
12.1 ACTIVA®

In the adsorption phase with the exclusive ACTIVA® system, the circulation of the air between the drum and the active carbon allows the adsorption of the perc vapours by the latter.

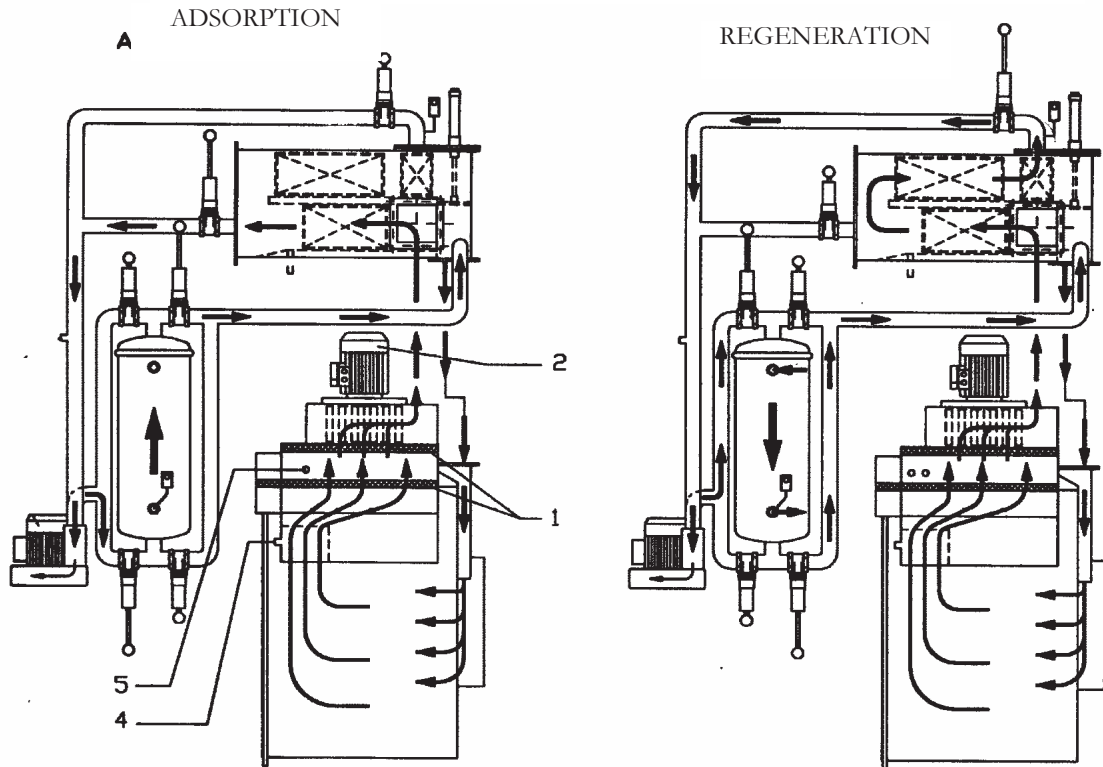
TIPOLOGIA ACTIVA®	CARBONE ATTIVI
ACTIVA® 30	10 KG
ACTIVA® 30 MAGGIORATO	15 KG
ACTIVA® 2	30 KG

The adsorbers fitted on our machines are of three capacities: the small one called ACTIVA® 30, the medium size called ACTIVA® 30/15, both fitted on the machine rear without changing the overall dimensions; the large model called ACTIVA® II is fitted at the machine side, increasing the width by approx. 40 cm (in.).

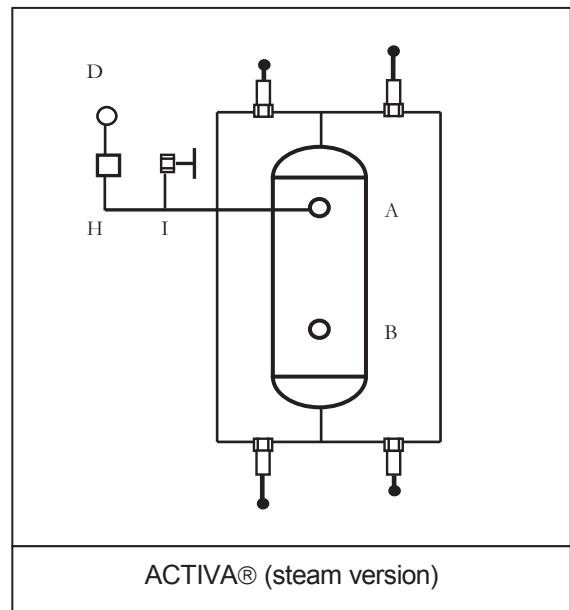
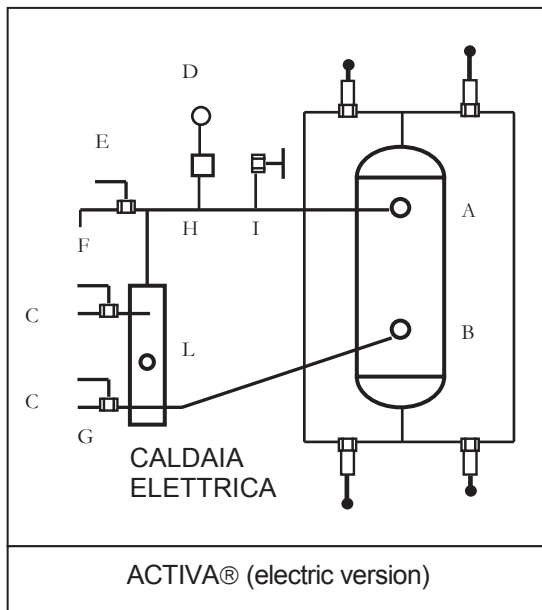
Of course these sizes depend on the quantity of active carbon inside; as a matter of fact ACTIVA®30 contains 10 kg (22 lb.) of carbon, ACTIVA®30/15contains 15 kg (33 lb.) of carbon and ACTIVA® II contains 30 kg (66 lb.) of carbon.

These devices provide the reduction of the perc concentration inside the drum to extremely low levels. As a matter of fact, by means of a laboratory measuring device we have been able to read inside the machine, at the end of the drying and deodorization phases, a concentration of perchloroethylene between 2800 and 3000 ppm.

After the ACTIVA[®] has worked for approx. 6 minutes, the concentration drops to levels which can vary between **120 and 150 ppm**. The variability of the concentration values is determined by the saturation degree of the carbon and by the type of garments inside the drum, due to the lesser or larger tendency to hold the solvent in the fibres.



The carbon inside the ACTIVA[®] after a certain number of cycles is saturated and the adsorption performance drops quickly. The machine Computer is preset to signal the necessity to carry out the regeneration cycle after a certain number of adsorption cycles. In the regeneration phase the carbon being heated releases the perc and the vapours are delivered to the cold coil of the machine recovery for condensation. The perc so recovered is delivered back to the tanks. The entire phase is carried out in an absolutely closed circuit, without emission of even the smallest part of perc in the atmosphere.



To give a value to the limits beyond which it will be necessary to carry out the regeneration, we can indicate 600 kg (1,320 lb.) of garments drycleaned for ACTIVA® 30, 900 kg (1,980 lb.) of garments drycleaned for ACTIVA® 30/15 and 1800 kg (3,960 lb.) for ACTIVA® II. Based on these values it is necessary to enter in the computer the number of adsorption cycles, after which it will be necessary to carry out the regeneration. To carry out the adsorption and above all the regeneration it is recommended to operate the machine in automatic, with the proper programs.

In view of the long duration (more than one hour) of the regeneration cycle it is recommended to carry it out at the end of the daily activities so for the machine to be ready for the day after..

A) steam inlet (steam heated machine)	F) water level valve
B) condense exhaust (steam heated machine)	G) water supply valve
C) safety plugs	H) control pressostat
D) pressure gauge	I) safety valve
E) air exhaust valve	J) water level control probe

12.2 STEAM CONNECTION (STEAM MODEL)

The steam supply lines must be connected to point A, fitting an interception valve and a steam filter in between. The steam working pressure must be 4-5 atm. (55-70p.s.i.). If the supply pressure is higher, fit a pressure reducer with a capacity not less than 30 kg/h (66 lb./h). Connect with the steam outlet B a condense exhaust and a bypass valve to facilitate the steam circulation in the first minutes of operation.

12.3 FILLING OF THE STEAM BOILER UPON START-UP (ELECTRIC MODEL)

Before carrying out the regeneration it is necessary to fill the steam boiler.

TAKE OFF the safety plugs C, OPEN the valves F and G, PUT IN water through valve G, until it comes out of valve F, CLOSE again valves G and F, PUT ON the safety plugs C again.

SWITCH ON the ACTIVA[®] switch of the control panel, after some minutes, when the pressure in pressure gauge D will have increased to approx. 0.5 bar (7p.s.i.), exhaust the air as follows:

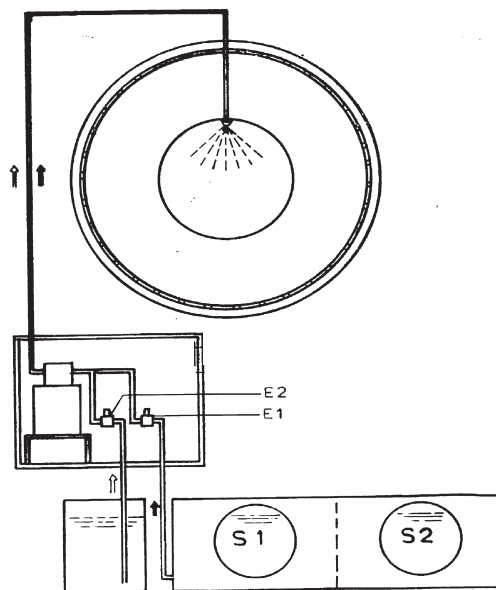
Slowly OPEN valve E, until steam starts coming out. Then:

CLOSE valve E again and SWITCH OFF the ACTIVA[®] switch of the control panel.

12.4 SPRAYMATIC®

For the waterproof treatment of the garments the machine can be provided with the exclusive ITALCLEAN SPRAYMATIC® system.

The operation is very simple. A special pump P sprays the waterproof product (resin) directly on the garments inside the drum, after the extract phase and before the drying. Afterwards the pipings of the SPRAYMATIC® system are cleaned with fresh perc taken from the tanks (S1 or S2), by means of the pump P, to avoid the resin from depositing in the pipings



For automatic operation, after the extract phase:

The time of injection of the waterproof liquid is regulated in the step of SPRAYMATIC.

Step of SPRAYMATIC can be programmed selecting the exit of 26,1,2.in MENU' PROG. Only in this situation the step time and the time that appears in sec/kg are the same thing. So when you use the SPRAYMATIC the step time has to be 00:00. The total time of the step is given by the product of the Kg value multiplied by the value of the [sec]/ [kg], more the time of pipes cleaning (30 sec automatically).

Es. I want to waterproof 6 [kg] of cloth, with a spray time of 40 sec/Kg, the time of the step= 6* 40+ 30= 270 sec= 4 min]and 30 sec.

KG : they are the suggested kg when the program is in PRESTART. (Min 1, Max. 31 [kg]).

SEC/KG : Seconds for unity of weight. At the beginning it is proposed the time of step. The inserted time will be memorized also in the time of step.

PROG 01 STEP 01 →	
SPRAY TIME	
KG	01
SEC / KG	00:20

For the use of this device you/he/she/it consult of use the opportune programs, to this intention consult the manual of the computer, or use the opportune cards you pierce.

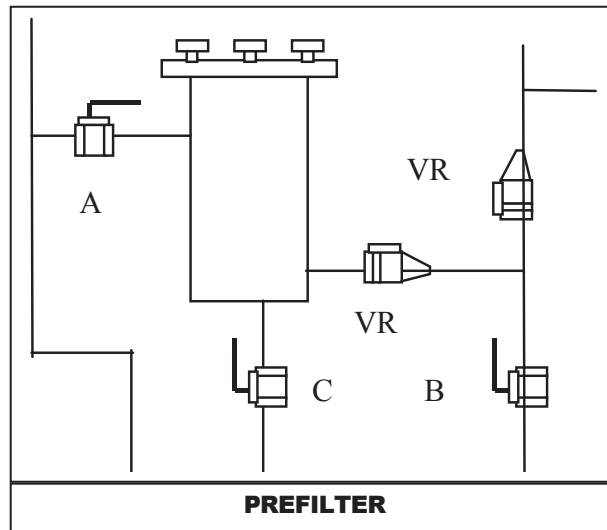
For manual operation, after the extract phase:

SWITCH ON the SPRAYMATIC® switch and leave it on for the time considered necessary, based on the quantity of garments and the instructions for the use of the waterproof product, after which:

SWITCH OFF the SPRAYMATIC® switch, after some minutes:

START the drying and deodorization phases

12.5 DISCLESS PRE-FILTER



The discless filter provides for an initial filtration of the grosser particles in suspension in the solvent before the main filtration in the nylon filters, thus extending the time for the filters to get saturated and reducing the frequency with which to clean them. Periodically (every 5-6 cycles) it is necessary to clean the pre-filter, as follows:

OPEN gatevalve C (hydraulic schematic).

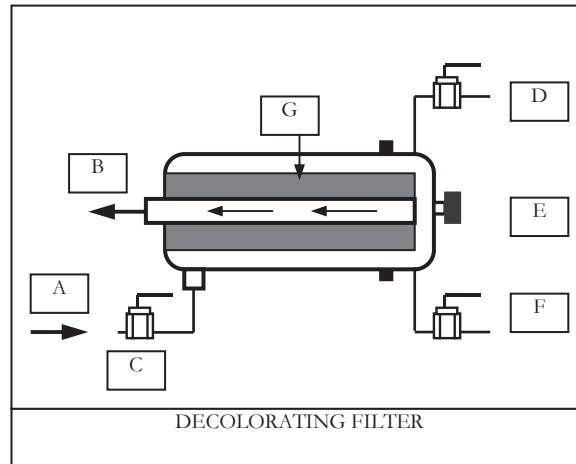
SWITCH ON the switch relating to the inlet of the tank used in the last cycle. WAIT until the pre-filter is drained.

OPEN the cover of the pre-filter and clean the filter bag, then:

PUT the bag back in its seat and accurately close the cover again.

CLOSE gatevalve C (hydraulic schematic) and switch off the switch previously switched on.

12.6 DECOLORATING FILTER



The decolorating filter has a high solvent filtration power due to the exclusive features of the carbon cartridge filter it is provided with. The operating principle is as follows: the incoming solvent is pushed by the pump inside the filter body and owing to the pressure it goes through the cartridge and is thus purified. At the end of the purification the filtered solvent is sent outside and delivered to the drum. The manual valve C makes it possible to exclude the use of the filter, if necessary, and deliver the solvent directly to the drum. For this selection it will suffice to align the valve in the direction away from the filter.

A	SOLVENT INLET
B	SOLVENT OUTLET
C	MANUAL INLET VALVE
D	AIR EXHAUST00
E	PRESSURE GAUGE
F	CARTRIDGE DRAIN
G	CARTRIDGE FILTER



For the proper use of the filter it is necessary that it is always dipped in solvent, therefore when starting up the machine or after the replacement of a cartridge, it is necessary to carry out the preparation of the filter.

For this operation open at the same time: valves C and switch on the computer outputs SOLVENT PUMP and INLET FILTER 1 (if fitted).



When in the transparent exhaust hose there are no solvent bubbles any more the filter is ready. At this stage switch off the computer outputs SOLVENT PUMP and INLET FILTER 1.

The working pressure of the decolorating filter must not exceed 1.8 bar (26 p.s.i.), if this value is exceeded, it will be necessary to replace the saturated cartridge

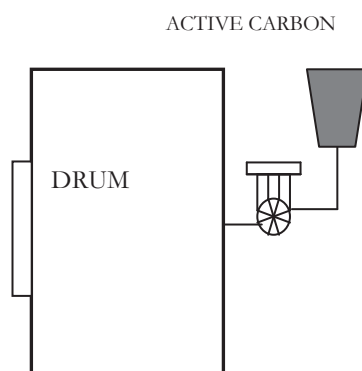
For this operation it is necessary to open F drain F and STILL INLET until the solvent has



completely come out of the filter body. At this stage it will be possible to open the filter cover and remove the saturated cartridge and replace it. At the end of this operation it will be necessary to close drain F, STILL INLET and carry out the preparation of the filter



The saturated filter is hazardous waste and has therefore to be treated according to the laws ruling in the country, where the machine is installed.

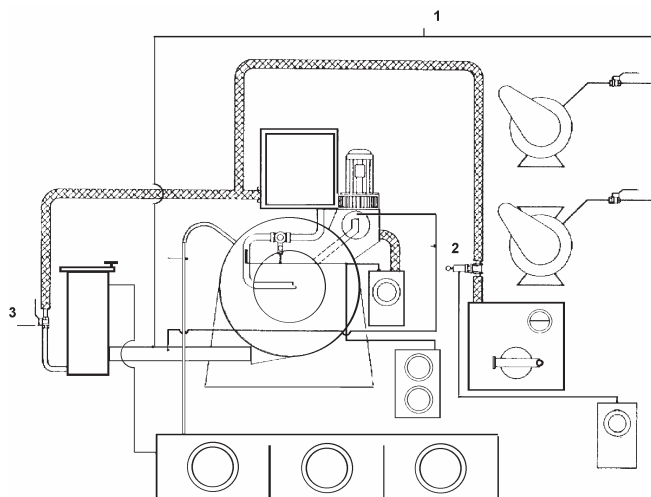
12.7 EXHAUST WHEN OPENING THE LOADING DOOR


In order to reduce the quantity of perc vapours into the work area when opening the loading door in order to remove the garments, the machines can be supplied with a device to exhaust the air from the drum into an active carbon container. In this case the recovery fan of the machine is used, which starts automatically when the loading door is opened to take out the garments.



It will be necessary to change the active carbon after some months of regular use of the machine. The saturated carbon must be disposed of as hazardous waste. For the replacement carbon contact the ITALCLEAN parts service.

12.8 DRYING OF THE STILL AND/OR BUTTON TRAP



By means of this device it is possible to send a flow of hot air into the still and/or the button trap during the drying phase, with the purpose to recover as much solvent as possible from the distillation sludge (diminishing the hazardous waste to be removed when cleaning the still) and from the button trap filter (diminishing the hazard of the waste).

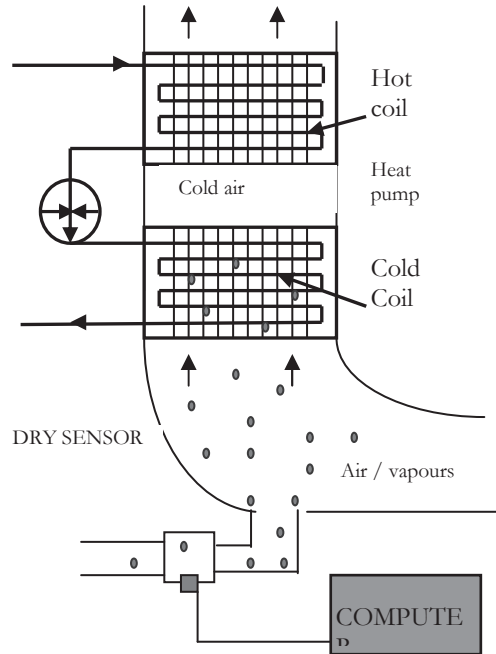
1	Solenoid Valve Yv18
2	Pneumatic Valve 18
3	Button Trap Hot Air Inlet Valve



Carry out the still drying only when the distillation has finished. Avoid to switch on the STILL DRYING switch of the control panel, if in the distillation unit there is still solvent to be distilled, if the machine is not in the drying phase or while the distillation is being carried out (e.g. if the machine operates in continuous distillation).

The inlet of the hot air into the still is controlled by the STILL DRYING switch of the control panel. The sludge drying is recommended above all after the distillation of the solvent ensuing the cleaning of the nylon filters, because of the presence of filter powder which can hold quite some solvent at the end of the distillation. Upon request, the machines can be preset even for the drying of the waste in the button trap filter. In the same way, before cleaning the button trap, it is possible in the drying phase to manually open valve 3. The flow of hot air will dry the fluff inside the button trap recovering solvent and diminishing the hazard of the waste. This valve must be opened during the drying phase and only if the button trap is very dirty and it is necessary to clean it. At the end of this phase close valve 3 again.

12.9 ELECTRONIC DRY SENSOR

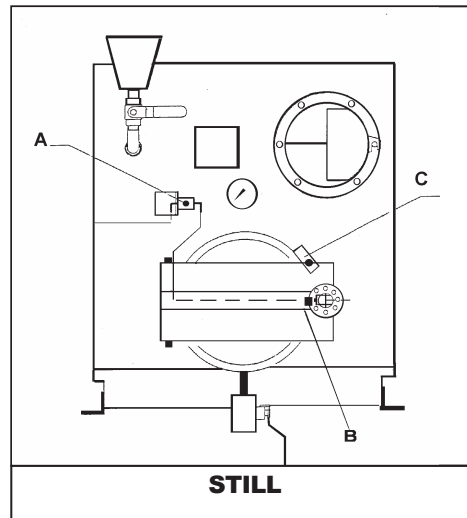


Our machines can be supplied with a sensor capable of measuring, during the drying, the flow of perc recovered by the cold condenser coil of the recovery and of automatically terminating the drying, as soon as this flow is almost null and so starting the deodorization.

This device assures the proper drying of the garments, also for different quantities and types of garments cleaned.

Hence the ELECTRONIC DRY SENSOR makes it possible to optimize the energy output of the machine assuring perfect drying at the lowest consumption of energy possible.

12.10 SAFETY LOCKS



Besides the loading door, also the service ports of the air filter, button trap and still can be provided with safety locks.

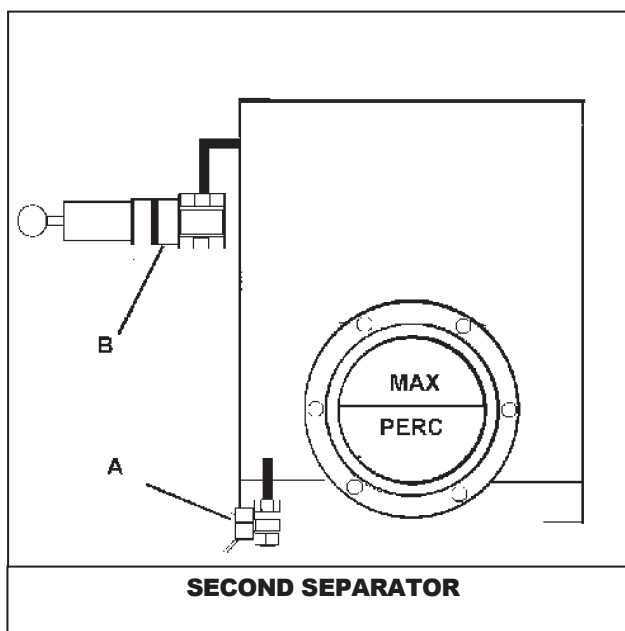
In this case opening these ports will only be possible, when the machine is stopped turning on the loading door release switch.

In order to open the still door, besides turning on the loading door release switch it is also necessary to press the pneumatic pushbutton A. In the figure are indicated also the safety microswitch C and the pneumatic piston B, which physically blocks the door opening.



If one of these ports stays open or is not properly closed, the machine will not start, because of the relating microswitch.

12.11 SECOND WATER SEPARATOR



The water coming from the primary separator is sent to the second water separator, in which by decanting the solvent is further separated from the water.

The drainage has to be carried out, when the water has gone up to the top of the upper sight glass, by means of valve B, which can be manual or automatic.

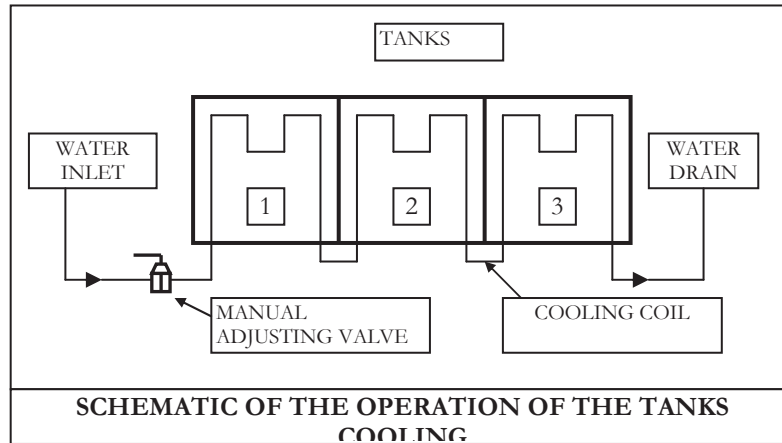
Note: If valve B is automatic, it opens each time the door opening switch is activated. It is therefore necessary that the contact water container be constantly connected to the second water separator.



The contact water must be disposed of as hazardous waste. Absolutely avoid perc or water containing perc from being drained into the sewer.

The drainage of the solvent is carried out by means of valve A, when the solvent can be seen at the lower sight glass.

12.12 ADDITIONAL COOLING



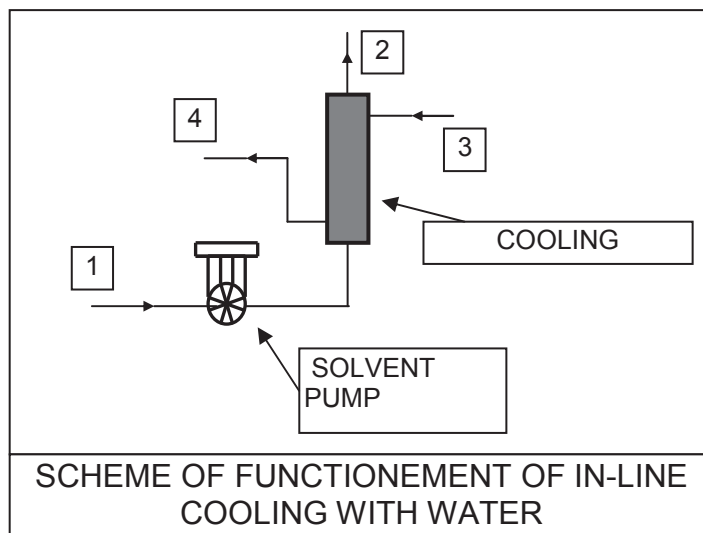
The ITALCLEAN machines can be provided with additional solvent cooling systems, very efficient to control the perc temperature both during the wash cycles and when it is stored in the tanks.

SOLVENT COOLING IN THE TANKS

The cooling of the tanks makes it possible to control the temperature of all tanks contemporaneously in a very simple way. By means of a manual interception valve it is possible to circulate water in a coil dipped in the solvent contained in the tanks, whenever necessary, and cool it.

This water, once accomplished the cooling, can be drained outside. The manual valve makes it possible to adjust the water flow, as you like it, so as to avoid waste of water. Moreover it is possible to carry out this operation also, when the machine is turned off so as to save electric energy.

12.13 IN-LINE COOLING WITH WATER



The in-line cooling system with water makes it possible to cool the solvent coming off the pump in a water fed cooler.

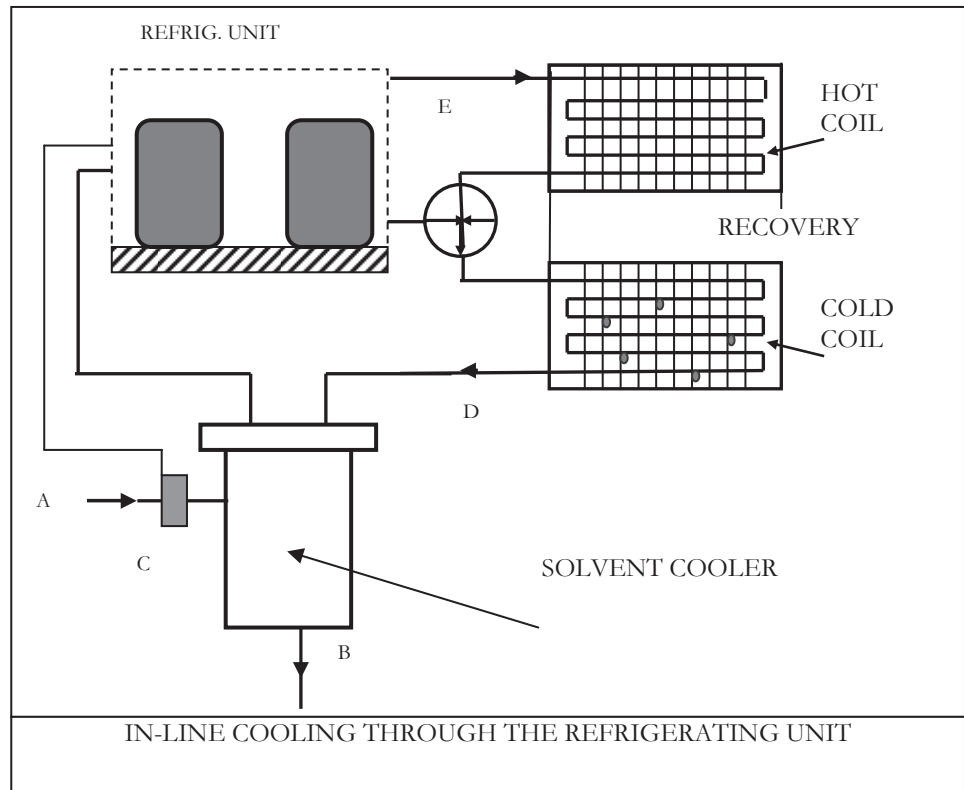
1	hot solvent inlet
2	cooled solvent outlet
3	cooling water inlet
4	cooling water drain

The cooling water is automatically circulated, during the regular work cycle, each time it is activated by the thermostat of the still condenser.

In other words, the water used is not drained outside, but completely recycled inside the machine. Thus by using the same water supply of the machine a double result is accomplished; control the temperature of the solvent and not increase the operation cost. Upon request it is possible to control the solvent temperature by means of a control thermostat.

12.14 IN-LINE SOLVENT COOLING THROUGH THE REFRIGERATING UNIT

The in-line solvent cooling through the refrigerating unit makes it possible to continuously control the solvent temperature by means of a cooler fed by the refrigerating unit. This cooling system features a high cooling power and is particularly suitable in the event of continuous shortage of water.



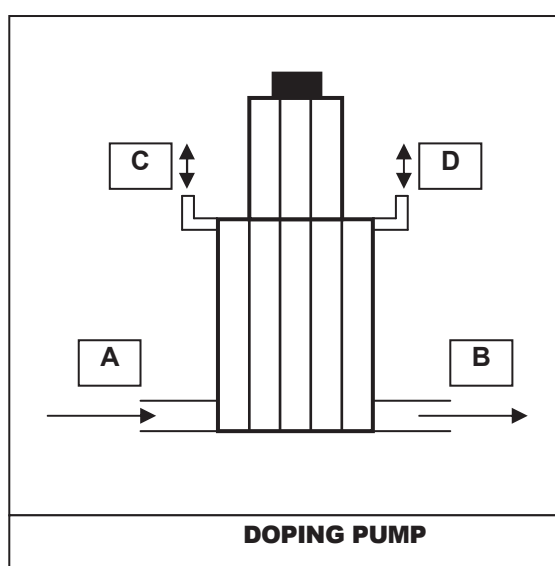
A	SOLVENT INLET
B	SOLVENT OUTLET
C	THERMOSTAT
D	FREON INLET
E	FREON OUTLET

The cooling system operates with double adjustment, during the regular wash cycle. During the regular use of the refrigerating unit the refrigerating liquid after completing its function inside the recovery is sent to the solvent cooler. In this way the refrigerating liquid already circulating in the machine is used, therefore the cooling is carried out without any additional cost for electric energy. A thermostat enables the second use of the cooling system, as a matter of fact each time the solvent temperature reaches high values, the thermostat activates the refrigerating unit until the solvent has completely cooled-down

12.15 ADDITIVES (soap)

Upon request the machine can be supplied with devices to add additives (soap) to the solvent. These additives make it possible to reinforce the cleaning output in relationship to the features of the garments to be treated

12.16 DOSING PUMP



The dosing pump makes it possible to dose with utmost precision the quantity of the additives (soap) you want to add to the solvent during the cleaning cycle. This system consists of an exclusive piston pump moved by the compressed air system. This pump sucks the quantity of additives required from an external container and injects it inside the machine..

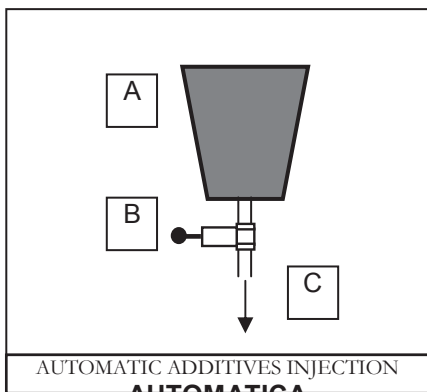
A	ADDITIVES (soap) SUCTION
B	ADDITIVES (soap) INJECTION
C	COMPRESSED AIR
D	COMPRESSED AIR

The operation of the soap dosing pump is fully controlled by the computer and is enabled by means of key 27-28. In the computer programming phase when enabling key 27-28 will appear a specific label, in which is to be programmed the number of pump pulses to inject the additives (from one to nine pump pulses).

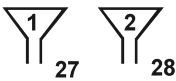


Moreover the computer by means of MENU SET makes it possible to adjust the duration both of the soap suction phase and of the soap injection phase thus obtaining the proper dosage for each situation.

12.17 AUTOMATIC ADDITIVES (soap) INJECTION

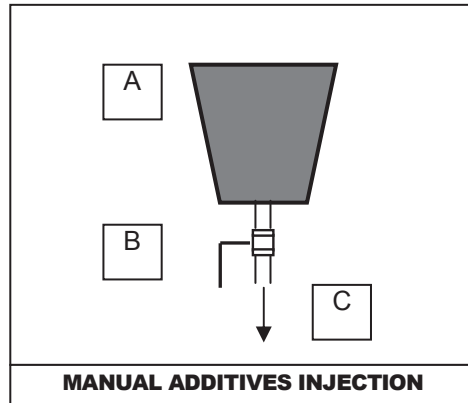


The automatic additives injection makes it possible to add to the solvent the additives first dosed in the specific pocket. The system consists of the above pocket and of a pneumatic valve controlled by key 27 and 28, the opening of which makes it possible to automatically inject the additives during the regular cycle.



A	SOAP POCKET
B	PNEUMATIC VALVE
C	ADDITIVES OUTLET

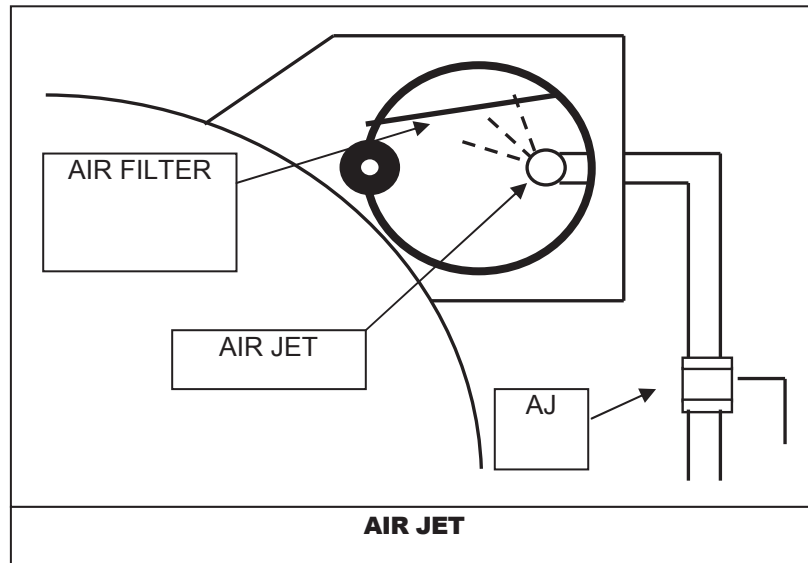
12.18 MANUAL ADDITIVES (soap) INJECTION



The manual additives injection makes it possible to add to the solvent the additives first dosed in the specific pocket.

The system is completely manual and consists of the above pocket and of a manual valve which makes it possible to inject the additives during the regular cycle.

12.19 AUTOMATIC CLEANING OF THE AIR FILTER (AIR JET)



Upon request the machine can be supplied with this exclusive device, which makes it possible to clean the air filter from the fluff normally building up during the cleaning cycles.

This cleaning is carried out by addressing a strong jet of perc into the air filter. This fluff then will be gathered in the button trap, from which it can be removed.

For this operation it is necessary to open the manual valve AJ and to use the automatic program 17. At the end of the automatic program it is necessary to close the manual valve AJ.

DISMANTLING

13.1 DISMANTLING OF THE MACHINE

The dismantling of the machine has to be carried out by specialized people only.

This procedure entails the risk of contact with perc and its vapours; therefore wear protective mask and gloves.



The operation must be carried out as follows:

- REMOVE the perc from the tanks and the filters.

The waste is a hazardous product and therefore has to be treated according to the laws ruling in the country, where the machine is installed.

- REMOVE the filter elements.

The waste is a hazardous product and therefore has to be treated according to the laws ruling in the country, where the machine is installed.

- REMOVE the distillation waste from the still.

The waste is a hazardous product and therefore has to be treated according to the laws ruling in the country, where the machine is installed.

- DRAIN the contact water from the separator.

This is a hazardous product and therefore has to be treated according to the laws ruling in the country, where the machine is installed.

- DISCONNECT the water connections.
- DISCONNECT the steam connections (if any).
- DISCONNECT the compressed air connections (if any).
- DISCONNECT the power supply.

The disconnection of the electric supply is carried out as follows:



- TAKE OFF the power from the machine upstream the supply wire, i.e. the power user board, to which the origin of the supply wire is connected.

- DISCONNECT the supply wire from the power user board.
- DISCONNECT the yellow-green point of the connection to the user's ground connection.
- PUT the machine isolator S to position "O".
- OPEN door P.
- DISCONNECT the supply wire from the terminals U V W, from neutral and from the equipotential protection PE.

TROUBLE SHOOTING

14.1 THE GARMENTS WILL NOT COME OUT DRY**1) EXCESSIVE SOLVENT IN THE GARMENTS.**

- a) Check that the machine has carried out the extract phase.
- b) Check that the drum is completely empty of solvent before the extract phase starts.
- c) Check that the button trap is not clogged.

2) DRYING AIR TEMPERATURE NOT SUFFICIENT.

- a) Check the setting of the drying thermostat (approx. 60°C = 140°F).
- b) Check the steam pressure. For the drying it must be minimum 3 bar = 45 p.s.i. (only for steam heated machines).
- c) One or more heating elements burnt. Replace them (only for electrically heated machines).
- d) Check the proper operation of the refrigerating unit.

3) THE FAN TURNS IN THE OPPOSITE DIRECTION.

Check if the rotation sense of the fan has been changed during service. Invert two of the three supply connections.

4) THE MACHINE IS OVERLOADED.

Check that the weight of the garments does not exceed the maximum load capacity. Load half the machine capacity in case of leather or heavy garments.

5) THE DRYING TIME IS TOO SHORT FOR SOME TYPES OF GARMENTS.

Increase the drying time for very heavy pieces, such as quilts, rugs, raincoats, suede leather garments, etc.

6) THE THERMOSTAT WORKS PROPERLY?

- a) Make sure that the drying thermostat works properly, check the instruction manual of the thermostat.
- b) Check that the setting of the drying thermostat is 60°C = 140°F.

7) THE DRYING TEMPERATURE IS LOW.

- a) For the electrically heated machines check the operation of the solenoid of the heating elements.
- b) For the electrically heated machines check, if the heating elements have a short circuit.
- c) For the steam heated machines check the operation of the relating pneumatic valve, also that it is properly fed, and the operation of the steam solenoid.
- d) Check that the steam line is not clogged and that the relating condense exhauster works properly.
- e) Check, if the heat exchange coils are clogged with fluff, if so clean them.

8) THE REFRIGERATING UNIT WORKS PROPERLY?

Check that the refrigerating system works. See also the chapter on refrigeration.

9) WHEN THE GARMENTS ARE REMOVED FROM THE MACHINE, THEY ARE STILL WET.

Check that the drain, extract and dry phases in the computer are correct.

10) THE DRYCLEANED GARMENTS ARE WET WITH WATER.

The steam coil leaks. Replace it.

14.2 HALO OR LINE MARKS ON THE GARMENTS

1) TOO MANY CYCLES CARRIED OUT WITHOUT CLEANING THE FILTERS OR REPLACING THE CARTRIDGES OR DISTILLING THE SOLVENT.

- a) Carry out the cleaning of the filters or replace the cartridges.
- b) Carry out the total distillation of the solvent.
- c) When the garments to be cleaned are very dirty, the cycles must be with two baths and continuous distillation.

14.3 THE FILTER IS CLOGGED, THE FILTER PRESSURE INCREASES RAPIDLY

1) WRONG OR HUMID FILTER POWDER USED (for nylon powder filters only).

For nylon powder filters use TONSILL NFF or HYFLO 545. The powder must be perfectly dry.

2) QUANTITY OF POWDER USED FOR THE FILTER PREPARATION NOT SUFFICIENT (for nylon powder filters only).

Prepare the filter using always the exact quantity of filter powder recommended.

3) FILTER POWDER HAS BEEN USED FOR NYLON ECOLOGICAL (POWDERLESS) FILTER.

Carry out the filter cleaning program and if necessary, replace the filters discs.

4) DIRTY OR GREASY SOLVENT.

Carry out the filter cleaning and solvent distillation (for nylon filters) or replace the cartridges (for cartridge filters).

5) THE FILTER DISCS ARE VERY DIRTY.

- a) It is necessary to carry out the filter cleaning program.
- b) Check, if the filter cleaning program has been carried out properly.
- c) Check the operating of the solvent drain valve from filter to still.
- d) Check that the filter motor turns correctly and in the right direction.

6) CHECK THE ADDITIVES (soaps).

- a) Make sure that the soap introduced in the machine is the right quantity. Carry out the filter cleaning.
- b) If liquid soap is used, make sure that the product used is compatible with perchlorethylene and that the quantity is correct. Carry out the filter cleaning.

7) AFTER A FEW LOADS THE PRESSURE IS HIGH AGAIN.

- a) Check the filter inlet and outlet valves.
- b) Remove the discs and clean them. Replace the worn-out or damaged discs.

14.4 FILTER POWDER ON THE GARMENTS (for nylon powder filters)

ONE OR MORE FILTER ELEMENTS FAULTY.

Replace the faulty filter elements.

14.5 THE SOLVENT DOES NOT CIRCULATE WITH THE SUFFICIENT QUANTITY

1) THE BUTTON TRAP IS DIRTY.

- a) Clean the button trap from fluff and dirt.
- b) Check the inside filter of the pump, if fitted, if necessary take it off, while the machine is switched off and clean it.

2) CHECK THAT THE PUMP TURNS PROPERLY.

Check, if the rotation of the pump is in the direction of the arrow on the cover; if necessary invert two of the three supply connections.

3) THE PUMP IS DIRTY.

Dismantle the pump and clean the impeller.

Stop the machine and disconnect the main switch. Disconnect the connecting wires of the pump so as to be able to remove the cover on the bottom of the pump and inspect the impeller. **IT IS NECESSARY TO REMOVE THE IMPELLER TO CLEAN IT!** It is recommendable to have some spare gaskets and rings available for this operation.

If the pump impeller is clogged, clean or replace it. **DO NOT REMOVE THE WASHERS OF THE PUMP SHAFT.** They are to adjust the impeller. If the pump impeller has to be cleaned rather frequently, check that the button trap chamber is in the proper position and that the inside filter of the pump (if any) is fitted properly.

4) SOLVENT FILTER SATURATED.

Clean and prepare the filter according to instructions.

5) EXCESSIVE USE OF ADDITIVES OR CHEMICAL PRODUCTS IN GENERAL.

Moderately use first quality soaps. If necessary, send the solvent used to clean the clogged pipings to the still.

14.6 THE SOLVENT DOES NOT CIRCULATE IN THE HYDRAULIC SYSTEM

1) ONE OR MORE PNEUMATIC INTERCEPTION VALVES OF THE HYDRAULIC CIRCUIT ARE BLOCKED.

- a) Check the cylinders and if they are blocked, lubricate them.
- b) Check the relating solenoids that control the cylinders.

2) COMPRESSED AIR PRESSURE INSUFFICIENT.

- a) The pressure must be from 6 to 8 bar (= 85-115 p.s.i.).
- b) If it is lower than these values, check the air compressor or the air supply circuit.

3) SOLVENT PUMP MOTOR BURNT.

If the solvent pump motor is burnt, replace it or have it rewound.

14.7 THERE IS NO SOLVENT IN THE DRUM DURING THE WASH PHASE

1) THE COMPUTER PROGRAM IS NOT THE RIGHT ONE.

- a) Check in Menu Set the time for LEVEL 1 and LEVEL 2.
- b) Check that in the program being used the step of the drum level is correct.

2) CHECK THAT THERE ARE NO CLOGGINGS.

See the previous paragraph.

3) CHECK THAT THERE IS SOLVENT IN THE TANK.

14.8 THE MACHINE DOES NOT EXTRACT

1) THE OVERLOAD OF THE MAIN MOTOR TRIPS OUT.

- a) Check the motor overload tripping out and if necessary reset the relay by pressing the relating pushbutton.
- b) If this happens frequently, look for the cause of this anomaly.

2) EXTRACT MOTOR BURNT.

If the motor is burnt, replace it or have it rewound.

3) EXTRACT REMOTE CONTROL SWITCH COIL BURNT.

Replace the coil or the remote control switch.

14.9 THE PUMP IS NOISY

- 1) ALIEN BODY IN THE PUMP IMPELLER.

Dismantle the impeller and clean it.

- 2) PUMP MOTOR BEARINGS WORN OUT.

Switch off the main switch and dismantle the pump. Replace the bearings and seals.

- 3) WHEN THE PUMP STARTS, IT MAKES A SLIGHT NOISE.

This is normal.

- 4) THE SOLVENT CIRCULATION IS SCARSE.

- a) Check the solvent level in the tanks.
- b) Check that the pump turns in the right direction.
- c) Check, if there are cloggings in the conducts.

- 5) THE FAN ON TOP OF THE PUMP MAKES A NOISE.

Switch off the main switch, remove the protection from the fan, clean the fan blades and put the protection back.

14.10 NOISE DURING THE EXTRACTION

- 1) MAIN MOTOR BEARINGS WORN OUT.

Replace the bearings.

- 2) MAIN SHAFT BEARINGS WORN OUT.

Replace the bearings and seals.

14.11 THERE IS A NOISE INSIDE THE DRUM

1) THERE MUST BE SOMETHING METALLIC CAUGHT IN BETWEEN THE DRUM AND THE ROTATING BODY.

- a) Remove it and try again.
- b) Make sure that on the garments there is nothing to cause this noise.

2) MAKE SURE THAT THE NOISE DOES NOT COME FROM THE BELTS.

- a) Adjust the belts, if necessary.
- b) Replace the belts, if necessary. THEY HAVE TO BE REPLACED WITH A COMPLETE SET OF MATCHING NEW BELTS.
- c) The noise can come from the protection of the bearings. Replace the bearings and seals.

14.12 THE DRUM TURNS IN ONLY ONE DIRECTION

1) CHECK THAT THE BELTS ARE TIGHT.

Adjust or replace the belts, if necessary.

2) CHECK THAT THE COMPUTER PROGRAMMING IS SUITABLE FOR THE DRUM ROTATION.

Adjust the RUN-PAUSES in Menu Set and check that they have been properly set in the program being used.

3) CHECK THAT THE WASH REMOTE CONTROL SWITCHES C1 AND C2 WORK PROPERLY.

Check that there is power from the computer to the remote control switches.

14.13 ONE OR MORE MOTORS GET VERY HOT

THERE ARE POWER VARIATIONS IN THE ELECTRIC SUPPLY LINE.

The voltage of the electric supply line must correspond with the connections of the motors. The max. variation can be +/- 5%.

14.14 THE FILTER GROUP DOES NOT ROTATE (only for rotating filters)

- 1) THE DRIVE BELT IS LOOSENEED OR WORN-OUT.

Stretch the belt properly or if worn-out, replace it.

- 2) THE INSIDE SHAFT IS BLOCKED.

Check, if the filter group rotates freely trying the filter drive pulley by hand. If it does not turn well, dismantle the filter set and check the shaft, bush, bearing and the filter group.

- 3) FILTER MOTOR BURNT.

Replace the motor or have it rewind.

14.15 DISTILLATION TOO LONG, EXCESSIVE QUANTITY OF LIQUID IN THE STILL

- 1) FOR STEAM HEATED MACHINES:

a) Insufficient steam pressure. The steam pressure must be 4 - 4.5 bar = 58 - 65 p.s.i.

b) Check that the condense exhauster works properly.

- 2) ONLY FOR ELECTRIC STILLS WITH OIL BATH:

a) Check the setting of the thermostat, the oil temperature must be 190°C = 370°F.

b) Check that the still remote control switch works.

c) Ascertain the proper operation of the still thermostat.

- 3) ONLY FOR ELECTRIC STILLS WITH WATER BATH:

a) Check the setting of the pressostat, the pressure of which must be 4 - 4.5 bar = 58 - 65 p.s.i.

b) Check, if some heating element or the connecting terminals of the heating elements are burnt-out.

c) Check the water level in the still steam chamber.

d) Check the proper setting and operation of the safety thermostat and of the water level probe, if fitted.

14.16 THE STILL BOILS OVER

1) THERE IS AN EXCESSIVE QUANTITY OF WATER AND SOAP IN THE STILL.

a) Maybe too much water has been used in the wash cycle.

b) The soap or prespotting products have not been properly dosed.

c) Water enters the machine from a different source. Check the still condenser coils and the drying coil (on steam heated machines).

d) Check the still bottom to see that it is not damaged.

2) THE STILL IS NOT CLEAN.

After carrying out the total distillation thoroughly clean the still.

3) THERE IS TOO MUCH SOLVENT IN THE STILL.

Do not let other solvent go to the still and gradually start the distillation so as to avoid boil-overs. When the level drops to the safety level, start the proper distillation cycle

4) THE STILL STEAM PRESSURE IS TOO HIGH.

The pressure must be approx. 4.5 bar = 65 p.s.i. Adjust it accordingly.

5) THE STILL SPILLS, WHEN THE LOADING DOOR IS OPENED.

a) Make sure that the water drain valve of the separator opens properly.

b) Make sure that in the computer the delay time, necessary before the door can be opened, is properly adjusted.

c) Check the exhaust fan (where fitted) for the door opening and the relating valve to make sure that they work properly.

14.17 THE MACHINE STAYS IN THE SAME PHASE

1) PROGRAMMER MOTOR BURNT OR FAULTY (only for card programmed machines).

Check, if the motor turns, if not replace it.

2) WASH OR DRY DELAY TIMER FAULTY (only for card programmed machines).

If the timer motor works, check the drying delay timer. If necessary replace the timer.

14.18 TOTAL STOP OF THE MACHINE, IN ANY PHASE. PRESSING THE START PUSHBUTTON THE MACHINE DOES NOT START**1) PROGRAM STOP PUSHBUTTON FAULTY.**

Check the program stop pushbutton and if necessary, replace it.

2) POWER OF THE AUXILIARY CIRCUIT TOO LOW.

The power must be 24V. If it is lower by 3-4V, shift the terminal wire of the 24V transformer to the 26V terminal.

3) ONE OR MORE PHASES ARE FAILING

Check the fuses of the main switch outside the machine, and if necessary replace it.

14.19 THE MACHINE DOES NOT WORK (THE CONTROL LIGHTS ARE NOT LIGHTED)**1) THE MACHINE POWER SWITCH IS OFF.**

a) Check that the switch on the front of the machine is in "ON" position.

b) Check that the main switch outside the machine is in "ON" position.

c) Check that there is power.

2) MAYBE THE MAIN FUSES ARE BURNT.

a) Turn the machine off and check the fuses.

b) Isolate and eliminate the problems relating to the fuses, if they are burnt.

3) THE VOLTAGE TO THE MACHINE IS NOT CORRECT.

a) Make sure that the supply voltage is the same as on the machine data plate.

b) Check that the switch installed on the supply line to the machine is adequate.

14.20 PANEL LEDS ARE LIGHTED)

ARE THERE ANY FAULT INDICATIONS ON THE COMPUTER DISPLAY?

- a) If so, check and correct the alarm.
- b) If not, make sure that the power to the computer is 24V; if there is power, check that the fuses inside the computer are all right.

14.21 THE MACHINE DOES NOT EXTRACT

1) CHECK THAT THE BELTS ARE STRETCHED.

Adjust or replace the belts, if necessary. Replace all the belts at the same time.

2) CHECK THE COMPUTER PROGRAMS FOR THIS OPERATION.

Check that in the program has been included the extract phase.

3) THE REMOTE CONTROL SWITCH OF THE EXTRACTION TRIPS OUT.

- a) Open the electric board and reset the remote control switch.
- b) Make sure that the button trap is not clogged.
- c) Make sure that the computer performs the drain phase before proceeding to the extraction.
- d) Check the wiring of the remote control switches and of the motor. If necessary, tighten them.
- e) Check the condition of the motor. Repair it or replace it, if necessary.

14.22 SOLVENT LEAKING FROM THE LOADING DOOR

1) THE GASKET IS OLD AND FAULTY.

Replace it.

2) MAYBE THE DOOR LOCK HAS TO BE ADJUSTED.

Tighten all parts of the lock and of the handle. Check and adjust the tension by means of the shims. Check the centering of the gasket on the door ring.

3) THE PRESSURE IN THE MACHINE IS TOO HIGH.

- a) For steam heated machines check, if the steam pressure is not too high.
- b) The max. pressure is indicated on the machine data plate. Also make sure that the steam coil does not leak.

14.23 REFRIGERATING UNIT**1) REFRIGERATING COMPRESSOR BLOCK DUE TO HIGH PRESSURE.**

- a) Water failing or not sufficient.
- b) The pressure of the water supply is not sufficient. The water inlet pressure must not be lower than 2 bar = 28 p.s.i.
- c) The air temperature is too high. The air temperature must not exceed 60°C = 140 °F.
- d) The cooling water temperature is too high. It must not exceed 20 - 22°C = 68-72°F.

2) THERE ARE BUBBLES IN THE SIGHT GLASS OF THE REFRIGERATING UNIT.

There is not sufficient freon in the refrigerating unit. Find the leak and repair it. Then re-charge the unit with the right quantity and type of freon. **DO NOT OVERFILL!!**

3) THE LOW PRESSURE IS AT 5 BAR (72 p.s.i.) , BUT THE HIGH PRESSURE GOES UP TO 24 BAR (350 p.s.i.) AND THE MACHINE SHOWS THE HIGH PRESSURE ALARM.

- a) The water flow to the refrigerating unit is not sufficient. Check the water strainer and the water supply.
- b) The water saving valves are not adjusted properly.
- c) The refrigerating unit is overfilled. Take out the excess quantity of freon.
- d) Check that the water flows properly through the refrigerating condenser. If that should not occur, it will be necessary to clean or replace the condenser. Wash with an idoneous lime-remover and anti-incrustator.

4) THE HIGH PRESSURE IS BETWEEN 18 AND 20 BAR (260 - 290 p.s.i.), BUT THE LOW PRESSURE IS BETWEEN 0.5 AND 2 BAR (7.25 - 29 p.s.i.) THE EXPANSION VALVE FREEZES AND THERE IS FROST INSIDE THE COMPRESSOR. SOMETIMES THE LOW PRESSURE ALARM COMES ON.

- a) Check, if the fan works and turns in the right direction. Switch the wire to change the rotation, or replace the motor.
- b) Check the drying fan of the ventilation system. If blocked or damaged, replace it.
- c) Check the air filters. Take them out and clean them.
- e) Remove and clean the refrigerating coils.

5) THE DRYING THERMOSTAT DOES NOT GO DOWN, BUT THE COLD AIR THERMOMETER DROPS SLOWLY.

Check the steam valve. It could be open.

6) DURING THE DRYING PHASE THE COMPRESSOR DOES NOT WORK.

a) Check that the refrigerating unit is included in the computer cycle.

b) There is no freon in the system. Refill, if necessary.

c) There is moisture in the expansion valve. Replace the freon filter.

d) Air does not go through. Clean the filters.

e) Check the compressor remote control switch and if necessary, repair or replace it.

f) The compressor is overheating and the overload trips (alarm). The compressor must cool down and will reset automatically. Reset the high pressure alarm.

14.24 OPERATION OF THE REFRIGERATING UNIT**1) DURING THE DRYING PHASE:**

After 3 minutes the gauges should be at 3-5 bar = 43-72 p.s.i. at the low pressure gauge and at 19-21 bar = 275-304 p.s.i. at the high pressure gauge. The drying thermometer will go up to the temperature preset.

2) DURING THE COOL-DOWN PHASE:

The pressure gauges must indicate 3-5 bar (43-72 p.s.i.) for the low pressure and gradually drop to 2-4 bar = (29-58 p.s.i.). The high pressure will stay between 15 and 18 bar (215-260 p.s.i.).

The thermometer at the front of the machine will gradually drop to the temperature preset at approx. 37-40°C = 99-104°F.

3) DURING THE ADSORPTION PHASE (ONLY FOR MACHINES PROVIDED WITH ACTIVA):

The pressure gauges of the refrigerating unit must indicate 2 at the low pressure gauge, whilst the high pressure gauge will stay at 15-18 bar (215-260 p.s.i.).

14.25 SLUDGE PUMP**1) THE DISTILLATION WASTE IS NOT DRAINED.**

- a) Check that the SLUDGE PUMP program is the proper one for the computer.
- b) Let the still cool down and check that the valves of the still and of the sludge pump circuit open properly or that they are not clogged.
- c) There might be some waste accumulated in the pipings. Let the still cool down and clean the pipings.
- d) Make sure that the still waste is not excessively dense, when they come out of the still. If necessary, remove the denser waste by hand.

2) AT THE END OF THE CYCLE THERE IS TOO MUCH RESIDUE IN THE STILL,

- a) Maybe it is necessary to increase the time to drain the distillation waste from the still to the waste container.
- b) The pipe connecting the pump to the waste container is clogged or damaged. Check it and clean or repair it.

14.26 ACTIVA**1) THE ACTIVA FAN TRIPS.**

- a) Check the air pressure and the operation of the ACTIVA inlet and outlet valves.
- b) The wiring on the motor or on the connector have a short circuit. When the machine is turned off, check them and repair them, if necessary.
- c) There might be something in the fan impeller. Clean it with the machine turned off.

2) THE ACTIVA DOES NOT REMOVE THE VAPORS.

Make sure that the garments have been properly dried and if necessary, act on the drying.

Check in the computer that the ACTIVA program has been properly made.

Check the ACTIVA circuit for leaks.

The ACTIVA activated carbon is saturated; it will be necessary to carry out the regeneration program. If that is not enough, replace the carbon with the original ITALCLEAN carbon.

PARTS MANUAL

15.1 PARTS MANUAL

In the event of a damage to a machine part always contact the Parts Service of ITALCLEAN Srl or an authorized ITALCLEAN Service center.

When ordering spareparts please specify the following:

Machine model.

Serial number of the machine (written on the data plate at the machine rear).

Number of the drawing showing the sparepart to be replaced.

Reference number of the sparepart shown in the aforesaid drawing.

Voltage and frequency (for electrical parts).

Quantity of the parts.

How we have to ship them to you.

Your name and address, etc.

Any other useful information.