limit the boiler's internal pressure. **It is recommended not to use the machine, immediately unplug the machine from the power feeding and call the service center.**
- **MUD DRAIN FROM THE BOILER** If you are not acquainted with the hardness level of the used water, it is recommended to proceed with the boiler cleaning (according to the procedure indicated in the proper section) after 24 hours of usage. On the contrary, if you know the hardness level and it is between 0 and 4 french degrees , the boiler cleaning can be carried out after 100 hours of usage.
- **ATTENTION.** Do not use the appliance within the range of persons unless they wear protective clothing.
- **ATTENTION.** The high pressure jets can be dangerous if not used properly. The jet does not have to be directed against persons, electrical devices under tension or the unit itself.
- Do not direct the jet against yourself or others in order to clean clothes or footwear.
- Disconnect the power supply before proceeding with the maintenance effected by the user.
- This device is not intended to be used by persons (including children) with a reduced physical, mental or sensorial ability or with insufficient experience and/or competence, unless they are not supervised by a person responsible for their safety and they are not instructed by that person on how to use the device.
- Monitor the children so they cannot play with the machine.
- To ensure the machine's safety, use only original spare parts from the manufacturer or spare parts approved by the manufacturer.

- **ATTENTION.** Pressure hoses, fitting and couplings are important for the safety of the machine. Use only hoses, fitting and couplings recommended by the manufacturer.
- Do not use the machine if the power cord or other important parts of the machine are damaged, i.e. safety devices, pressure hoses and trigger gun.
- If an extension cord is used, the plug and socket must be of a watertight construction.
- **ATTENTION.** Inadequate extension cords can be dangerous.
- The user must not leave the iron (optional) unattended when it is connected to the power supply.
- The hand-arm vibration data, referred to this device, are not mentioned as they are below 2.5 m / s <sup>2</sup>.
- **ATTENTION.** This appliance has been designed for a use with cleaning agents supplied or recommended by the manufacturer. The use of other cleaning agents or chemicals may adversely affect the safety of the appliance. If using detergent (which has not to be foamy) please follow the specific instructions: 1 liter detergent for every 10 liters water (about 10% is the detergent percentage), making sure to fill in first the detergent to obtain a better mixing. **Please be careful with the detergent to be used, as some in commerce, if heated above 100 °C , taken to the gaseous state, could emanate highly toxic steams. Be aware to control the technical schedule and to consult the supplier.**

### 3. TECHNICAL CHARACTERISTICS

- To verify the technical data of your model, consult the plate under the appliance.

### 4. PREFACE

Dear Client,

We would like to congratulate you on your choice.

With the goal of improving and continually updating production by always offering innovative products, TECNOVAP has studied, designed and created the **CARMEN PLUS INOX model**, a combined machine for cleaning which brings together the power of steam and the force of vacuuming.

This product, with its stainless steel body, is custom-built and equipped with a dependable stainless steel boiler with automatic refilling system which allows it to produce a powerful and continuous supply of steam (24/24 hours). The **CARMEN PLUS INOX** models is also equipped with a separate detergent tank which enables the injection of a detergent with hot water at 90-125°C.

With the power of steam, meaning ecological cleaning power, Tecnovap has combined a powerful vacuum able to pick up solids and liquids.

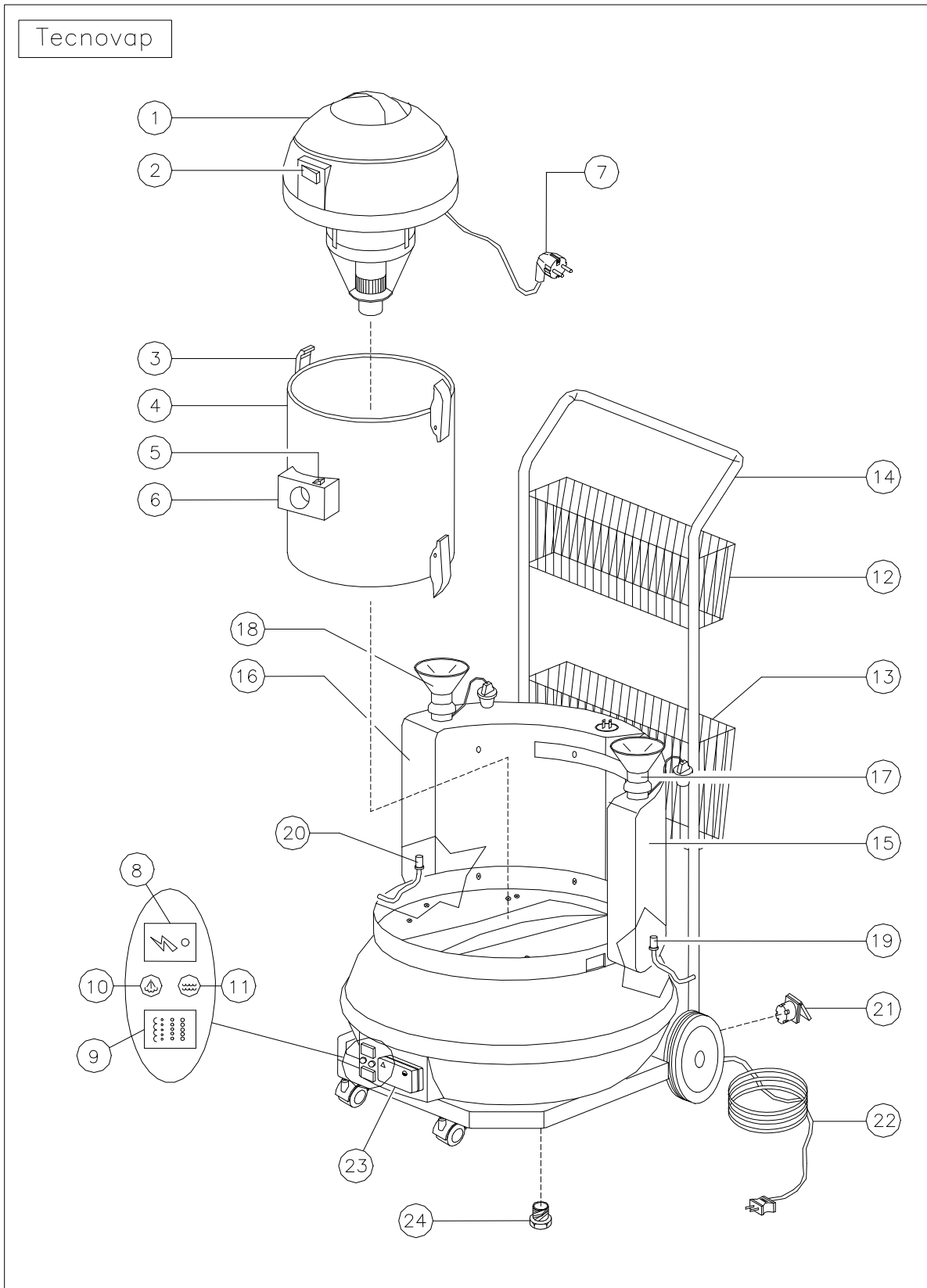
The **CARMEN PLUS INOX** is the ideal solution when it comes to cleaning and disinfecting. With the various accessories available, it cleans, disinfects, and removes dirt eliminating completely even the bacterial flora hidden in those areas most difficult to reach.

Pay careful attention to the following instructions which will be helpful in operating your **CARMEN PLUS INOX**.

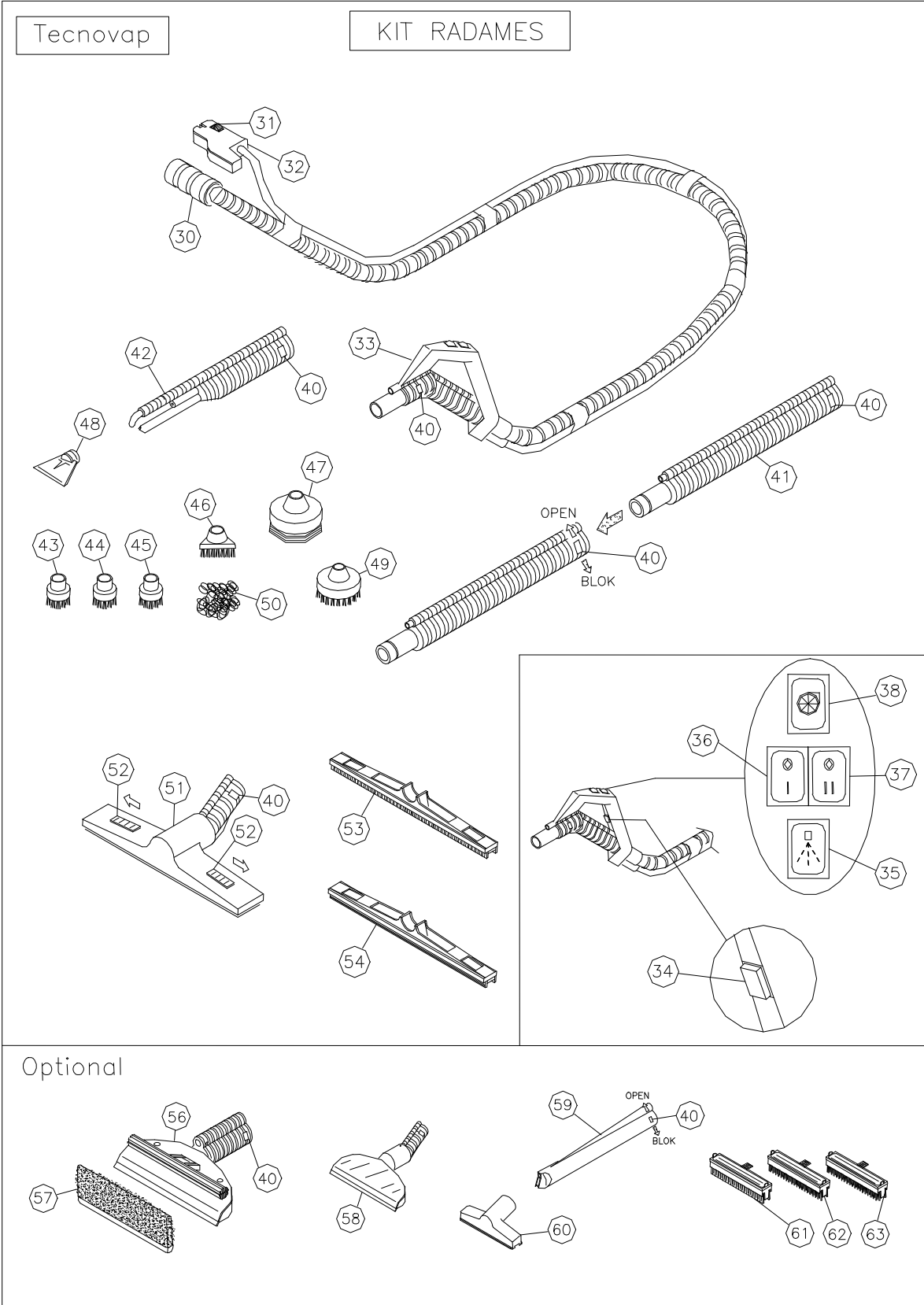
THE MANUFACTURER RESERVES THE RIGHT TO BRING ANY MODIFICATION OR IMPROVEMENT, TECHNICAL OR STRUCTURAL, WITHOUT PRIOR NOTICE

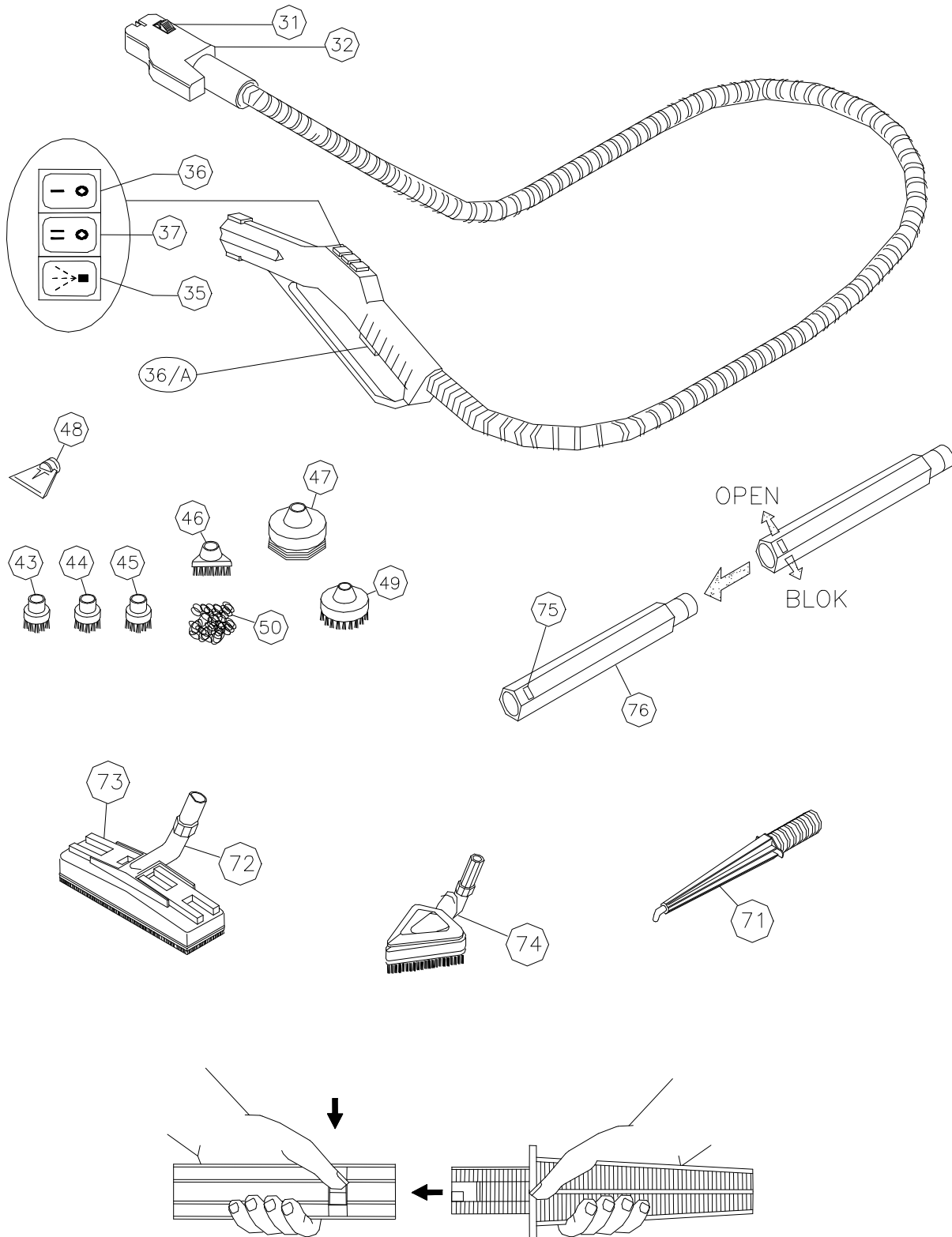
## 5. TECHNICAL DRAWINGS

### CARMEN PLUS INOX



**ACCESSORIES**





## 6. NOMENCLATURE

- 1) Vacuum motor
- 2) Vacuum power switch
- 3) Clamping hooks for vacuum drum
- 4) Vacuum drum (5 liters)
- 5) Locking latch vacuum outlet
- 6) Vacuum hose outlet
- 7) Power cord – wet vac
- 8) Power switch
- 9) Boiler switch
- 10) “Ready steam” indicator (green)
- 11) “Low water” indicator (red)
- 12) Small basket for trolley
- 13) Large basket for trolley
- 14) Handlebar of trolley
- 15) Detergent tank
- 16) Water tank
- 17) Detergent tank cap (yellow)
- 18) Water tank cap (blue)
- 19) Drain tube detergent tank
- 20) Drain tube water tank
- 21) Electric socket for vacuum cleaner
- 22) Power cord
- 23) Steam outlet
- 24) Boiler drain cap
- 30) Vacuum hose coupler
- 31) Locking latch steam plug
- 32) Steam plug
- 33) Steam & Vac hose with handgrip
- 34) Steam command switch
- 35) Detergent switch
- 36) Steam adjustment switch – minimum
- 37) Steam adjustment switch – medium
- 38) Vacuum switch
- 40) Locking latches for accessories
- 41) Extension tubes with O-rings
- 42) Turbo lance steam + vac
- 43) Small nylon brush Ø 28
- 44) Small brass brush Ø 28
- 45) Small stainless steel brush Ø 28
- 46) Small triangular brush
- 47) Steam plunger
- 48) Steam scraper
- 49) Large nylon brush Ø 60
- 50) Stainless Steel wool pad
- 51) Floor tool for inserts
- 52) Latches for blocking inserts
- 53) Insert squeegee + brush 375 mm
- 54) Insert squeegee + squeegee 375 mm
- 56) Steam/vac window cleaner (optional)
- 57) Cloth for window cleaner (optional)
- 58) Carpet tool (optional)
- 59) Steam + Vac nozzle (optional)
- 60) Upholstery nozzle (optional)
- 61) Insert squeegee + squeegee 145 mm (opt.)
- 62) Insert squeegee + brush 145 mm (optional)
- 63) Insert brush + brush 145 mm (optional)
- 70) Steam hose + handgrip (optional)
- 71) Steam lance (optional)
- 72) Rectangular brush (optional)
- 73) Cloth holder
- 74) Triangular brush (optional)
- 75) Locking latches for accessories
- 76) Extension tube (optional)

## 7. OPERATING INSTRUCTIONS

- (a) After opening the packaging box, insert the main handlebar (14) onto the trolley base and block into place by inserting the large basket (13) into the bottom holes of the handle bar. Then insert the small basket (12) into the top holes of the handle bar.
- (b) Plug the vacuum into the power socket (21) located behind the machine underneath the tanks and verify that the vacuum power switch (2) is in ON position.
- (c) Lift the tank caps (17 and 18) and add water (max. 3 liters) to the water tank (16) (blue cap) and appropriately diluted detergent (max. 3 liters) in the detergent tank (15) (yellow cap).



**(d) If using detergent please follow the specific instructions: 1/3 liter detergent for every 3 liters water (about 10% is the detergent percentage), making sure to fill in first the detergent to obtain a better mixing.**

(e) Insert the plug (22) into an electrical outlet, making sure that the voltage and the amperage correspond with those printed near the handlebar on the machine.

### **WARNING**

WHEN THE WATER TANK IS EMPTY WITH THE LOW WATER INDICATOR (11) ON, ADD WATER (MAX. 3 LITERS) TO THE WATER TANK (16).

PLEASE NOTE: THIS OPERATION CAN BE CARRIED OUT WITHOUT SWITCHING OFF THE MACHINE.

### **Refilling of detergent:**

Once the detergent tank is empty, proceed as following:

1. Add detergent and water in the detergent tank (15).
2. Activate the steam adjustment switch (36) on minimum steam position while pushing the detergent switch (35) and the steam command switch (34) until detergent is coming out of the accessory.
3. The machine is now ready for use.

## **OPERATING THE CARMEN PLUS INOX WITH KIT RADAMES**

Insert the vacuum hose (30) into vacuum hose outlet (6) and the steam plug (32) into the steam outlet (23) found on the front of the machine. Push until the latches (5 and 31) lock into place.

Activate the power switch (8) and the boiler switch (9) in for the production of steam and wait approximately 4 minutes until the green "ready steam" indicator (10) on the command switch lights up indicating the boiler has reached operating pressure. The switches (36,37 and 38) located on the handle should be in OFF position.

Positioning the switches (36 and 37) on the handgrip will regulate the steam flow as follows: switch (36) minimum flow, switch (37) medium flow, switches (36) and (37) maximum flow. Use the steam command switch (34) to activate the steam flow.

The vacuum switch (38) activates the vacuum and can be used simultaneously with steam.

The detergent switch (35) enables you to inject detergent with the steam by activating it for a few seconds at a time to avoid exceeding the injected liquid to the steam.

To clean with the combination of steam, injection of detergent and vacuum suction choose the accessory best suited for the job:

The multi-purpose floor tool (51): with appropriate inserts (53 and 54). Inserts are locked into place by sliding the latches (52) to the OPEN position and hold the insert in place applying a little pressure while sliding the latches in BLOK position. Remember that the command switches on the handle (36-38) must be on OFF position.

Turbo lance steam/vac (42): to be used by itself with the small round brushes (43-46, 49) or with steam plunger (47) and steam scraper (48) according to the cleaning job to be executed.

If necessary, attach the extension tubes (41) and lock them into place using the clamping units (40) in BLOCK position. Only one tube may be used if desired.

When finished cleaning, it is recommended to vacuum approximately 2-3 liters of clean water to rinse the inside of the hose (33) and the suction conduits. Wash and dry all accessories used. Remove the vacuum drum (4) and, after emptying and rinsing it, let it dry before storing it away.

## **OPERATING THE CARMEN PLUS INOX WITH KIT JULY**

Insert steam plug (32) into the steam outlet (23) found on the front of the machine. Push until the latch (31) locks into place.

Activate the power switch (8) and the boiler switch (9) in and wait approximately 4 minutes until the "ready steam" indicator (10) lights up indicating the boiler has reached operating pressure. The command switches (36-38) located on the handle should be in the OFF position.

Positioning the switches (36 and 37) on the handgrip will regulate the steam flow as follows: switch (36) minimum flow, switch (37) medium flow, switches (36 and 37) maximum flow. Use the steam command switch to activate the steam flow.

Insert the steam lance by sliding the latch to the OPEN position, lock into place and then slide the latch into BLOCK position.

Follow the same procedure in attaching the rectangular brush (72) or the triangular brush (74) which can be covered with an absorbing cloth by using the gripper to hold the cloth in place. This is a recommended use to clean delicate surfaces (such as precious wood for ex.) or vertical surfaces (in tiles for ex.) etc. The cloth is acting as dirt "extractor" in this case.

## **8. MAINTENANCE**

### **ATTENTION**

DISCONNECT FROM ELECTRICAL POWER SUPPLY BEFORE CARRYING OUT USER MAINTENANCE. IT IS RECOMMENDED THAT BOILER MAINTENANCE IS CARRIED OUT WHEN THE EQUIPMENT HAS COOLED DOWN. (SWITCHED OFF FOR AT LEAST 5 HOURS)

### **MAINTENANCE OF STEAM GENERATOR**

#### **ELIMINATING SCALE RESIDUE FROM THE BOILER**

We suggest cleaning the boiler after every 100 hours of use, or also if the machine has remained unused for a long period of time.

Fill the water tank (16) (3 liters), placing a recipient container under the machine and remove the boiler drain cap (24) underneath the machine. Then switch on the machine activating the power switch only (8) (the boiler switch (9) has to be in OFF position). Wait until the "low water" indicator (11) lights up which indicates that the internal cleaning of the boiler has been completed. Unplug the power cord (22) from the

electric outlet and proceed by replacing the drain cap (24). Once again plug the power cord (22) into the electric outlet and activate the power switch only (8). It is recommended to activate also the command switch (36) for minimum steam on the handgrip to release the air contained in the empty boiler. Wait for the completed cycle of refilling from the pump (approx. 3 min.).

The maintenance of the boiler is completed; proceed with the using instructions as described in chapter 6.

We suggest to empty the water tank (16) completely if the machine will not be used for a long period of time.

## MAINTENANCE OF THE VACUUM CLEANER

The vacuum cleaner of the CARMEN PLUS INOX models does not require any specific maintenance.

## MAINTENANCE OF THE ACCESSORIES

Grease occasionally joints on the accessories and hose extensions.

### 9. BEFORE REFERRING TO THE TECHNICAL SERVICE

PROBLEM	POSSIBLE CAUSE	REMEDY
MACHINE DOES NOT PRODUCE STEAM AND VACUUM DOES NOT WORK	LACK OF POWER.	MAKE SURE PLUG IS WELL INSERTED (7) AND THAT THERE IS MAIN POWER TO THE OUTLETS
THE RED "LOW WATER" INDICATOR (11) LIGHTS UP.	ALL THE WATER HAS BEEN CONSUMED.	REFILL THE WATER TANK (16) WITH CLEAN WATER.
THERE IS NO INJECTION OF DETERGENT.	ALL THE DETERGENT FROM THE DETERGENT TANK (15) COULD HAVE BEEN CONSUMED.	CONTROL THE LEVEL IN THE DETERGENT TANK (15). IF NECESSARY, REFILL THE DETERGENT TANK (15) AS DESCRIBED IN THE INSTRUCTIONS.
SUCTION POWER IS MISSING.	A. LACK OF POWER TO THE VACUUM CLEANER. B. THE VACUUM TUBE IS OBSTRUCTED. C. THE VACUUM DRUM (4) IS FULL OF WATER.	A. MAKE SURE THE SWITCH (2) IS ON AND THE PLUG (7) IS WELL INSERTED. B. CLEAN TUBE AND ACCESSORY USED. C. EMPTY THE VACUUM DRUM 4.
WATER LEAKS THROUGH THE CONNECTIONS OF THE ACCESSORIES.	CHECK THE WEAR OF THE O-RING.	CLEAN AND LUBRICATE THE O-RING WITH GREASE. IF NECESSARY, REPLACE WITH ONE SPARE SUPPLIED.
STEAM DOES NOT COME OUT.	A. BOILER HAS NOT REACHED YET THE OPERATIONAL PRESSURE (GREEN LIGHT (10) IS OFF). B. STEAM COMMAND SWITCHES (36-37) ARE OFF. C. THE STEAM COMMAND SWITCH (34) HAS NOT BEEN USED.	A. WAIT A FEW MINUTES. B. SWITCH ON THE STEAM COMMAND SWITCHES (36-37). C. USE THE STEAM COMMAND SWITCH (34) TO ACTIVATE THE STEAM FLOW.
DROPS OF WATER COME OUT OF THE ACCESSORIES.	AT BEGINNING OF WORK WATER CONDENSES IN THE TUBES AND ACCESSORIES DUE TO THE DIFFERENCE IN TEMPERATURE.	AFTER A FEW MINUTES OF USE THIS PROBLEM WILL CEASE. IF IT CONTINUES, PROCEED TO THE CLEANING OF THE BOILER.
ACCESSORIES DO NOT FIT PERFECTLY.	THERE IS DIRT BUILD UP IN THE JOINTS AND LOCK/RELEASE LATCHES (40).	CLEAN AND LUBRICATE THE JOINTS.

## 10. DECLARATION OF CONFORMITY



### ***DICHIARAZIONE DI CONFORMITA' CE*** ***(EC DECLARATION OF CONFORMITY)***

**TECNOVAP S.R.L.** con la presente dichiara che:  
le macchine per pulizia a vapore modello:  
(Certifies that the steam cleaning machine model):  
**Chattanooga Carmen Plus**

**Risultano conformi alle specifiche delle direttive**  
(conforms to the specifications of directives)  
**2006/95/CE 2004/108/CE 2006/42/CE 2002/95/CE**

Per il controllo della conformità alle sopraindicate direttive, sono stati seguiti i seguenti standard :  
(For the checking of conformity to the above directives, the following standards have been used):

Riferimento alle norme armonizzate:  
(Reference to harmonized standards):

**EN 60335-1**  
**EN 60335-2-2**  
**EN 60335-2-79**  
**EN 60335-2-3**  
**EN 55014-1**  
**EN 55014-2**  
**EN 61000-3-2**  
**EN 61000-3-3**

*PESCANTINA – VERONA (ITALY)02-02-2010*

**FRANCHINI Giuliano**  
(Managing Director)

A handwritten signature in black ink, appearing to read "Giuliano Franchini".



**Via dei Sassi 1/A, Pescantina (VR) Italy - Tel. +39 045 6767252**

**Fax. +39 045 6703631 – E-mail: [tecnovap@tecnovap.it](mailto:tecnovap@tecnovap.it) – [www.tecnovap.it](http://www.tecnovap.it)**