

Instruction Manual Use and Maintenance



STANDARD



TEKNA



STEAM



STEAM PLUS

**FLOOR WASHER / CARPET
CLEANER**

**DUPLEX
340 / 420 / 620**

WARNINGS



**READ THE INSTRUCTIONS OF THIS BOOKLET
CAREFULLY BEFORE USING THE MACHINE.**

See Directive ISO 7000-0434-1691-0790

WARNING: This appliance cannot be used to collect hazardous dusts

**WARNING: This device is intended for use exclusively with the brushes specified by
the manufacturer.**

The use of any other brushes could compromise the safety of the device.

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**WARNING**

Read the instructions of this booklet carefully before using the machine.

The device is NOT intended for use by persons (children included) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

WARNING: Operators must be adequately trained to use the machine.

1.1 FOREWORD

DUPLEX is a machine for washing floors equipped with an original automatic system for recovering dirty water.

Its special manufacturing characteristic consists of the off-set position of the cylindrical brushes that thanks to their strong rotation permit:

- A thorough washing of any surface;
- Right to the edge cleaning;
- Automatic collection of dirty water.

Ease of use of the machine is ensured by the following:

- Two way handle operation for cleaning in forward and reverse directions;
- Counterbalanced position of the tanks that contain and supply the clean water;
- Tank for recovering the dirt located in the centre of the machine;
- Safety guards bearing the weight of the entire structure in die-cast aluminium;
- Brush support in stainless steel;
- Four wheels to control the selected brush height.

DUPLEX is covered by international patents and has been designed and built according to the best Italian technical tradition exploiting the know-how of an extremely high technological level.

PROPER AND IMPROPER USE

The proper use of this appliance includes washing, scrubbing and drying applications in industrial and commercial use (hotels, schools, factories, hospitals, shops, offices) of floors (internal and external) made of the following materials:

Ceramics - rubber – terracotta tiles - cement - wood – plastic – non-slip safety – PVC – Vinyl – Profiled Rubber – Sports Safety Flooring - epoxy resin - brick - marble - granite – relief ceramics – circular disk floors - linoleum - porcelain - glass – artistic mosaics - quartz. Any other use is considered improper.



1.2 GENERAL WARNINGS

MAINS CABLE WITH PLUG

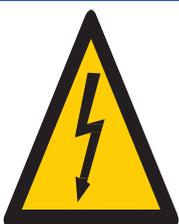
- Check the Mains Cable regularly to see if there is any sign of damage: cracking, peeling, ageing.
- If the Mains Cable is damaged, replace it before using the machine.
- Use a cable of the same type used by the Manufacturer, certified according to “ENEC” European standards
- Cable replacement must be performed by qualified personnel.

AVOID ANY CONTACT OF THE MAINS CABLE WITH BRUSHES

- Should the Mains Cable get caught under the machine brushes, **DO NOT ATTEMPT TO GET IT OUT WHILE THE MACHINE IS WORKING.** Move the handle upwards to the vertical position to stop the machine immediately.

OTHER WARNINGS

- Whenever the machine is in the rest position check that it does not rest on the brushes but that it is supported by the four wheels that come down automatically when the slide switch is in the “RT” position (see figure [“1.10”](#)). If this not the case, the machine weight could warp the brushes.
- Do not pour water or liquids directly onto the machine.
- Unplug the Mains Cable plug from the power socket before any maintenance intervention.
- Store the machine in a closed and dry place after use.
- The machine is designed and constructed exclusively to clean floors. Any other use is considered improper.
- When the machine is no longer able to operate after years of work, it must be dismantled and rendered unusable for disposal in compliance with the indications on paragraph [“1.20 DISPOSAL AND RECYCLING”](#).



WARNING

CLEANING AND MAINTENANCE OPERATIONS MUST BE PERFORMED WITH THE MACHINE DISCONNECTED FROM THE MAINS.

1.3 DISTINCTIVE FEATURES AND COMPETITIVE ADVANTAGES OF DUPLEX MACHINE

The DUPLEX brand name is synonymous with double efficiency and distinguishes a machine that actually has a dual function thereby providing numerous advantages for the best possible floor cleaning and hygiene.

- **OFF-SET BRUSH POSITION**

This allows for reaching into the corners of every wall.

- **TWO-WAY HANDLE**

This allows for easily changing the direction of cleaning.

- **DOUBLE LIQUID DISPENSING SYSTEM**

This wets both brushes simultaneously.

- **DOUBLE DIRT COLLECTION SYSTEM**

Possible thanks to the forward and reverse cleaning action.

- **BALANCED AND LIGHTWEIGHT USE**

Thanks to the balancing of the components.

- **DOUBLE WASHING SYSTEM**

Possible thanks to the action of two powerful contra-rotating brushes that scrub and agitate with a peripheral speed of 5 metres a second.

- **DOUBLE USE SYSTEM**

Pre-washing is achieved by turning off the pick-up system or washing and drying simultaneously with the pick-up system on.

- **LARGER DIAMETER BRUSHES**

This allows for the utmost working efficacy and more effective cleaning of the grouting in floors.

- **BRUSH INSERTION SYSTEM**

Original solution that prevents vibrations during operation.

- **BRUSH REMOVAL**

Easy removal by using the allen key supplied with the machine.

- **OPTIONAL BRUSHES**

Suitable for washing and polishing all types of floors, brushes for carpets, and also abrasive brushes for removing ground-in dirt.

- **TWO TANKS CONTAINING THE WASHING LIQUID**

Easy removal for cleaning.

- **RECOVERY TANK**

Installed in the middle of the machine for easy removal and fitted with two efficient trimmers.

- **VERSATILITY**

Lightweight, user-friendly, and fatigue-free.

- **FOUR OPERATING POSITIONS**

For adapting from heavy, hard-floor scrubbing to delicate, deep pile carpet cleaning.

- **TECHNOLOGICAL ADVANTAGES**

1. *No electrostatic loads.*
2. *Hermetically sealed motor.*
3. *Revolving mechanisms on maintenance-free sealed stainless steel bearings.*
4. *Electrical energy 110% greater than other machines.*
5. *Exceptional efficacy thanks to the original dirt recovery system.*

- **QUIET OPERATION**

Noise level and vibration dBA < 60

- **TANK CAPACITY**

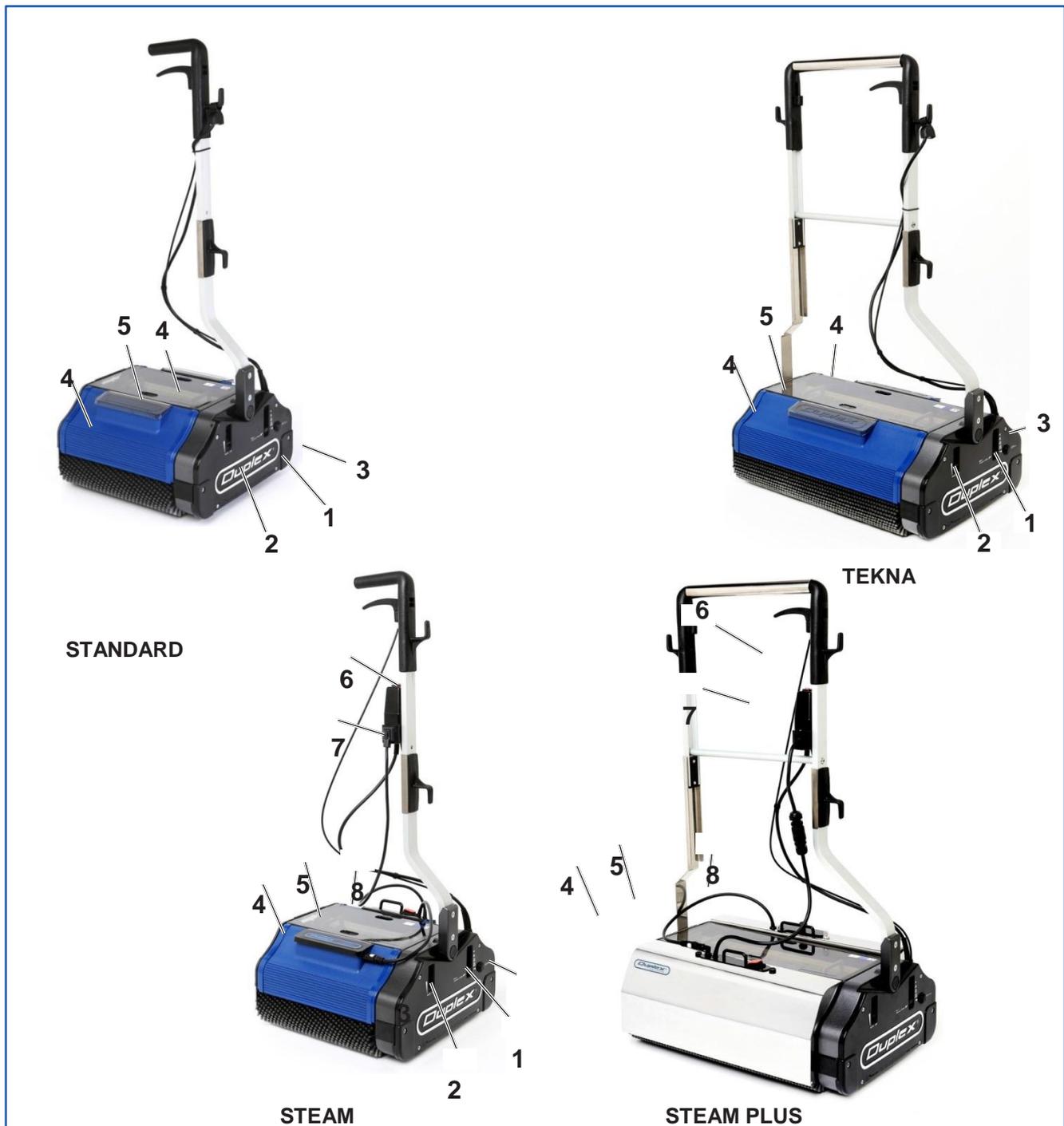
200% greater than other machines.

- **STEAM GENERATOR**

The original and exclusive generator allows Duplex floor washer Steam model to wash and sanitize all types of flooring by means of steam at 110c. The steam is directed on to the floor at a high temperature facilitating the removal of even the most stubborn dirt.

1.4 GENERAL FEATURES AND FUNCTIONS

1	Regulator (Rest Translation")	5	Recovery tank
2	Insertion of dirt collector (Mop Up)	6	Steam switch
3	Motor Protector	7	Plug
4	Tanks for water with detergent	8	Boiler (with switch)



STEAM AND STEAM PLUS

ECOFRIENDLY STEAM MACHINES



By using steam and brush agitation we can clean all types of flooring without the use of chemicals and detergents.

Washes, restores, dries and sanitizes all types of flooring by means of powerful steam.

The steam is directed on to the floor at a high temperature facilitating the removal of even the most stubborn dirt.

The steam sprayed close to the floor is even more effective in the removal of greasy and stubborn dirt on either hard, smooth or profiled flooring.

This steam washing system is particularly effective on textile flooring such as CARPETS as it not only washes the textile fibres but it re-vitalizes them as well.

The machine is also equipped with two standard tanks which can be used in a conventional manner with water and detergent.

On the STEAM and STEAM PLUS models, two tanks are used, one contains and supplies the water and the other contains the steam generator.

The possibility to reverse the handle position, allows the operator to easily work in both directions and thoroughly clean and wash floors and carpets.

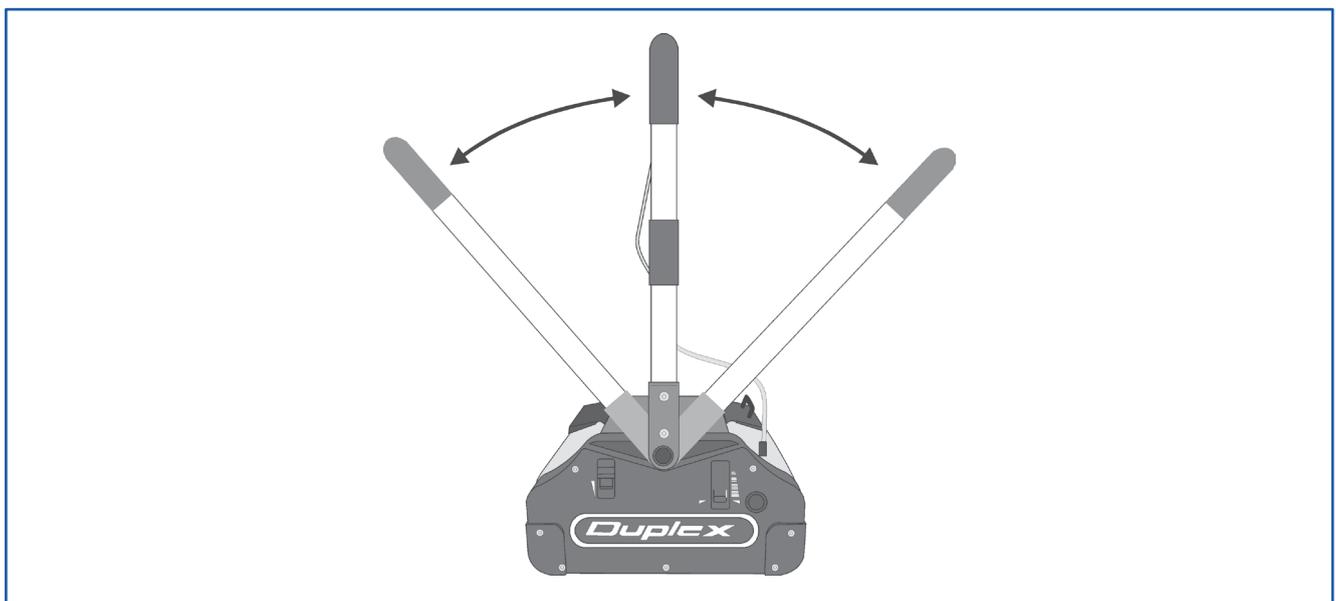


Figure 1.3

1.5 MACHINE ASSEMBLY

The machine is shipped packed in cardboard boxes (1).

On receipt of the package, the user must carry out the assembly of the parts which due to their overall dimensions are unassembled before being shipped.

The package contains the following:

- Machine (2);
- Elbow for handle (3);
- Handle (4);
- Connecting casing (5);
- Use and maintenance manual (6);
- Tanks (7);
- Certificate of Compliance.

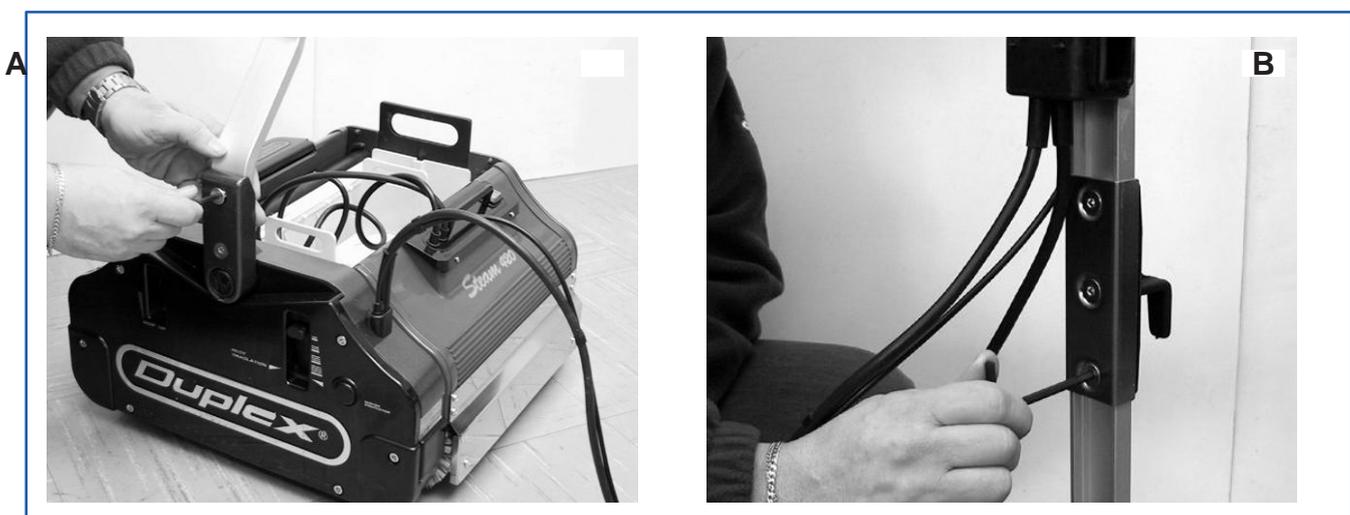


Figure

1.4

1.6 ASSEMBLING THE HANDLE

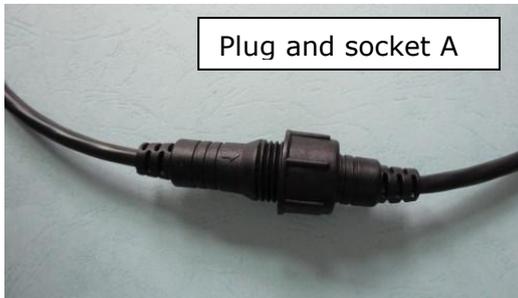
1. Insert the elbow of the handle into the housing of the jointed elbow.
2. Tighten the two screws with the allen key supplied and tighten well (A);
3. Assemble the handgrip of the handle by pushing it through the connecting casing and make sure to point the screws inward switch the cable-holder facing towards the bottom.
4. Screw up the three screws with the same allen key supplied (B)



Figure

1.5

GF7 V1 waterproof plug and socket.



All UK Duplex steam machines have a plug and socket connection (A) to the steam generator.

When using the machine in steam mode the plug and socket **must** be connected and the fitting ring has to be **fully tightened**

When changing to standard water tanks (removing steam generator) the cap (B) attached to the steam tank socket on the machine **must** be fitted (**screwed fully on and tightened**).



Machine operation

The switch on the steam tank operates as an on/off switch for the steam, when in the **on** position the steam generator only operates when the main handle is in the working position i.e. the brushes are rotating.

The steam will take approximately 30 seconds to start, before this there will be a small amount of water pumped out of the steam generator, this is normal.

Remember a small amount of Hydroscale used at each session will minimize scale build up.

When assembled the machine must look like the following drawing.



Figure 1.6

5. Adjust the screw of the slide switch located underneath the lever (7) of the handgrip, at the same time paying attention to the movement of the pistons (8) that allow the liquid to exit from the tanks.
6. Make sure that the pistons (8) remain flush with the side panel when the lever (7) is not pulled down.


IMPORTANT!

If the pistons protrude it may not be possible to insert or extract the tanks containing the liquid from their housings.

Use a screwdriver to adjust their position either inwards or outwards.



Figure 1.7

FILLING THE TANK

Two tanks contain the washing liquid and they both have always to be at the same level.

Filling can be performed as follows:

1. by pouring water in from a jug (figure [“1.9”](#));
2. removing the tanks and placing them under a tap.

STEAM PLUS model is equipped with a level gauge for water (1) ensuring easy control of the residual active solution in the tank.

Fill tank “A” only with water.

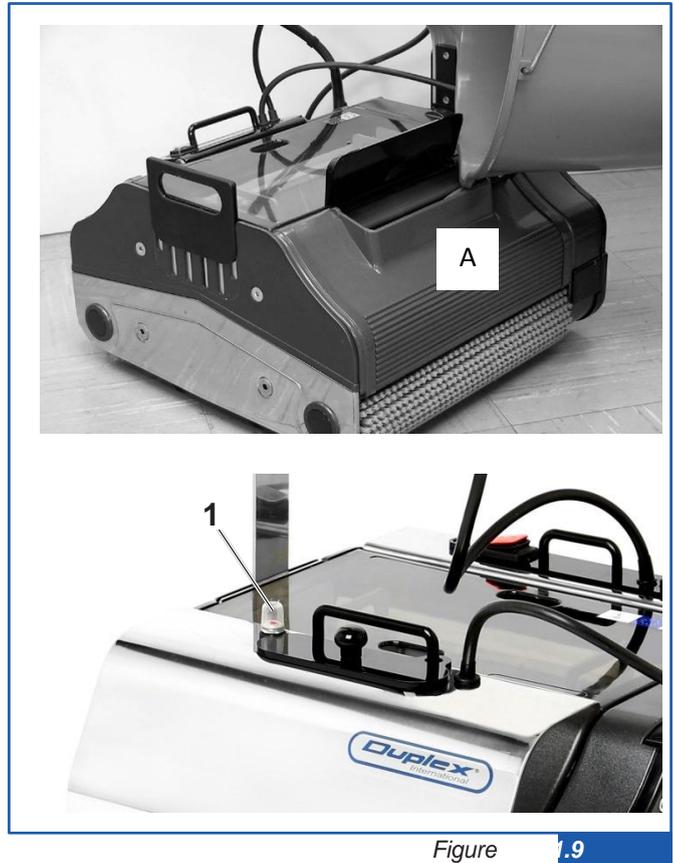


Figure 1.9



WARNING

The manufacturer declines any liability for damage caused to the machine, flooring of any kind, including carpets, deriving from the use of non conforming detergents or products (see [“1.19 WARRANTY”](#))

DUPLEX STEAM 340 and 420 AND DUPLEX STEAM PLUS 420 and 620



WARNING

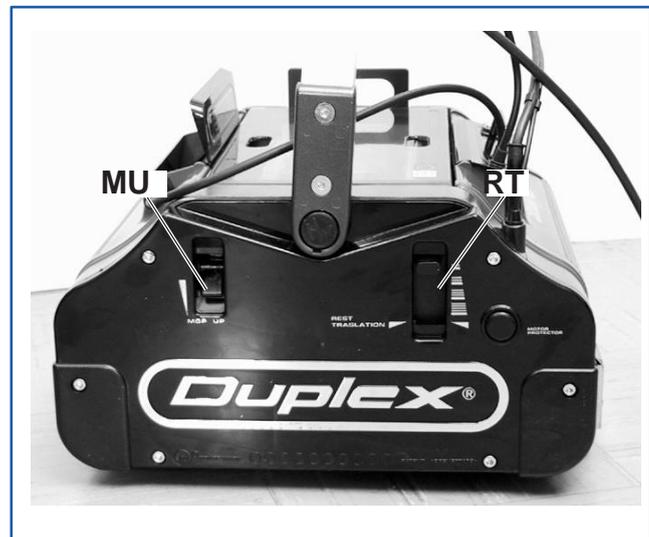
With DUPLEX STEAM model detergents must not be used. The use of detergents will irreparably damage the equipment.

the manufacturer shall not be liable for damage caused to the machine deriving from the use of any other type of detergent or non conforming products (see paragraph [“1.19 WARRANTY”](#)).

1.8 STARTING UP

1. Make sure that the handle is in the Rest position (perfectly vertical) and that the slide switch is in the "Translation" position (REST TRANSLATION);
2. Plug the mains cable into an earthed socket.
3. Shift the slide switch to one of the four available positions according to the type of cleaning you wish to perform (figure "1.11").

(MU= Mop-Up)



Figure

1	Heavy duty wash for very dirty floors.
2	Delicate wash for all types of floors.
3	Normal carpets and wooden floors.
4	Long-pile carpets.
5	Transporting position. (REST TRASLATION)

Figure 1.11



WARNING

During machine operation it is recommended to keep the cable well clear of the brushes to prevent it from being damaged.

1.9 USING THE MACHINE

1. Take hold of the handle and lower it slowly to one of the two sides. The machine will start up and the brushes will start revolving on the floor (figure [“1.12”](#)).
2. Move the machine slowly forwards, going over the same washing path with the recovery device MU (MOP UP) engaged (figure [“1.10”](#)).
3. Dispense the liquid by activating the lever underneath the handle at brief intervals and only when the machine is moving forwards, taking care not to flood the floor.



Figure 1.12

The dirty water will be collected instantly inside the recovery tank which must be emptied as soon as it fills up removing it from its seat (figure [“1.13”](#)).



Figure 1.13



WARNING

The disposal of the dirty water must be carried out in compliance with the regulations in force.

Figures **A**, **B** and **C** illustrate how Duplex floor washing machines work close to the edges of the skirting boards or furniture gaining access also into restricted spaces. Reversing the handle from right to left and vice versa, allows DUPLEX machines to work in both directions and reach the opposite ends of every room.

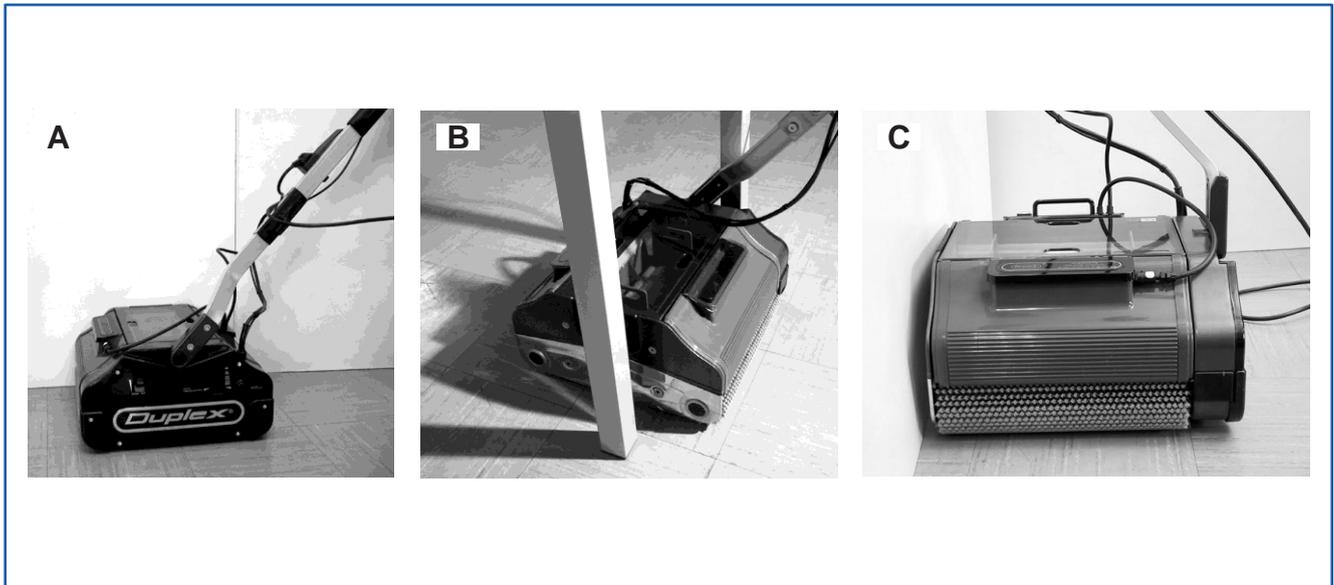


Figure 1.14

1.10 HOW TO WASH FLOORS

Stage 1

1. From the starting position, move forward towards the corner as indicated in the figure.
2. When you have reached the corner, move back with the machine and keep cleaning the lane until you reach your starting position.
3. From the starting position move to the second lane to wash slightly overlapping the area you have cleaned before.
4. Repeat this operation until you complete stage 1.
5. Clean the outer edge on the opposite side of the cleaning area, reversing the machine.

Stage 2

6. Reverse the machine cleaning direction using the handle.
7. Repeat the operations described in Stage 1.

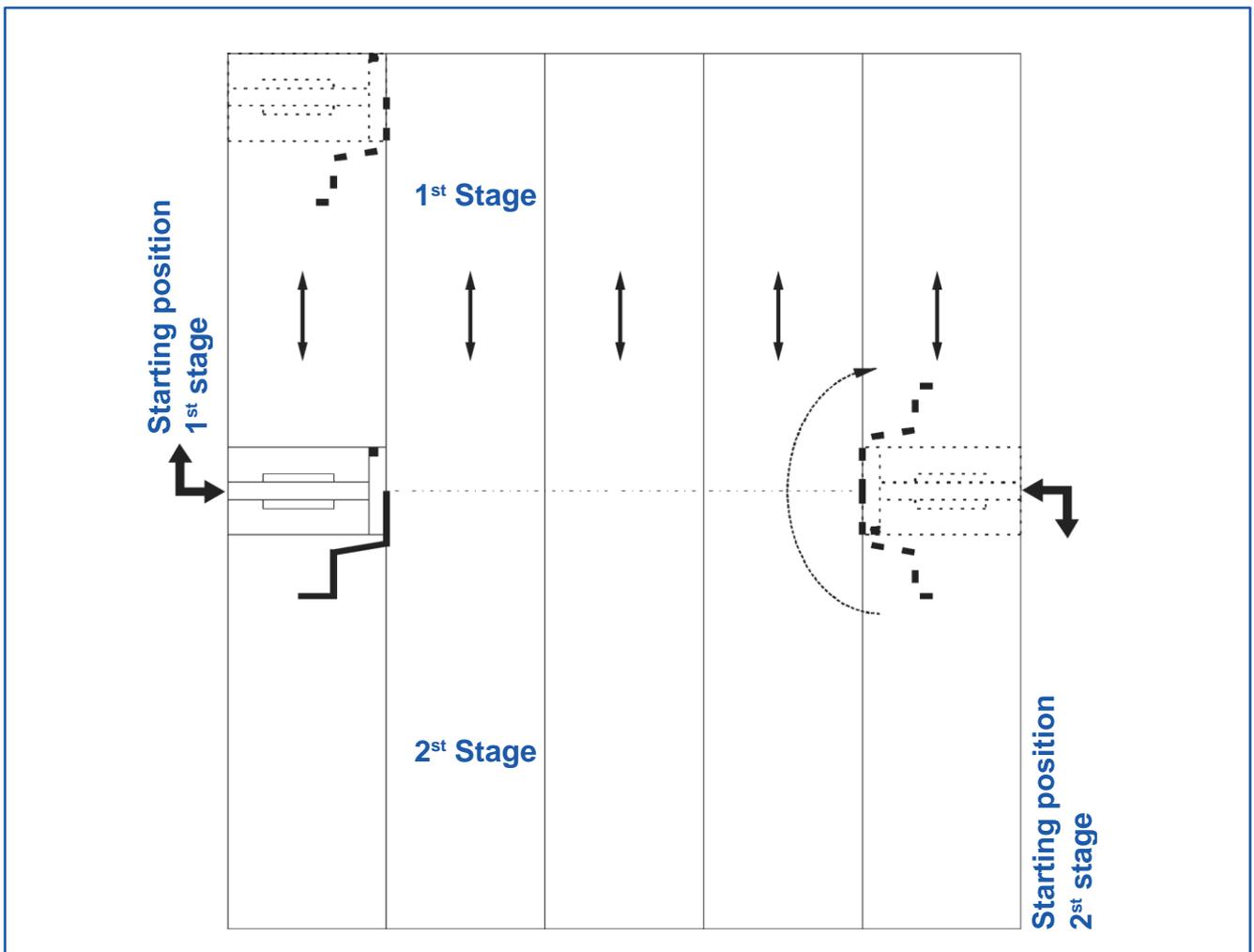


Figure 1.15

1.11 CLEANING EXTREMELY DIRTY FLOORS

When it is necessary to thoroughly wash floors with ingrained dirt it is advisable to switch off the “mop-up”.

In such conditions the water left on the floor will serve to further soften the dirt and this will be subsequently removed by an energetic brushing action together with the steam.

To deactivate the recovery device, proceed as follows:

1. Stop the machine (if in operation);
2. Position the MOP-UP lever (figure [“1.10”](#)) upwards.

Then, by positioning the MOP-UP lever downwards the automatic dirty water recovery system will be switched back on.



IMPORTANT!

When using this procedure on carpets extra care must be taken not to soak the floor.

USING THE STEAM AND STEAM PLUS MODELS

1. Press the main switch on the boiler (A) (figure [“1.16”](#)). The switch will light up when the handle is moved into a working position.
2. Slowly lower the handle on one of the sides. The machine will start up and the revolving brushes will start revolving on the floor.
3. As the machine is moved over the floor the steam generator will start to heat up, after about 1 minute steam will start to flow from the stainless steel plate on the side of the tank.
4. Operate the lever positioned under the handle every time that floor needs additional wetting.
5. Move the machine forwards following the same washing track.
6. Dispense the liquid by activating the lever underneath the handle at brief intervals and only when the machine is moving forwards, taking care not to flood the floor.



Figure 1.16

During use dirty water will be collected instantly inside the recovery tank which must be emptied as soon as it fills up removing it from its position (figure [“1.13”](#)).

**WARNING**

The tank of the active solution for delivering the steam should never be empty.

STEAM PLUS model is equipped with a level gauge for water.

**WARNING**

The disposal of the dirty water must be carried out in compliance with the regulations in force.

1.12 TIPS FOR CLEANING FLOORS

The original DUPLEX brushes are tested and balanced individually with special electronic instruments and guarantee the absence of vibrations that could generate mechanical stress for the machine and the floors.

The brushes are supplied in different colours according to their use characteristics:

Brush colour	Use
Grey	All-purpose for all types of flooring (standard supply)
Black	All-purpose for hard floors.
Scarifying	For very heavy scrubbing. Used singly in conjunction with a standard black brush.
Yellow	For cleaning carpets How to clean carpets: Set the slide switch to the working position, choosing the correct operating position (normal carpets / long-pile carpets). It is recommended to cross over the washing tracks in order to thoroughly wash all the fibres while taking care not to wet the carpet too much. (Make several trial runs before proceeding with the full washing operation).
Brown	Polishing brushes for polishing smooth surfaces. After spreading a thin layer of liquid wax evenly over the floor wait until the wax is completely dry. Then vigorously brush the floor with the dry brown brushes.
Scotch-brite (compact)	Only for fine polishing and endowing waxed and very smooth floors with a mirror finish.
Dark grey (Tynex)	Extremely abrasive for removing paint, plaster, incrustations of cement and other products, even when dried hard on resistant industrial floors: these brushes can normally be used with water and detergents. CAUTION: due to their abrasive power they may damage the floor.

CLEANING FLOORING WITH WAX CLEANERS

The Duplex machine can wash and polish certain types of flooring for an optimal “polished look” and instantaneous recovery of the dirt in a simple, fast manner.

It is extremely suitable for the following floor types:

- Terracotta
- Smooth tiles
- Marble
- Granite
- Industrial flooring
- Studded rubber flooring

Proceed as follows:

1. Use the machine with the two grey brushes;
2. Fill the two water tanks with the appropriate detergent (see Duplex recommendations) mixing it with water according to the instructions contained on the bottles;
3. Proceed with the usual washing system.

At the end of washing we recommend passing over the surface using the Brown polishing brushes to obtain a polished look.

Extremely dirty floors:

Whenever it is necessary to wash floors which have remained dirty for a long time with all sorts of stains and the build-up of solvents from normal detergents, it is recommended to switch off the `mop up`.

In this way the liquid on the floor will be scrubbed into the surface and will allow it to work for longer, thus allowing the detergent to be more effective.

Proceed as follows:

1. Stop the machine (if in operation);
2. Position the MOP-UP lever (figure [“1.10”](#)) upwards;
3. Press the lever of the handle to dispense a large amount of detergent consisting of product/water, preferably warm (35/40°C) .
4. Move the machine forward on the entire wet surface, in all directions or following precise tracks;
5. When work is complete stop the machine;
6. Move the MOP-UP lever downwards to re-activate the automatic dirty water recovery device.
7. Proceed with the usual washing system.



WARNING

The MOP-UP lever must only be activated when the machine is stopped. Thoroughly clean the machine and brushes after cleaning very dirty floors and before cleaning delicate floors.

1.13 STOPPING THE MACHINE

To stop the machine, proceed as follows:

1. Move the handle to the vertical position (rest position);
2. Move the slide switch (figure [“1.10”](#)) to the RT position (REST TRANSLATION);
3. Press the main switch on the generator (figure [“1.16”](#)) (STEAM model).



WARNING

The main switch must be turned off whenever the machine is not in use.

1.14 TRANSPORT

Machine transportation occurs by means of the four transport wheel underneath the machine that allow for easy movement.

To transport the machine proceed as follows:

1. Move the handle to the vertical position (rest position);
2. Move the slide switch (figure [“1.10”](#)) to the RT position (REST TRANSLATION);
3. Lower the handle to either of the two sides, pushing the machine in the required direction.

TROLLEY FOR TRANSPORTATION

The trolley for transportation (figure [“1.18”](#)) is an optional accessory that makes the machine easier to move about on irregular floors or going up/down steps.



Figure 1.18

1.15 AUTOMATIC MOTOR PROTECTION "MOTOR PROTECTOR"

The "Motor Protector" is a safety device which stops the machine in case conditions occur that overload the electric motor (e.g. foreign bodies caught in the brushes which can prevent their rotation, poor supply of power, overheating, etc.).

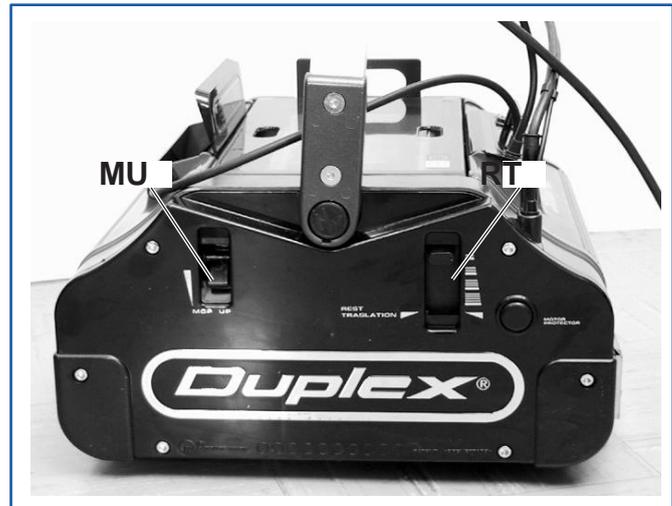


Figure 1.19



WARNING

Disconnect the machine from the power socket before removing any foreign bodies caught in the brushes.

After checking and removing the cause which led to motor overload, press the "Motor Protector" button (after about 60 seconds) to restore machine operation.

1.16 CLEANING AND MAINTENANCE OF THE BRUSHES

DUPLEX brushes require little routine maintenance.

The high rotation speed during cleaning helps to dislodge dirt and keep the brushes efficient at all times.

However, check their status and clean them regularly.



WARNING

Remove the plug from the power socket before cleaning the brushes.

In addition to cleaning, it is necessary to perform the following operations daily:

1. Remove the brushes from the machine (see following section);
2. Dip them in a container with cold or lukewarm water and let them soak for a few hours;
3. Stir and rinse the brushes well;
4. Re-fit the brushes in the reverse position in relation to the one they had before (point 1).

This is necessary as the bristles tend to bend when the brushes always rotate in the same direction.

TO REMOVE THE BRUSHES

1. Use the supplied allen key to remove the two screws on the stainless side panel (1).
2. Extract the two brushes together with the side panel (2).
3. Separate the two brushes from the side panel.

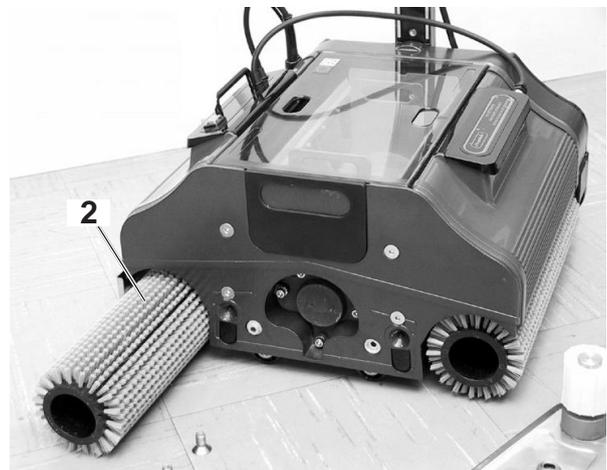
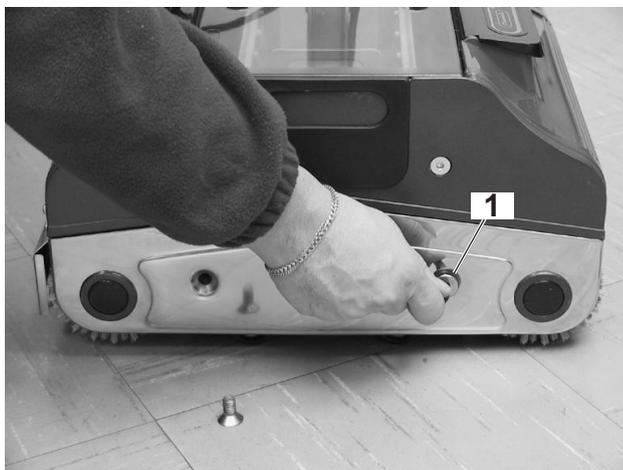


Figure 1.20



WARNING

Do not use worn and/or deformed brushes that could cause vibrations. In this case contact the Service Department.

CLEANING THE MACHINE

1. Remove the three tanks (figure "1.21").
2. Use a damp sponge to carefully clean the rubber conveyor belts and every part of the machine;
3. Use a brush to remove every residue of dirt from all the corners of the machine.
4. Dry well.



Figure 1.21



WARNING

Never use pressure washers to clean the machine.

CLEANING THE TANKS

The tanks for dirty water must be removed from the machine and may be with running water. Make sure that there is no dirt and/or foreign bodies preventing the valves located inside the tanks from closing.

1. unscrew the screws (1);
2. remove the nozzles (2) from the tanks holding them in the middle and pull them upwards;

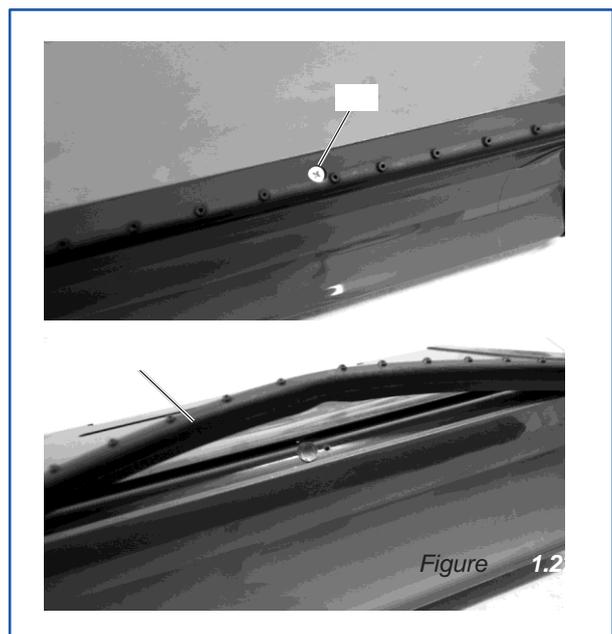
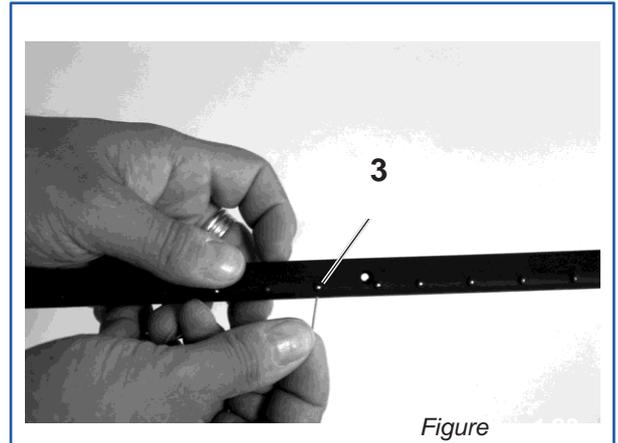


Figure 1.2

3. extract the nozzles from their side housings;
4. clean the holes of the nozzles with a pin (3);
5. keep the recovery tank trimmers clean at all times.



Figure

GENERAL MAINTENANCE

The mechanical parts of the DUPLEX machine do not require periodic maintenance by the operator as their gears all run on bearings.

1.17 PRECAUTIONS FOR USE OF THE STEAM GENERATOR

1. Never leave the steam generator turned on or in operation if there is no water in the tank;
2. After each use, turn main switch on the boiler;
3. Clean the outside of the steam generator with a damp cloth;
4. Do not wash the generator with water to prevent infiltrations inside the boiler;
5. Clean the spray nozzles with water and dry with a brush;
6. Clean the holes with a pin;
7. Keep the water tank clean;
8. Replace the sand filter at least once a year.



WARNING

Do NOT touch the steam spray nozzles or the metal panels of the machine with your hands due to the high temperatures that they reach during operation.

DUPLEX STEAM DESCALING

We recommend descaling the steam generator regularly with HYDROSCALE.

1. Care should be taken when descaling the machine
2. Remove the brushes
3. Place the machine on a robust floor tiles/concrete etc.
4. Remove the `grub` screw at the end of the steam outlet pipe on the bottom/side of the steam generator
5. Fill the water tank with a solution of water and Hydroscale
6. Put the slide switch into the first working position
7. Pull down the handle to activate the steam generator
8. Wait for the water/descaling solution to be completely used up
9. Turn off the machine (handle upright)
10. Rinse the water tank and fill with water only
11. Turn on the machine again to allow clean water to flush through the generator
12. Let the steam flow for about 10 minutes (time necessary for washing and rinsing the nozzles).

At the end of this operation all the lime scale will be eliminated, together with all traces of Hydroscale.

The perforated diffuser that ejects the steam towards the floor is made of special inert material (Teflon) that ensures its cleanliness as it prevents lime scale from adhering to the surface.

HINTS ON THE “STEAM” GENERATOR OPERATION

The boiler starts heating up when the main switch on the generator is `on` and the handle is moved to a working position (red LED indicator light switched on).

The heating of the boiler is controlled by one thermostat which deactivates the operation in case of a fault.

A thermofuse limiting device interrupts boiler operation in the event of thermostat malfunctions.

The ‘empty’ operation of the pump in the absence of solution in the tank, may cause it to overheat. Once the overheating level reaches a critical level, a thermostat incorporated into the pump will intervene and immediately block its operation allowing it to restore operation by means of cooling.

It is always recommended to turn off the pump using the main switch in case of no water in the tank.



WARNING

Do NOT touch the steam spray nozzles or the metal panels of the machine with your hands due to the high temperatures that they reach during operation.

1.18 TROUBLESHOOTING TIPS

WET STRIPES ON THE SIDES

- Excessive liquid dispensed
- Irregular paths are covered failing to follow the instructions on paragraph [“1.10 HOW TO WASH FLOORS”](#).
- Recovery tank trimmers dirty or worn. Replace.

The dirt is not picked up

- Mop-Up device turned off.
- Worn brushes.
- Recovery tank trimmers dirty or worn out.
- Cleaning liquid not coming out.
- The recovery tank has not been fitted correctly into its housing.

Does not start up

- Faulty plug.
- Mains cable damaged (DO NOT USE).
- “Motor protector” tripped. Press the (MP) button to re-activate it, [“1.8 STARTING UP”](#). Resetting occurs after about 60 seconds.
- The slide switch 1 has been left in the “RT” (rest translation) position [“1.8 STARTING UP”](#).
- The handle has been lowered too quickly.
- Voltage too low.

It vibrates

- The brushes are deformed, worn or dirty, follow the instructions on paragraph [“TO REMOVE THE BRUSHES”](#).

Liquid flows continuously

- The pistons sticking out of the frame too far, in this case they restrict the tanks which cannot be removed and as a result the valves remain open.
- Pull the lever on the handle several times in order to facilitate the unblocking. Otherwise introduce a screwdriver or a piece of wood into the opening of the tank and press on the rubber valve so that it pushes the pistons backwards.

The liquid continues to run out even when the pistons have re-entered the side element

- The valves are blocked in one of the tanks. Press the valves several times to unblock them.
- A foreign body has been caught up in the valve seat. Rinse each tank vigorously while keeping the external button that opens the valve pressed down.

One tank supplies more liquid than the other

- Use a screwdriver to align the two pistons at the same level (figure [“1.7”](#)).

1.19 WARRANTY

The commercial warranty issued by the seller has a validity of “12 months”

Warranty acknowledgement can be achieved showing a photocopy of the receipt or invoice along with the machine serial number.

Failure to send this document entails the non-acknowledgement of the warranty.

The warranty does not cover expendable components such as:

- Brushes.
- Trimmers.
- Conveyor belts.
- Mains cable .
- Casing connection cable.
- Plastic or metal parts damaged out of negligence.

For Steam models:

- Water pump;
- Thermofuse;
- Thermostat;
- Electric resistance of the boiler;
- Filter.

FORFEITURE OF THE WARRANTY

The warranty will be invalid in the following cases:

- The machine is used for purposes not complying with those for which it has been designed or is used improperly.
- Failure to observe the indications for use described in the manual.
- The machine gets damaged due to the use of unsuitable detergents or aggressive and unsuitable chemical products, like acid products: Static dissipative detergents, Hydrochloric acid, trichloroethylene, methyl ethyl ketone, acetone, pure ammonia, bleach or pure sodium hypochlorite, etc.

1.20 DISPOSAL AND WASTE SEPARATION

Pursuant to art. 13 of Legislative Decree of 25th July 2005, no. 151 “Fulfilment of the Directives 2002/95/EC, 2002/96/EC and 2003/108/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment and disposal of their waste”.

The crossed-out bin symbol on the equipment indicates that at the end of its lifespan, the product, must be collected separately from other waste.

The user must deliver the machine, at the end of its lifespan, to an appropriate collection point for the recycling of electric and electronic equipment or deliver it back to the retailer when purchasing a new equivalent machine on a one-to-one basis.

Correct disposal of the machine for its recycling and treatment will help prevent potential negative consequences for the environment and human health, and will help recycling the materials of which the machine consists.

DIFFERENTIATED SUBDIVISION OF THE MATERIALS

Electrical components:

Material that can be disposed of with the urban waste collection, in compliance with the legal provisions in force in the country of use.

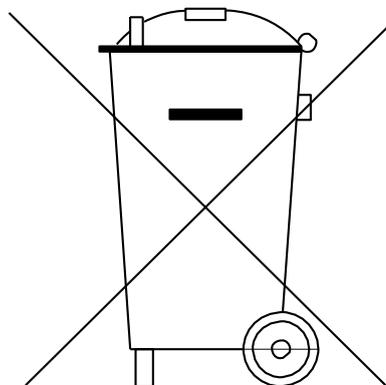
Mechanical components:

The machine is built with aluminium, steel and plastic materials.

Steel and aluminium will not damage the environment if recycled by qualified and authorised companies.

The plastic materials may cause environmental damage, therefore they should be handed over to specialised companies authorised for disposal.

The disposal of the packaging must be carried out in accordance with the regulations in force.



1.21 HELPFUL HINTS FOR USE

SPECIAL PRODUCTS AVAILABLE ON REQUEST

SILICONE SPRAY ml 400

To maintain the belts, before and after using our machines it is recommended to lubricate the rubber conveyors with silicon spray.

HYDROSCALE 5ltr

Scale inhibitor for use in all steam models

1.22 TECHNICAL FEATURES

Harmonised Standard applied IEC/EN 60335-2-67



The Duplex floor-washing machines have been approved by the following Quality Institutes:



REGULATIONS: EN 5036:03 + A1:06, EN 55014-1:06 + A1:09, EN 55014-2:97 + A1:01 + A2:08, EN 60335-1:02 +A1:04 +A11:04 +A2:06 +A12:06 + A13:08, EN 60335-2-67:09, EN 61000-3-2:06 + A1:09 + A2:09, EN 61000-3-3:08, EN 62233:08

In compliance with the following provisions and Directives 2004/108/EC (EMC), 2006/95/EC (LVD)

		DUPLEX STANDARD			DUPLEX TEKNA		STEAM BLUE		STEAM PLUS		
		340	420	620	420	620	340	420	420	620 TK	
Length	mm	430									
Width	mm	340	420	620	420	620	340	420	420	420	
Height	mm	240					250				
Unloaded weight	Kg	27.5	27.5	36	30	40	29	29	31.6	41.5	
Brush diameter	mm	102									
Brush width	mm	280	350	550	350	550	280	350	350	550	
Voltage	V	115 ÷ 240									
Frequency	Hz	60/50									
Power	W	1000	1000	1600	1000	1600	1000	1000	1000	1600	
Insulation class		I°									
Theoretical working surface	m ³ /h	180	350	550	350	550	180	350	350	550	
Tank capacity	L	4.2	5.4	9.5	5.4	9.5	2.1	2.7	2.7	4.75	
Recovery tank capacity	L	1.9	2.3	3.6	2.3	3.6	1.9	2.3	2.3	3.6	
Brush round-minute	rpm	650-750									

Pressure on flooring cm ³	g/	190	190	160	200	175	190	195	200	195
Steam jet width	mm	-			-		250	330	330	530
Steam jet endurance	min	-			-		60			
Boiler power	W	-			-		1300		1400	
Pump Power	W	-			-		16			
Noise level	dB	< 64								
rms value of the weighted vibration acceleration	m/s ²	1								

Vibration value compliant with the ISO 5349-1 standard = ahv 0,95 m/s²

* STEAM PLUS machines are equipped with original DUPLEX boiler of greater power and supplied with: replaceable electric resistance with easy access for maintenance, safety valve and "CP BOARD" high-performance thermal insulation material.

Moreover the active solution tank of the STEAM PLUS models is equipped with water level gauge.

MACHINES MADE EXCLUSIVELY IN ITALY



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European Mark of conformity



Made in Italy



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