COMET
CLEANING DIVISION

English EN

K 250 STATIC

EN Cold Water, Electric High Pressure Cleaners — *Instruction manual - Use and Maintenance*

IT • **ATTENZIONE.** Leggere le istruzioni prima dell'uso della macchina.

EN • **WARNING.** Read the instructions before using the machine

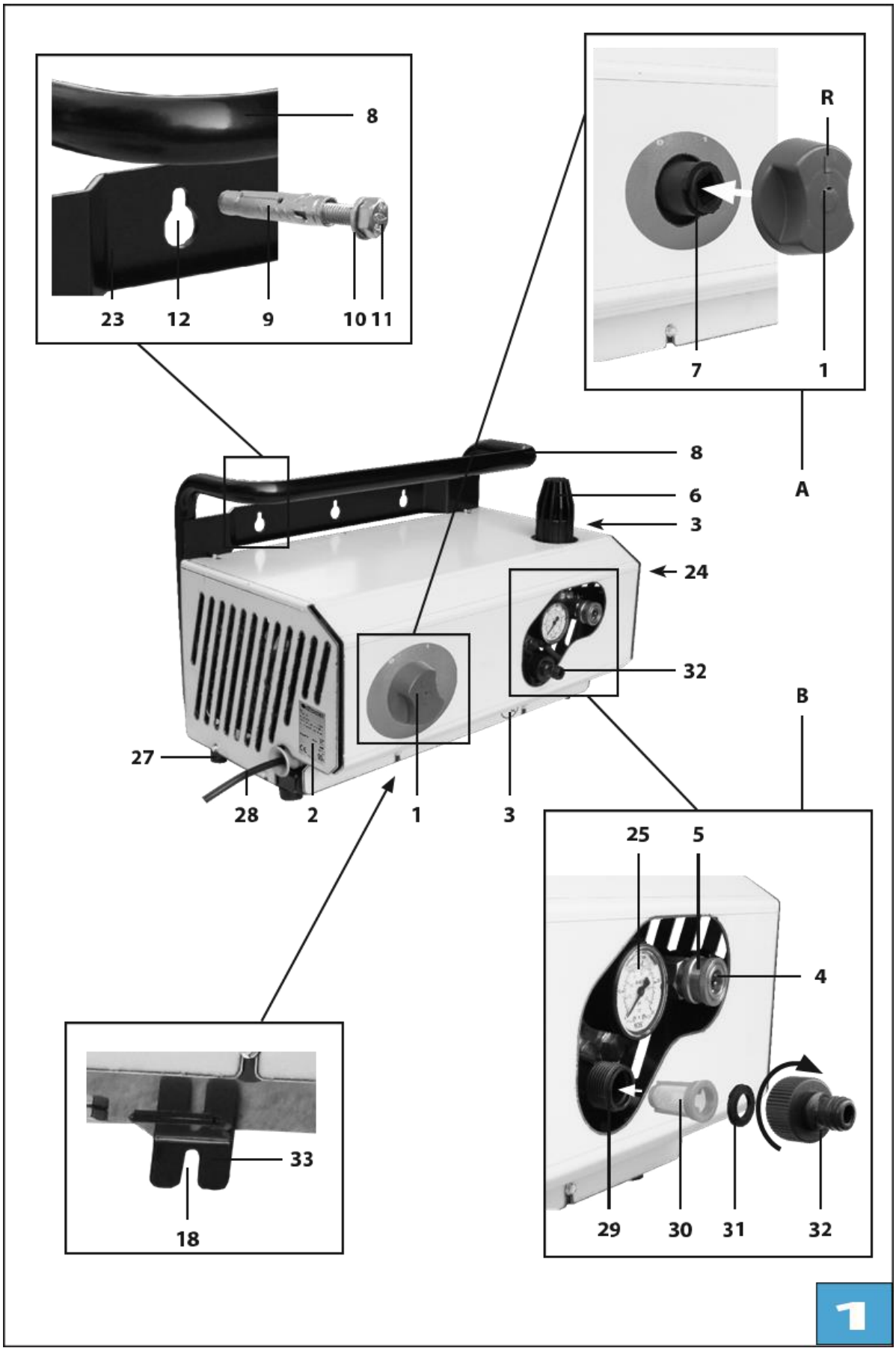
FR • **ATTENTION.** Lire les instructions avant d'utiliser l'appareil

ES • **ATENCIÓN.** Leer atentamente las instrucciones antes de utilizar la máquina.

DE • **ACHTUNG.** Vor der Verwendung der Maschine die Anweisungen lesen.

PL • **UWAGA.** Przeczytać instrukcje przed użyciem maszyny.

RU • **ВНИМАНИЕ.** Перед использованием оборудования необходимо прочитать данные инструкции.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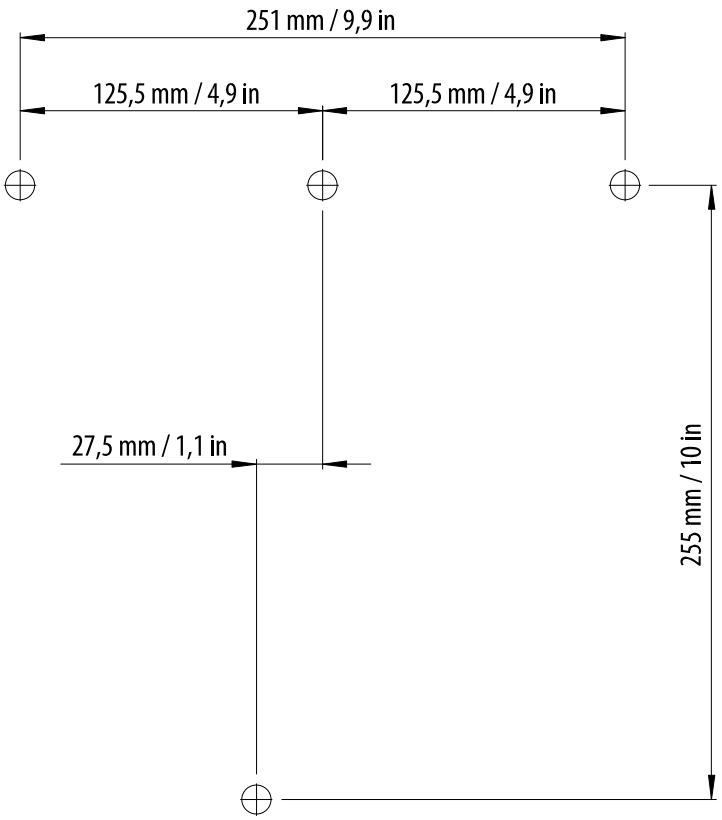
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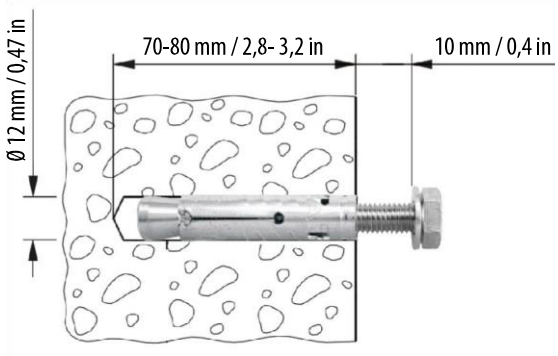
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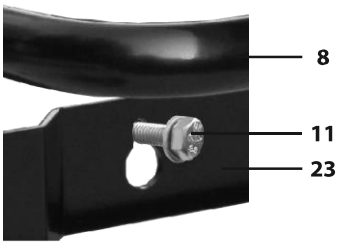
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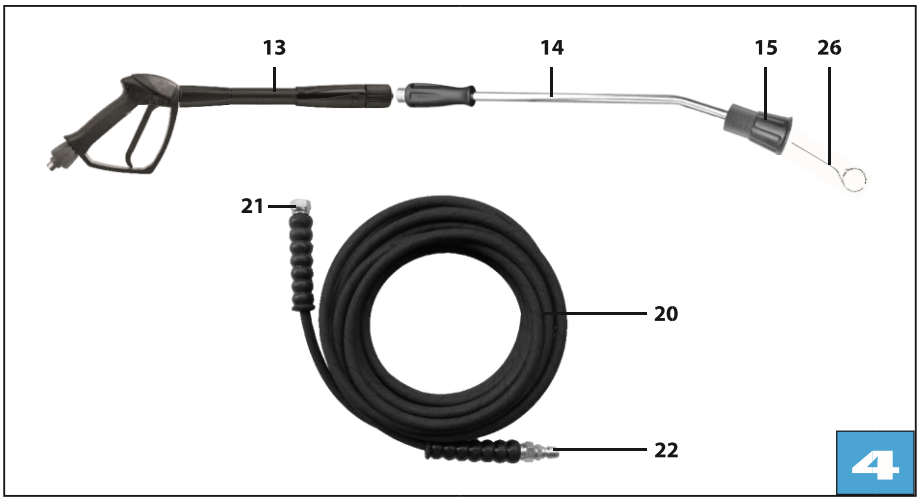
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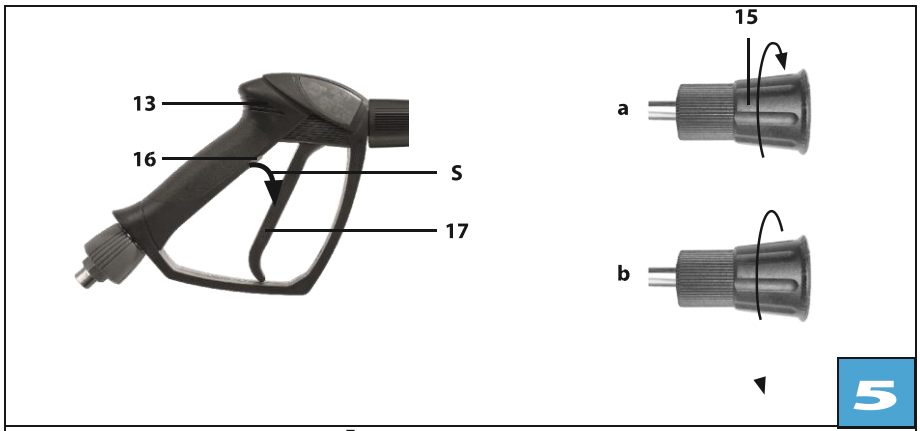
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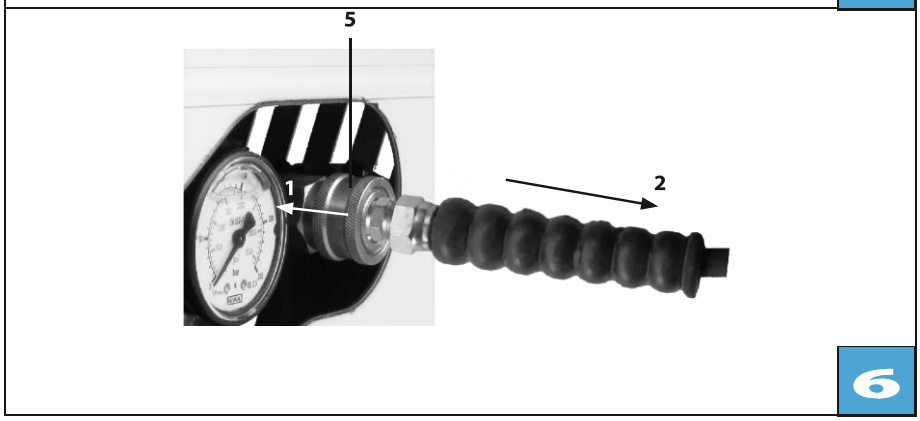
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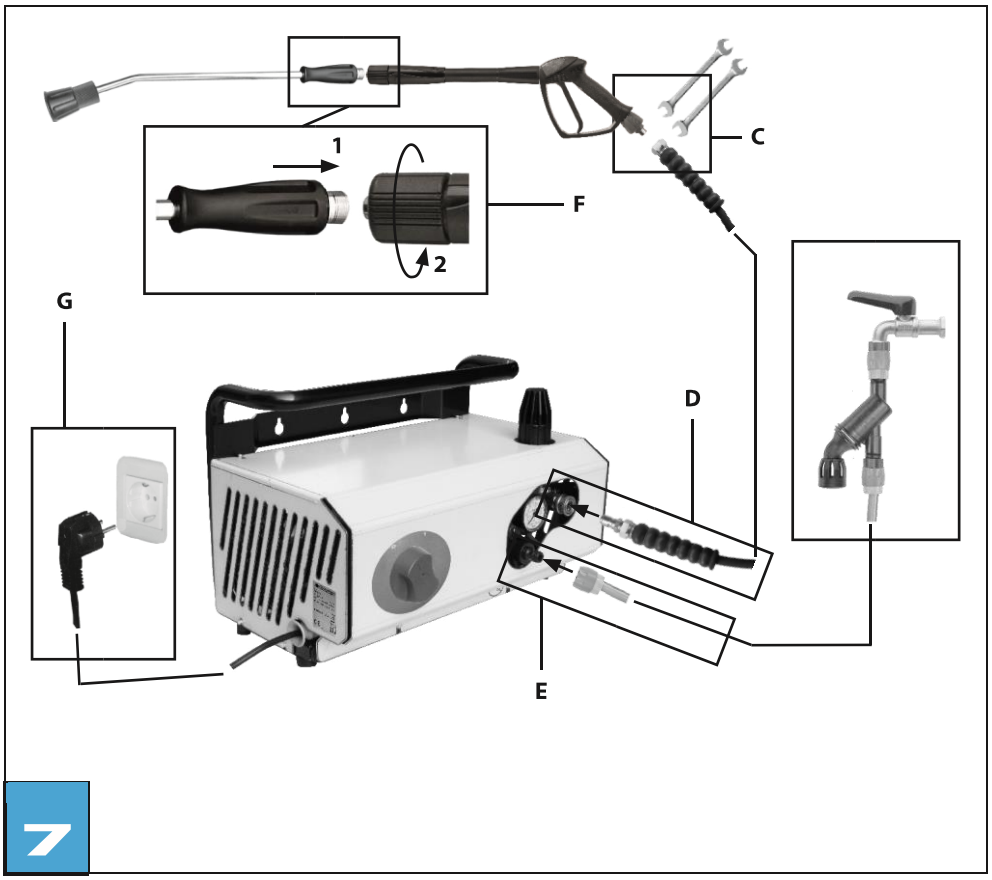

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EN

WARNING

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

Read and keep in mind that indicated in the INSTRUCTION MANUAL - SAFETY WARNINGS.

English

SPECIFICATIONS AND TECHNICAL DATA

	K 250 Static		
	10.150 M	**12.130 M**	**15.170 T**
ELECTRICAL CONNECTIONS			
Power supply (*)	230 V – 1~ *50 Hz*		400 V – 3~ *50 Hz*
Input	2,9 kW		5,0 kW
Fuse	16 A		
HYDRAULIC CONNECTION			
Maximum water supply temperature	60 °C – *140 °F*		
Minimum water supply temperature	5 °C – *41 °F*		
Minimum water supply flow rate	750 l/h *198 US gph*	900 l/h *238 US gph*	1120 l/h *296 US gph*
Maximum water supply pressure	*0,8 MPa* – 8 bar – *116 psi*		
Maximum priming depth	1,2 m – *3,9 ft*		
PERFORMANCES			
Maximum flow rate	*10 l/min* – 600 l/h *159 US gph*	*12 l/min* – 720 l/h *190 US gph*	*15 l/min* – 900 l/h *238 US gph*
Nominal flow rate	*9,3 l/min* – 558 l/h *147 US gph*	*10,6 l/min* – 636 l/h *168 US gph*	*13,1 l/min* – 786 l/h *208 US gph*
Maximum pressure	*15 MPa* – 150 bar *2176 psi*	*13 MPa* – 130 bar *1885 psi*	*17 MPa* – 170 bar *2466 psi*
Nominal pressure	*12,5 MPa* – 125 bar *1813 psi*	*10,5 MPa* – 105 bar *1523 psi*	*15 MPa* – 150 bar *2175 psi*
Reaction force on the gun	28,9 N	32,2 N	46,1 N
Sound pressure level - Uncertainty (**)	73,2 dB(A) – 0,8 dB(A)		
Sound power level	84 dB(A)		
Operator arm-hand system vibration - Uncertainty (**)	2,25 m/s² – 0,24 m/s²		
WEIGHT AND DIMENSIONS			
Length x Width x Height	550 x 350 x 350 mm – *(21,6 x 13,8 x 13,8 in)*		
Weight	45 kg – *99 lb*		50 kg – *110 lb*

(*) The cable supplied with the three-phase versions does not have a plug fitted; to assemble this component please contact a ***QUALIFIED ELECTRICIAN*** *(see the* ***INSTRUCTION MANUAL - SAFETY WARNINGS****).*

(**) Measurements taken in compliance with EN 60335-2-79

The characteristics and specifications are guidelines only. The manufacturer reserves the right to make all modifications to the equipment deemed necessary.

IDENTIFICATION OF COMPONENTS

Refer to **Figures 1, 4** and **5**.

1. Master switch
2. Identification plate. It indicates the serial number, guaranteed sound power value (in compliance with Directive 2000/14/EC) and main technical specifications
3. Warning plate. It informs about residual risks
4. Delivery quick-fit coupling
5. Delivery quick-fit coupling ring nut
6. Pressure adjustment knob
7. Master switch knob housing
8. Transport handle
9. Wall-fixing plugs
10. Washer
11. Screw
12. Upper slots
13. Spray gun
14. Lance hose
15. Nozzle holder head
16. Spray gun lever safety stop
17. Spray gun lever
18. Lower slot
19. Spray gun connection
20. High pressure hose
21. High pressure hose connection (spray gun side)
22. High pressure hose quick-fit coupling (pump side)
23. Upper supporting sheet
24. Oil sight glass
25. Pressure indicator
26. Nozzle cleaning pin
27. Feet
28. Power cable
29. Water inlet fitting
30. Water inlet filter
31. Water inlet quick-fit coupling seal
32. Water inlet quick-fit coupling
33. Lower supporting sheet

SAFETY DEVICES

• **Ampere cut-out protection device.**
This device stops the machine operation in the event of excessive power absorption.
If it trips, proceed as follows:
- move the master switch (1) to **"0"** position and remove the plug from the power socket;
- press the spray gun (13) lever (17), so as to release any residual pressure;
- wait 10÷15 minutes for the machine to cool down;
- make sure the instructions for connection to the power supply are complied with (refer to the **INSTRUCTION MANUAL - SAFETY WARNINGS**), with special reference to the extension used;
- fit the plug back in the socket and repeat the start procedure described in the paragraph **"OPERATION".**

• **Pressure unloader/regulation valve**
Valve, suitably calibrated by the Manufacturer, for regulating work pressure by means of the knob (6) and that allows the pumped fluid to return to pump suction, thus preventing the onset of dangerous pressures when closing the spray gun or when trying to set a pressure that is

above the maximum permitted values. The pressure value can be read on the indicator (25).

- **Spray gun lever lock device.**
  Safety stop (16) which allows locking the lever (17) of the spray gun (13) in closed position, thus preventing accidental operation **(FIG. 5, REFERENCE "S").**

STANDARD FITTINGS

Make sure the following are inside the pack of the product you have purchased:

- high pressure cleaner;
- high pressure delivery hose with quick-fit coupling;
- spray gun;
- lance hose;
- water inlet quick-fit coupling with seal;
- master switch knob;
- 4 plugs for wall fixing;
- instruction manual - safety warnings;
- instruction manual - use and maintenance;
- warranty certificate;
- booklet giving the assistance centres;
- EC declaration of conformity;
- nozzle cleaning pin.

If any problems arise please contact a **Specialized Technician**.

OPTIONAL ACCESSORIES

You can add the following range of accessories to the standard ones supplied with your machine:

- water mains disconnector: designed to comply with the standards in force as far as connecting up to the drinking water mains is concerned.
- sandblasting lance: designed to smooth surfaces, removing rust, paint, encrustations, etc.;
- drain cleaning kit: designed to unclog pipes and ducts;
- rotating nozzle: designed for removing resistant dirt;
- foam lance: designed for a more efficient distribution of the detergent;
- rotating brush: designed for a gentle, yet effective, cleaning on large surfaces such as vehicle bodywork;
- floor cleaning lance: designed for cleaning large tiled or other floors.
- hose reel: to increase working range thanks to a longer hose and practical housing for it;
- different types of lances and nozzles.

INSTALLATION - ASSEMBLING THE ACCESSORIES

- Screw up the connection (21) of the high pressure hose to the connection (19) of the spray gun (13) and tighten well using two 22 mm/0.87 in spanners (not supplied). **Operation C in Fig. 7.**

- Insert the filter (30) in the water inlet fitting (29). Fit the seal (31) in the water inlet quick-fit coupling (32) and screw up to the fitting (29). **Operation B in Fig. 1.**
- Fit the master switch (1) knob in its housing (7), ensuring that the notch **R** is lined up with letter **"0"**. **Operation A in Fig. 1.**

INSTALLATION - FLOOR OPERATION

⚠ WARNING

- ***Given the weight of the machine, the following operation must be performed by two people.***

- Carry the machine to the working position, taking care to place it stably on a flat surface. Use the rubber feet (27) to position correctly.

INSTALLATION - WALL FIXING

- Identify an appropriate wall to fix the machine to: the machine must only be fixed to brick or reinforced concrete walls not less than 10 cm/4 in thick; **do not fix the machine to plasterboard, wood, steel sheet walls or made from any other materials which cannot support the plugs supplied.**
- For wall fixing use only the plugs provided; if a plug is lost or damaged during installation, contact a **Specialized Technician** for a replacement.
- Referring to the measurements given in **Fig. 2**, make four marks used as a reference for the subsequent drilling operations: **for the best position for use, it is advisable to drill the three upper holes at a height of 150-160 cm/59-63 in from the ground.**
- Using a 12 mm/0.47 in diameter bit (not supplied) suitable for drilling brick/reinforced concrete walls, drill four holes approx. 70-80 mm/2.8-3.2 in deep (see also **Fig. 3**), on the marks made previously. **When drilling pay attention to the safety precautions given in the use and maintenance manual supplied with the drill used. Also remember to check that there are no pipe and/or electrical wiring channels underneath the drilling area.**
- Place the plugs (9) in the holes, so that their necks are flush to the wall; **do not push the plugs into the hole or keep them sticking out from it.**
- Using a 13 mm/0.5 in spanner (not supplied), screw in the screws (11) leaving a gap of approx. 10 mm/0.4 in between the washer (10) and the wall (see also **Fig. 3**).

⚠ WARNING

- ***Given the weight of the machine, the following operation must be performed by two people.***

- Holding the transport handle (8), lift the machine, sliding the screws (11) and washers (10) into the upper slots (12): make sure that the washers (10) are positioned between the head of the screws (11) and the supporting sheet (23) (see also **Fig. 3**). Slowly lower the machine, making sure that the lower slot (18) catches the screw: also in this case the washer (10) must be positioned between the head of the screw (11) and the supporting sheet (33). Before releasing the machine, make sure that all four screws are correctly fitted in their seats, to prevent the machine from any accidental falling (see also **Fig. 3**). Now tighten all four screws (11).

DISMANTLING FROM THE WALL

- Unscrew the four screws (11), leaving a gap of approx. 10 mm/0.4 in between the washers (10) and the supporting sheets (23) and (33).

⚠ WARNING

- ***Given the weight of the machine, the following operation must be performed by two people.***

- Holding the transport handle (8), lift the machine and slip the screws (11) and washers (10) out of the upper (12) and lower (18) slots. Lower the machine slowly, placing stably on the floor.

OPERATION - PRELIMINARY ACTIVITIES

- Completely unwind the high pressure hose (20) and attach the quick-fit coupling (22) onto the delivery coupling (4), and press down: **make sure that the coupling is fitted correctly by trying to pull it apart. Operation D in Fig. 7.**
- Fasten a supply hose with inner diameter 19 mm/0.75 in to the water inlet quick-fit coupling (32), using an ordinary gardening quick-fit coupling. **Operation E in Fig. 7.**
- Open the water supply tap and make sure this is not dripping;
  - if the connection is made to the drinking water mains, a water mains disconnector must be used, in conformity with EN 60335-2-79 standard, and available from your dealer. With regard to its use, refer to the relative instruction manual;
  - in case of supply from a water tank, introduce the suction hose inside the tank and make sure the vertical distance between the water level and the pump is no more than 1.2 m/3.9 ft.
- Make sure the master switch (1) is on **"0"** position and insert the plug into the power socket. **Operation G in Fig. 7.**
- Move the master switch (1) to position **"1"**.
- Press the spray gun lever (17) and wait for a continuous jet of water to come out;
- Move the master switch (1) to **"0"** position and connect the lance hose (14) to the spray gun (13), tightening well. **Operation F in Fig. 7.**

STANDARD OPERATION (HIGH PRESSURE)

- Make sure the nozzle holder head (15) is not in the detergent dispensing position, turning the nozzle holder head (15) as shown in **Fig. 5 - Position "a".**
- Start the machine again moving the master switch (1) to position **"1"**.
- Press the spray gun lever (17) checking that the nozzle spray is uniform and there are no drips.
- If necessary regulate the pressure by way of the pressure adjustment knob (6). Turn it clockwise to increase pressure, anticlockwise to reduce it. You can see the pressure on the pressure indicator (25)

OPERATION WITH DETERGENT

- Possible only with the appropriate optional accessory.
- To use with detergent, operate on the nozzle holder head (15) as shown in **Fig. 5 - Position "b".**
- For further information, consult the documentation provided with the accessory.

STOPPING OPERATION

- When, with working pressures higher than 20 bar/290 psi, you release the spray gun lever (17) the machine stops automatically thanks to the **Total-Stop** device. It starts operating again when pressing the spray gun lever.

STOP

- Completely close the water supply tap (or remove the suction hose from the water tank).
- Empty the water from the machine, allowing this to operate for a few seconds with the spray gun lever (17) pressed.
- Move the master switch (1) to **"0"** position.
- Remove the plug from the power socket.
- Eliminate any residual pressure in the high pressure hose, by keeping the spray gun lever (17) pressed for a few seconds.
- Wait for the machine to cool down.

DECOMMISSIONING

- Re-wind the high pressure hose (20) carefully, avoiding any folds; for excellent storage, it is also possible to remove the delivery hose, by releasing the quick-fit coupling (22) from the delivery coupling; to do so twist ring nut (5) towards the body of the machine and remove the quick-fit coupling, see also **Fig. 6**.
- Wind the power cable (28) up carefully.
- If the machine is not fixed to the wall, place carefully in a clean, dry place, taking care not to damage the power cable and the high pressure hose.

ROUTINE MAINTENANCE

Do the operations described in the **"STOP"** paragraph, following the chart shown below.

MAINTENANCE SCHEDULE	JOB
After every use	• **Check the power cable, high pressure hose, couplings, spray gun and lance hose.** **If any of these is damaged, do not use the machine and contact a Specialized Technician.** • **Wall fixing check, where applicable.**
Weekly	• **Clean the water inlet filter (30).** Unscrew the quick-fit coupling (32) and take out the filter (30) (see also **Fig. 1**). Generally speaking, to clean this all that need be done is pass the filter under a jet of running water or blow on it with compressed air. In the most difficult cases, use an anti-scale product or replace the filter. To buy spares contact an authorized after-sales centre. Fit the filter back on and screw the quick-fit coupling back on.
Monthly	• **Clean the nozzle.** Generally speaking, to clean the nozzle, it is enough to pass the pin (26) provided through the nozzle hole. If this is not successful, change the nozzle. Buy this from an authorized after-sales centre. The nozzle can be changed using a 14 mm/0.55 in wrench (not supplied). • **Check pump oil level.** For floor operation, put the machine horizontally and check the level through the oil sight glass (24). If topping up is required, contact a **Specialized Technician**.

EN English

SPECIAL MAINTENANCE

Special maintenance jobs must only be done by a **Specialized Technician**, following the table below (approximate data).

MAINTENANCE SCHEDULE	JOB	
very 200 hours	• Check the pump (water) hydraulic circuit.	• Check the pump clamping.
very 500 hours	• Pump oil change. • Check the pump suction/delivery valves. • Check the tightness of the pump screws.	• Check the pump regulation valve. • Check the safety devices.

TROUBLESHOOTING

PROBLEMS	CAUSES	REMEDIES
When the master switch (1) is moved to position **"1"**, machine does not start.	Tripping of the system cut-out device (fuse, RCCB, etc.) to which the machine is connected.	Reset the cut-out device. **In case this trips again, do not use the machine and contact a Specialized Technician.**
	The plug is not properly fitted.	Disconnect the plug and fit it back correctly.
The machine vibrates a lot and is noisy.	Water inlet filter (30) dirty.	Follow the indications of the **"ROUTINE MAINTENANCE"** paragraph.
	Suction of air.	Check the integrity of the suction circuit.
	Not enough water supply or too much priming depth.	Make sure the tap is completely open and that the water mains flow or priming depth are in conformity with the indications of the **"SPECIFICATIONS AND TECHNICAL DATA"** paragraph.
The machine fails to reach maximum pressure.	Regulation valve set at a lower value than the maximum one.	Turn the knob (6) clockwise.
	Nozzle holder head (15) in low-pressure mode **(Fig. 3 - Position "a")**.	Refer to **Fig. 3 - Position "b".**
	Worn nozzle.	Replace the nozzle as indicated in the **"ROUTINE MAINTENANCE"** paragraph.
	Not enough water supply or too much priming depth.	Make sure the tap is completely open and that the water mains flow or priming depth are in conformity with the indications of the **"SPECIFICATIONS AND TECHNICAL DATA"** paragraph.
	Faulty operation of the backflow preventer device (if any)	See relative instruction manual.

(continued on next page)

PROBLEMS	CAUSES	REMEDIES
Low detergent suction (when the relevant optional accessory is on)	Nozzle holder head (15) not in low-pressure mode **(Fig. 3 - Position "b".**	Refer to **Fig. 3 - Position "a".**
	Detergent suction filter clogged.	Refer to the instruction manual of the optional accessory.
	Detergent too viscous.	Use a detergent recommended by the Manufacturer, and dilute in accordance with plate instructions.
No water comes out of the nozzle.	No water.	Make sure the water mains tap is completely open or the suction hose can prime.
	Faulty operation of the backflow preventer device (if any).	See table in relative instruction manual.
	Too much suctioning depth.	Make sure the priming depth is in conformity with the indications of the **"SPECIFICATIONS AND TECHNICAL DATA"** paragraph.
	Water nozzle clogged.	Clean and/or replace the nozzle as indicated in the **"ROUTINE MAINTENANCE"** paragraph.
The machine stops during operation.	Tripping of the system cut-out device (fuse, RCCB, etc.) to which the machine is connected.	Reset the cutout device. **In case this trips again, do not use the machine and contact a Specialized Technician.**
	Tripping of the ampere cut-out protection device.	Follow the indications of the **"SAFETY DEVICES"** paragraph.
The machine starts again spontaneously from **Total Stop** condition.	Leaking and/or dripping in the delivery circuit.	Check the integrity of the delivery circuit.
When the master switch (1) is turned, the motor hums but does not start.	Electrical system and/or extension inadequate.	Make sure the power line connection instructions have been followed (see the **"INSTRUCTION MANUAL - SAFETY WARNINGS"**), with special reference to the extension used.