L'ARTE DEL VAPORE

CHATTANOOGA

JUNIOR STAR

1. 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 **CHATTANOOGA JUNIOR STAR**; a combined machine for cleaning which brings together the power of steam and the force of vacuuming.

This product was studied in collaboration with 20 years of experience from cleaning experts. It 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 **JUNIOR STAR** model 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 **JUNIOR STAR** 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 **JUNIOR STAR**.

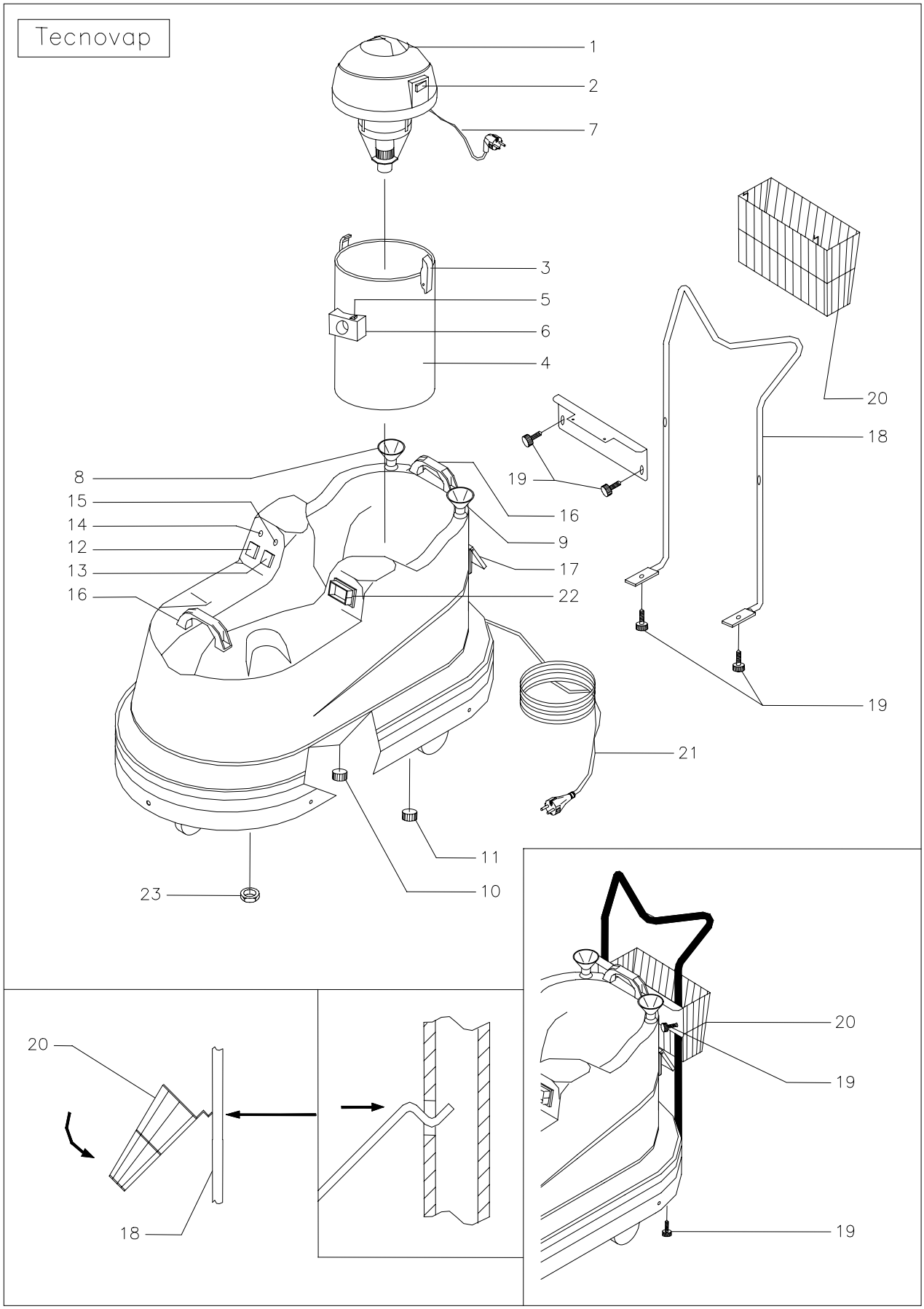
IMPORTANT

BEFORE USING THE STEAM GENERATOR CAREFULLY READ THIS MANUAL IN ALL ITS PARTS

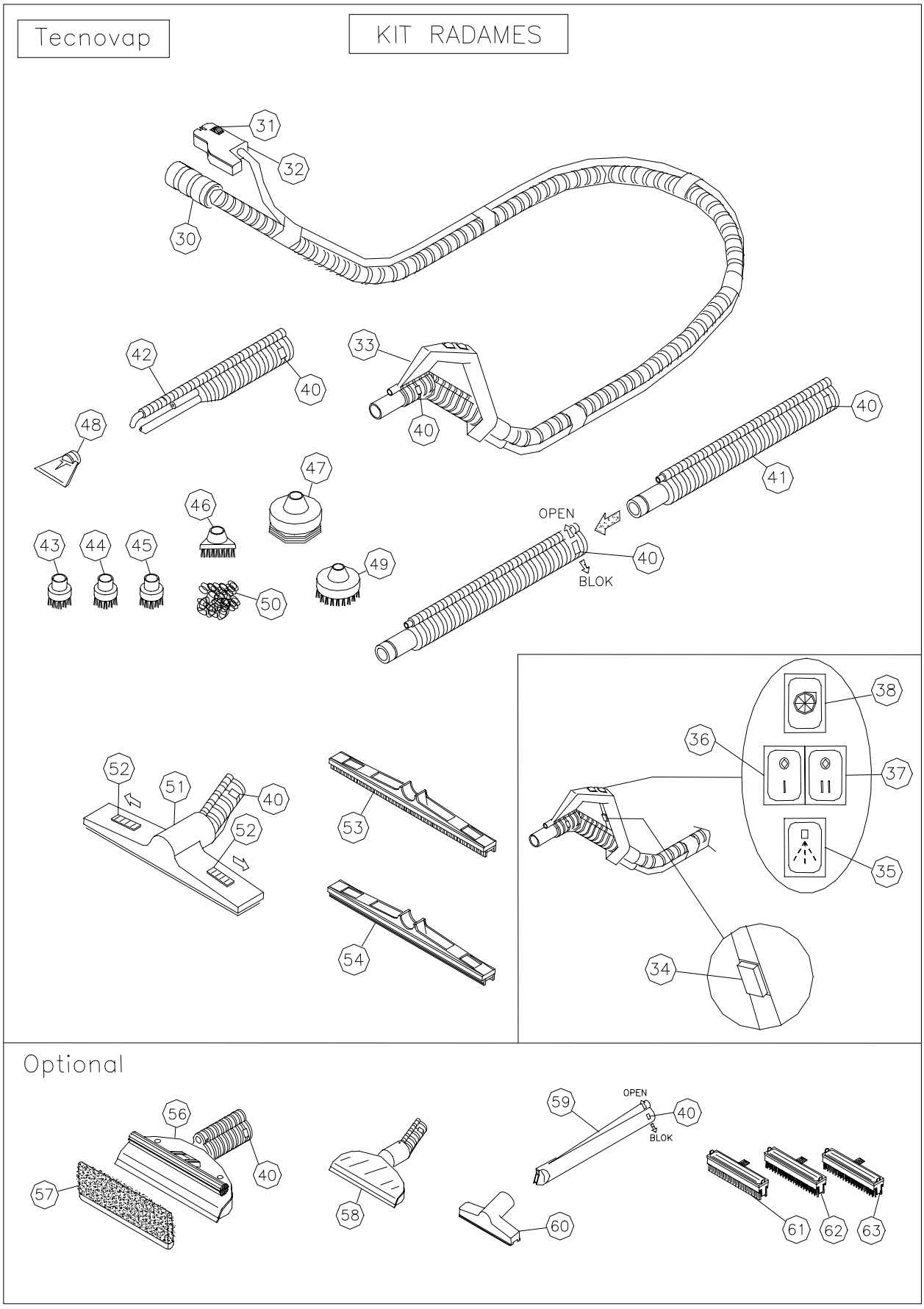
THE MANUFACTURER RESERVES THE RIGHT TO BRING ANY MODIFICATION OR IMPROVEMENT, TECHNICAL OR STRUCTURAL, WITHOUT PRIOR NOTICE.

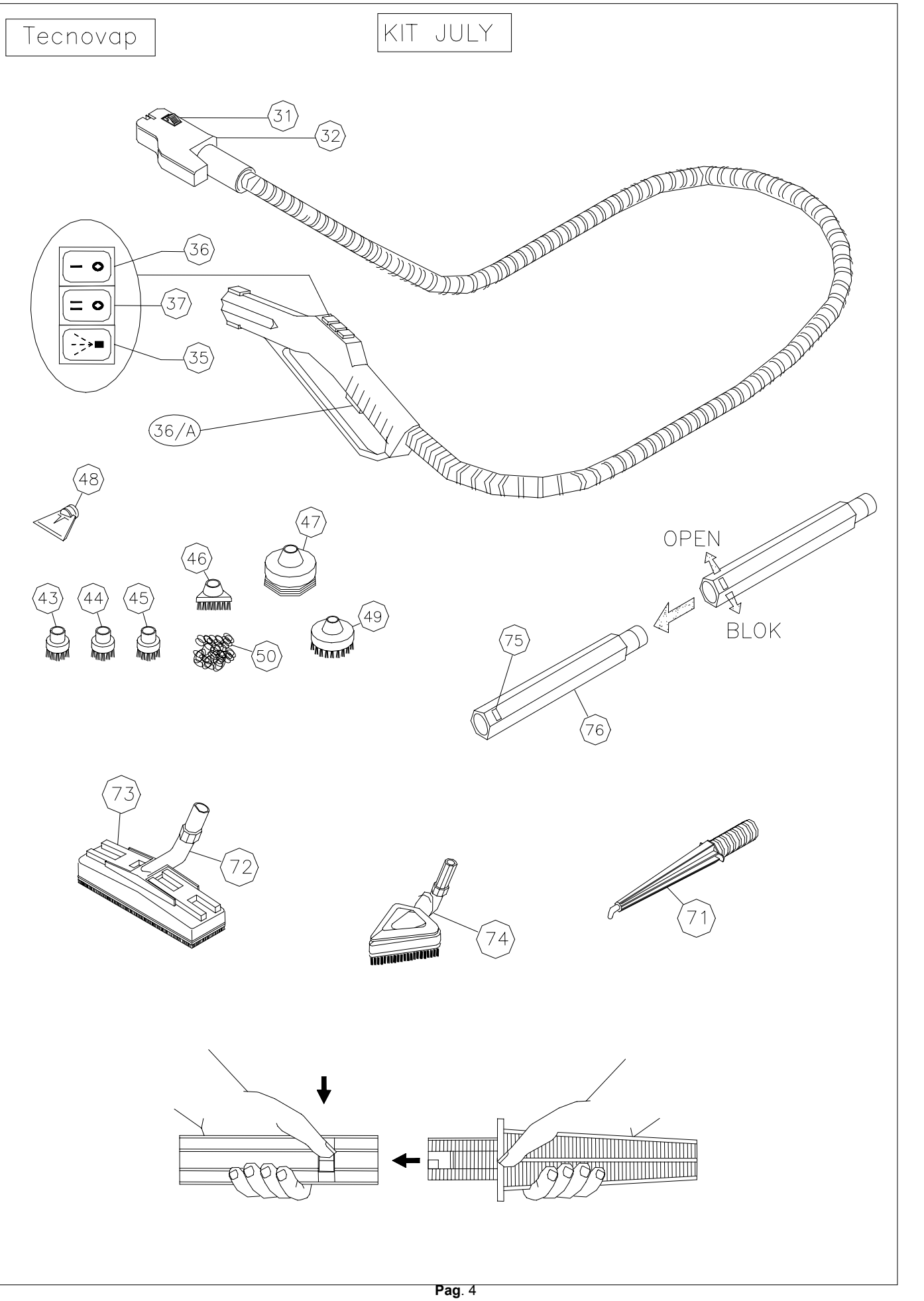
2. DISEGNI TECNICI

JUNIOR STAR



ACCESSORIES




Tecnovap
KIT JULY
31
32
36
37
35
36/A
48
47
46
43
44
45
49
50
OPEN
BLOK
75
76
73
72
74
71

3. TECHNICAL CHARACTERISTICS

3.1. STEAM GENERATOR

STAINLESS STEEL BOILER (AISI 304)
BODY IN SCRATCH PROOF PLASTIC

LOW VOLTAGE HAND CONTROLS:	12V
POWER SUPPLY:	230 / 50 ÷ 60 Hz
WATER RESERVE TANK:	4 liters
DETERGENT TANK:	2 liters
DETERGENT TEMPERATURE:	90-125°C
STEAM TEMPERATURE:	160°C
BOILER OUTPUT:	3600 Watt
PRESSURE:	5 bar
STEAM VOLUME:	97 g/min
POWER CORD:	8 meters

3.2. WET VAC

BODY IN POLYESTER

VACUUM OUTPUT:	1200 Watt
DRUM CAPACITY:	14 liters
DEPRESSION:	2200 mm
AIR FLOW:	200 m^3 / h

4. NOMENCLATURE

1) Vacuum motor
2) Vacuum power switch
3) Clamping hooks for vacuum drum
4) Vacuum drum (14 liters)
5) Locking latch vacuum outlet
6) Vacuum hose outlet
7) Power cord – wet vac
8) Detergent tank cap (yellow)
9) Water tank cap (blue)
10) Drain cap detergent tank
11) Drain cap water tank
12) General power switch
13) Boiler switch
14) “Ready steam” indicator (green)
15) “Low water” indicator (red)
16) Carrying handle
17) Electric socket for vacuum cleaner
18) Handle bar
19) Hand wheel screw for handle bar 20mm
20) Basket for accessories
21) Power cord
22) Steam outlet
23) 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) Steam & Vac extension tubes
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 lance (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 with handgrip (optional)
71) Steam lance (optional)
72) Rectangular brush (optional)
73) Cloth holder
74) Triangular brush (optional)
75) Locking latches for accessories
76) Steam extension tube (optional)

5. SAFETY REGULATIONS

IMPORTANT

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.

WARNING

- **PRESSURE JETS CAN BE DANGEROUS IF SUBJECT TO MISUSE. THE JET MUST NOT BE DIRECTED AT PERSONS, LIVE ELECTRICAL EQUIPMENT, OR THE MACHINE ITSELF.**
- **STEAM CLEANERS SHALL NOT BE USED BY CHILDREN OR UNTRAINED PERSONNEL.**
- **TO ENSURE THE MACHINE SAFETY, USE ONLY ORIGINAL SPARE PARTS FROM THE MANUFACTURER OR APPROVED BY THE MANUFACTURER.**
- **ENSURE THAT THE ELECTRICAL INSTALLATION IS EQUIPPED WITH AN EARTH DEVICE.**
- **IF NECESSARY, THE POWER CORD MAY BE REPLACED ONLY BY AUTHORIZED PERSONNEL OR SERVICE CENTER.**
- **PRESSURE HOSES, FITTING AND COUPLINGS ARE IMPORTANT FOR THE SAFETY OF THE MACHINE. USE ONLY HOSES, FITTINGS 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 WATERTIGHT CONSTRUCTION. INADEQUATE EXTENSION CORDS CAN BE DANGEROUS.**
- **FILL THE WATER TANK WITH WATER ONLY. DO NOT ADD DETERGENTS OR CHEMICAL PRODUCTS IN THE WATER TANK.**
- **FILL THE DETERGENT TANK WITH WATER, OR IF USING DETERGENT, ONLY WITH NEUTRAL AND NON FOAMY DETERGENT.**
- **DO NOT DISASSEMBLE THE ACCESSORIES WHILE THE MACHINE IS SUPPLYING STEAM.**
- **DO NOT OPERATE ELECTRIC MACHINES WITH WET HANDS.**
- **NEVER TURN THE MACHINE OVER OR ON ITS SIDE DURING USE.**
- **FAILURE TO OBSERVE THE REGULATIONS LISTED ABOVE WILL RENDER THE MANUFACTURERS WARRANTY NULL AND VOID ON THE ENTIRE MACHINE.**

6. OPERATING INSTRUCTIONS

(a) After opening the packaging box, fix the handle bar (18) to the rear support plate and tighten into place with the hand wheel screws (19).

(b) Insert the plug (7) into the outlet (17) and verify that the vacuum power switch (2) is in ON position.

(c) Lift the reserve tank caps (8 and 9) and add water (max. 4 liters) to the water tank (8 with blue cap) and appropriately diluted detergent (max. 2 liters) in the detergent tank (9 with yellow cap) of the machine.

(d) <u>If using detergent please follow the specific instructions: 1/5 liter detergent for every 2 liters water (about 10% is the detergent percentage), making sure to fill in first the detergent to obtain a better mixing.</u>

(e) Insert the plug (21) into an electrical outlet, making sure that the voltage and the amperage correspond with those printed on the plate located under the machine.

WARNING

WHEN THE WATER TANK IS EMPTY, WITH THE LOW WATER INDICATOR (15) ON, ADD WATER (MAX. 4 LITERS) TO THE WATER TANK (9).

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 diluted detergent in the tank (8).
2. Position the minimum steam adjustment switch (36) and activate the steam command switch (34) while pushing the detergent switch (35) until detergent comes out of the accessory.
3. The machine is now ready for use.

6.1. OPERATING THE JUNIOR STAR WITH KIT RADAMES

Insert the vacuum hose (30) into vacuum hose outlet (6) and the steam plug (32) into the steam outlet (22) found on the top right of the machine. Push until the latches (5 and 31) lock into place.

Activate the power switch (12) and the boiler switch (13) for the production of steam and wait approximately 8 minutes until the green "ready steam" indicator (14) 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 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 excess liquid with 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 (53,54). 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 3-5 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.

6.2. OPERATING THE JUNIOR STAR WITH KIT JULY

Insert steam plug (32) into the steam outlet (22) found on the top right of the machine. Push until the latch (31) locks into place.

Activate the power switch (12) and the boiler switch (13) for the production of steam and wait approximately 8 minutes until the green "ready steam" indicator (14) lights up indicating the boiler has reached operating pressure. The switches (36,37 and 38) located on the handle should be in OFF position.

Activating 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 steam flow.

Insert the steam lance (71) 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 (72) or the triangular brush (74) which can be covered with an absorbing cloth by using the gripper (73) 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.

7. 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. (I.E. SWITCHED OFF FOR AT LEAST 5 HOURS)

7.1 MAINTENANCE OF THE 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 (9), with about 4 liters of water, placing a recipient container under the machine and remove the boiler drain cap (23) underneath the machine. Then switch on the machine activating the power switch only (12) (the boiler switch (13) has to be in OFF position). Wait until the "low water" indicator (15) lights up which indicates that the internal cleaning of the boiler has been completed. Unplug the power cord (21) from the electric outlet and proceed by replacing the drain cap (23). Once again plug the power cord (21) into the electric outlet and activate the power switch only (12). 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 (9) completely if the machine will not be used for a long period of time.

7.2. MAINTENANCE OF THE VACUUM CLEANER

The vacuum cleaner of the JUNIOR STAR model does not require any specific maintenance.

7.3. MAINTENANCE OF THE ACCESSORIES

Grease occasionally joints on the accessories and hose extensions.

8. 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 (21) IS WELL INSERTED AND THAT THERE IS MAIN POWER TO THE OUTLETS.
THE RED "LOW WATER" INDICATOR (15) LIGHTS UP.	ALL THE WATER FROM THE WATER TANK (9) HAS BEEN CONSUMED.	REFILL THE WATER TANK (9) WITH CLEAN WATER.
THERE IS NO INJECTION OF DETERGENT.	ALL THE DETERGENT FROM THE DETERGENT TANK (8) COULD HAVE BEEN CONSUMED.	CONTROL THE LEVEL IN THE DETERGENT TANK (8) BY LIFTING THE VACUUM DRUM (4). IF NECESSARY, REFILL THE DETERGENT TANK (8) 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 (14) IS OFF). B. STEAM COMMAND SWITCHES (36-37) ARE OFF. C. 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 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.

9. COMPANY TECNOVAP

9.1. QUALITY SYSTEM CERTIFIED ISO 9002

9.2. ASSOCIATED AFIDAMP

9.3. EC DECLARATION OF CONFORMITY

DICHIARAZIONE DI CONFORMITA' CE
(EC DECLARATION OF CONFORMITY)

Il sottoscritto (The undersigned) FRANCHINI GIULIANO

TECNOVAP SNC
VIA DEI SASSI 1A
37026 PESCANTINA VR

Attesta che la macchina per pulizia a vapore modello :
(Certifies that the steam cleaning machine model):
Chattanooga Junior Star

Risulta conforme alle specifiche delle direttive
(conforms to the specifications of directives)
73/23/EEC – 93/68/EEC 89/336/EEC – 93/68/EEC 97/23CE

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 60335-2-79 + A1 + A11
EN 55014
EN 61000-3-2
EN 61000-3-3

PESCANTINA – VERONA (ITALY) 01-02-2002

FRANCHINI Giuliano
(Managing Director)

NOTA:
Il rapporto di prova relativo alla compatibilità elettromagnetica da considerarsi è il rapporto B0705 relativo al modello Chattanooga Junior
Viene preso in esame il suddetto rapporto vista la famigliarità dei circuiti elettrici.

10. SUMMARY