

HYUNDAI
POWER PRODUCTS

HY150HPW-1

HOT PRESSURE WASHER

Instruction Manual



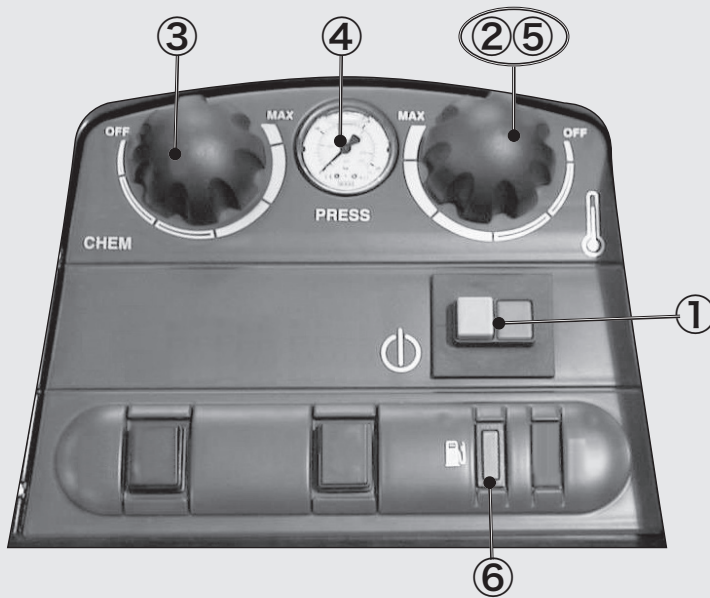
GENUINE PRODUCT OF
HYUNDAI CORPORATION



WARNING: Read the instructions carefully before use.

DESCRIPTION OF THE MACHINE

fig. A



Depending on the model, there are differences in the scopes of delivery.



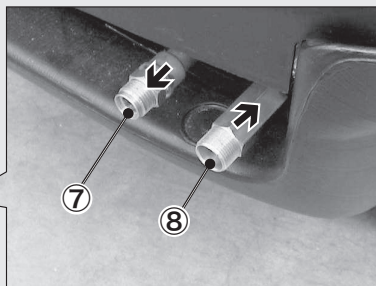
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Diesel



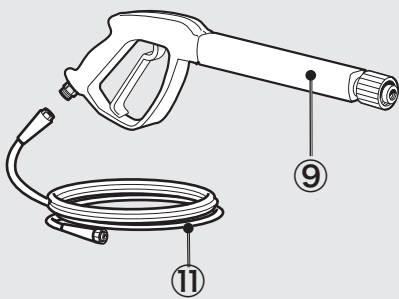
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Detergent



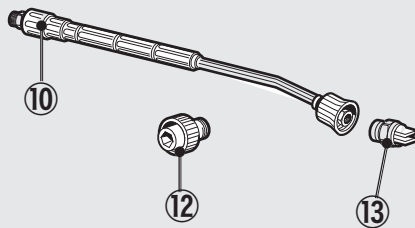
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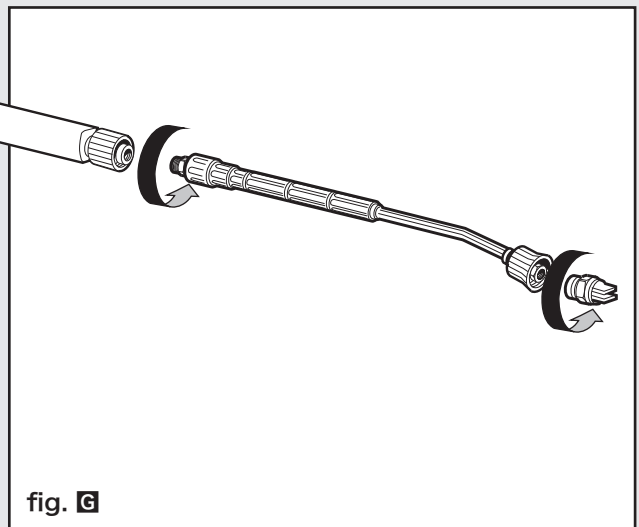
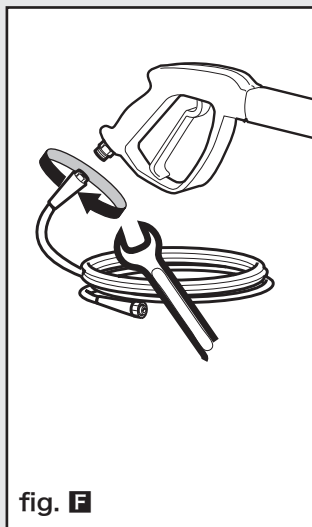
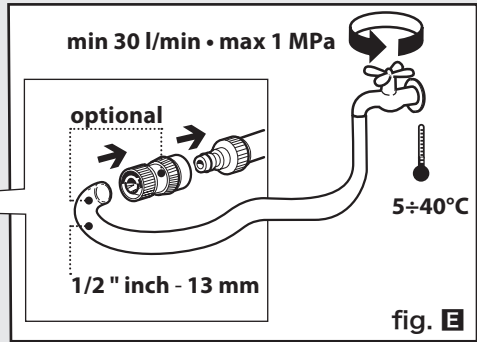
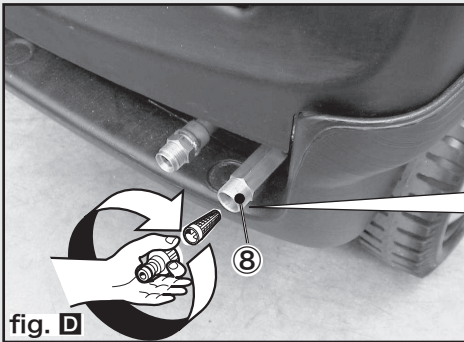
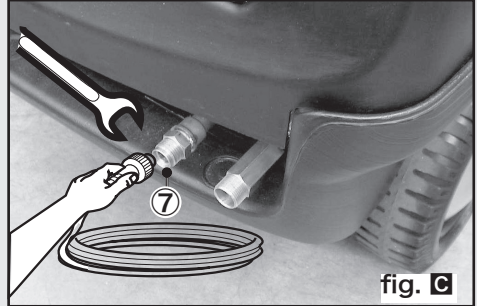
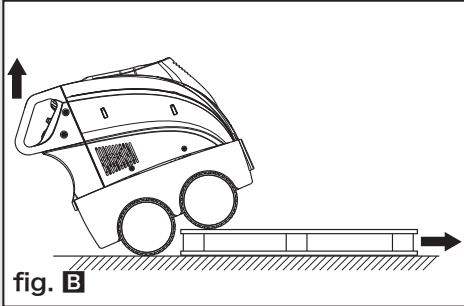


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INSTALLATION



STARTING UP

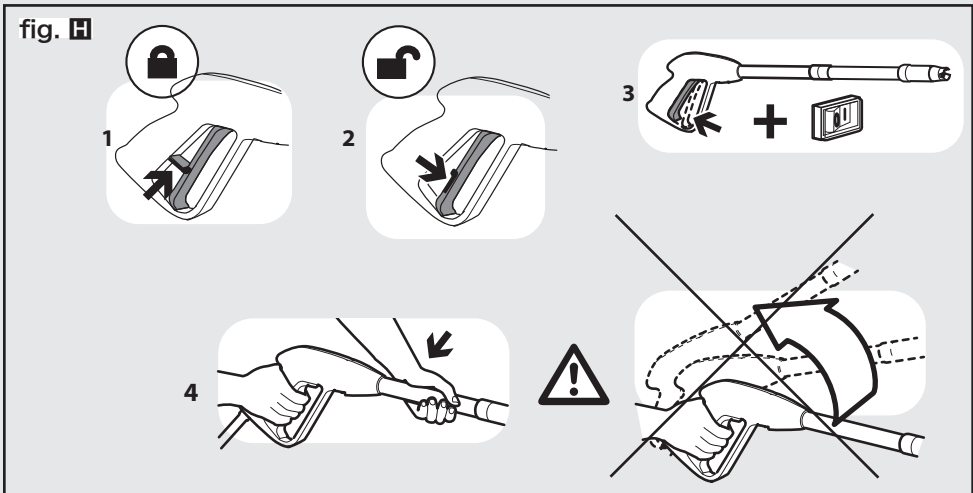
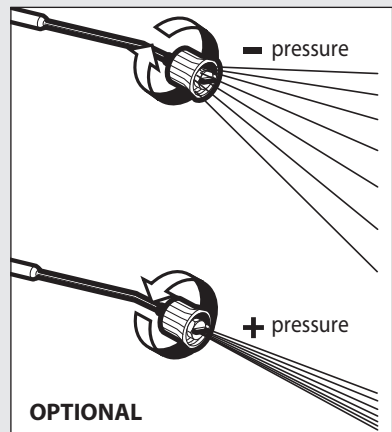


fig. II

spread pattern/pencil jet



spread pattern

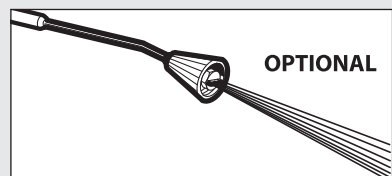


fig. 1

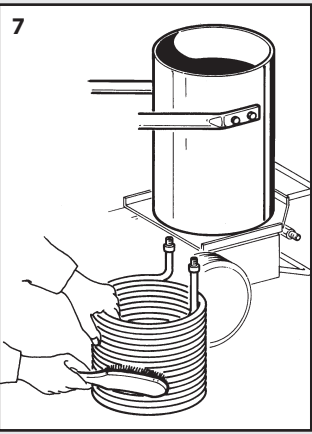
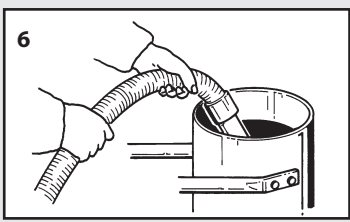
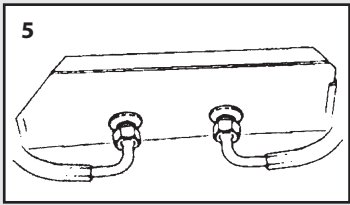
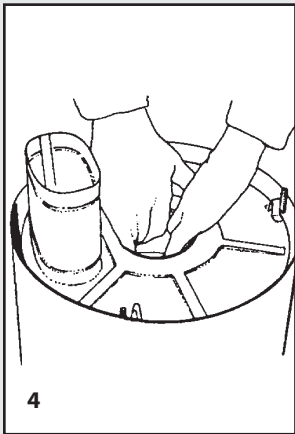
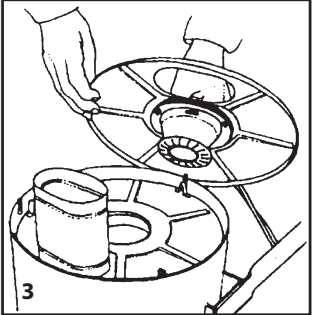
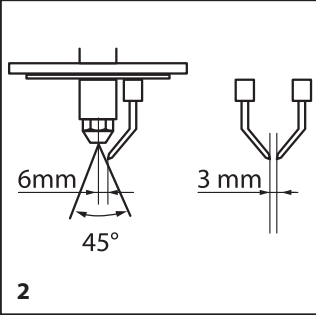
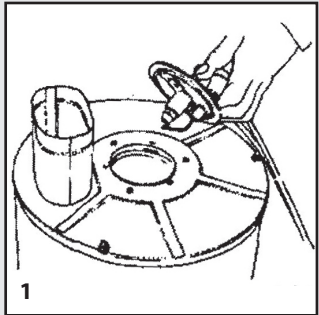
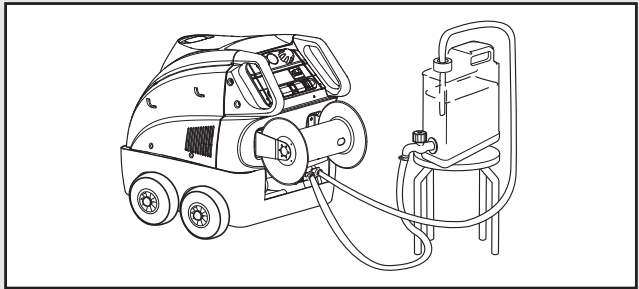
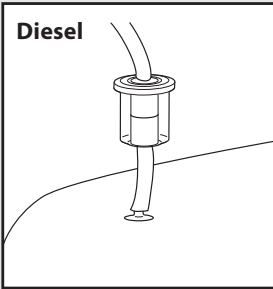
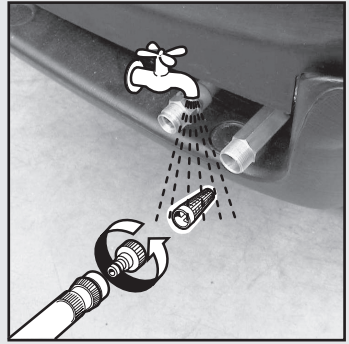
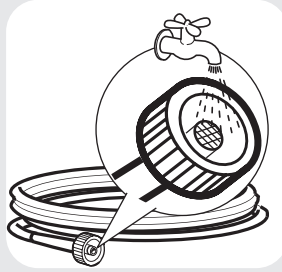
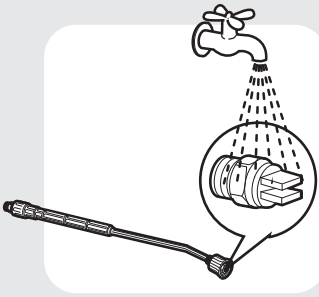
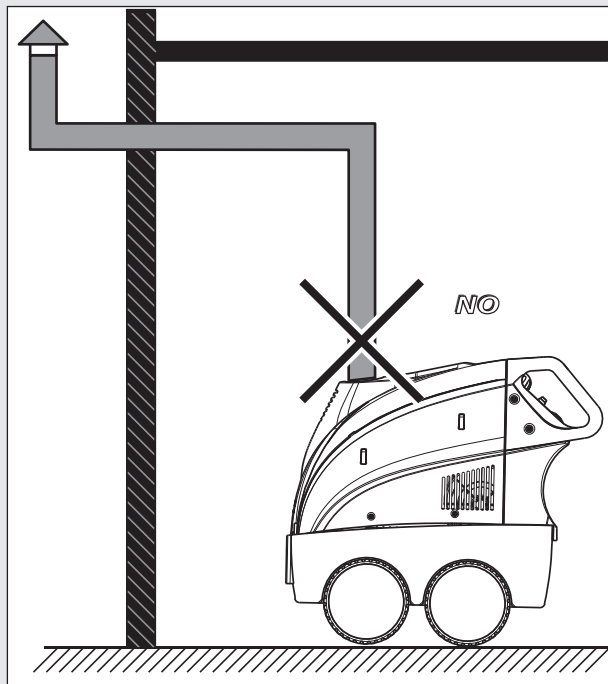
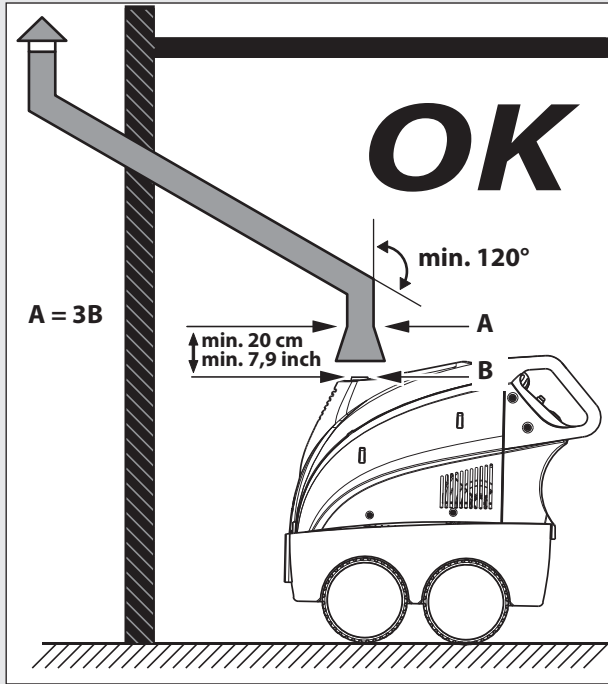
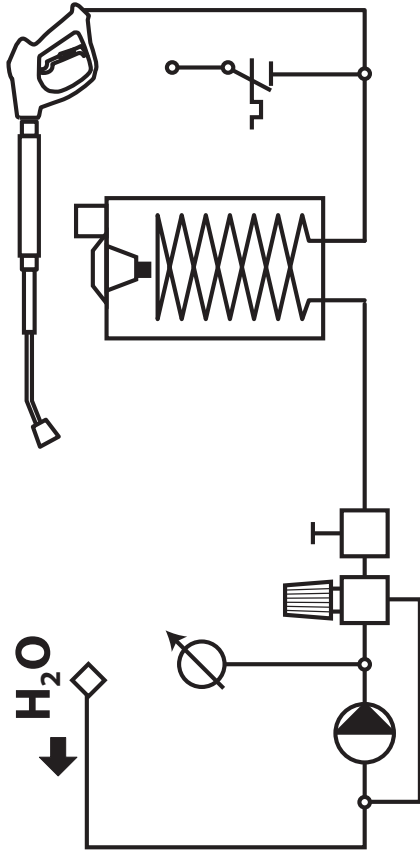


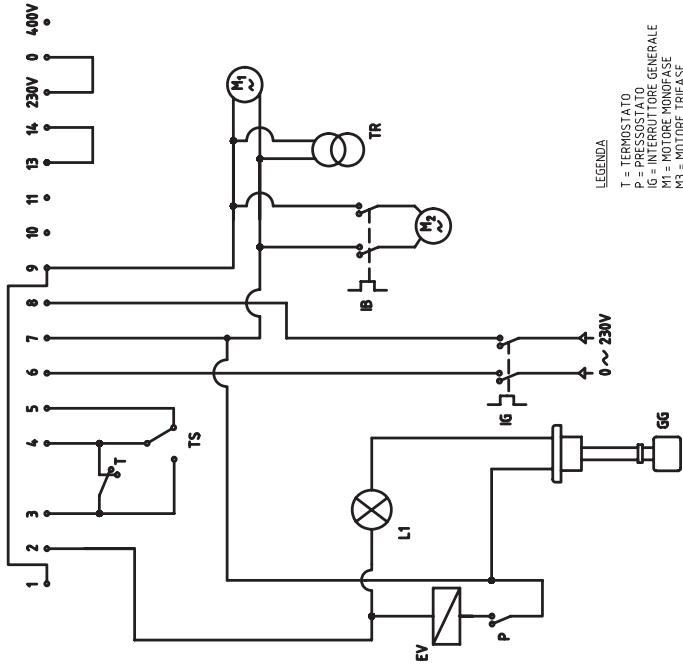
fig. M



• WATER DIAGRAM



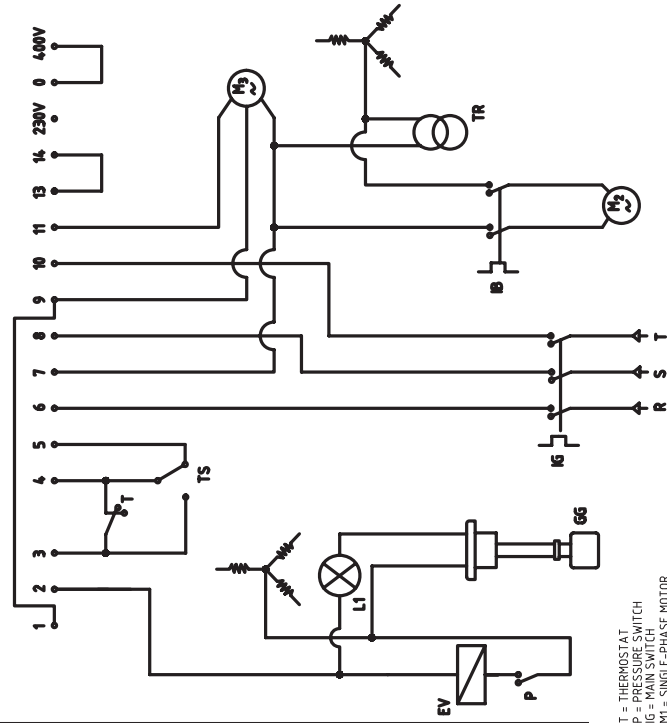
NPX XP 1 Ph



- LEGENDA
- T = TERMOSTATO
 - P = PRESSURE SWITCH
 - IG = MAIN SWITCH
 - M1 = MOTORE MONOFASE
 - M3 = MOTORE TRIFASE
 - TS = TOTAL-STOP
 - EV = ELETTROVALVOLA GASOLIO
 - TR = TRASFORMATORE ALLENZIONE
 - M2 = MOTORE BRUCIATORE
 - GG = GALLEGGIANTE GASOLIO
 - L1 = SPIA GASOLIO

SE 6.049-03 1 Ph

NPX XP 3 Ph



- ELECTRIC DIAGRAM
- T = TERMOSTATO
 - P = PRESSURE SWITCH
 - IG = MAIN SWITCH
 - M1 = SINGLE-PHASE MOTOR
 - EV = AUTOMATIC STOP SYSTEM
 - TR = FUEL ELECTRO-VALVE
 - M2 = IGNITION TRANSFORMER
 - M3 = VENTILATION MOTOR
 - GG = FLOATER
 - L1 = LOW FUEL CUT-OUT LAMP

GENERAL INFORMATION

- The appliance is intended for PROFESSIONAL use.
- The appliance can be used for washing surfaces outdoors, whenever pressurised water is required to remove dirt.
- With special optional accessories, it can be used for foaming and sandingblasting, and for washing with a rotary brush for application to the gun.

> TECHNICAL DATA

(see technical data plate)

SYMBOLS



WARNING: It is important to be careful of the following items.



IMPORTANT



LOCKED



OPEN



IF PRESENT



WARNING: do not touch .
Risk of burns on account of hot surfaces!

WARNING: High pressure jets can be dangerous if subject to misuse. The jet must not be directed at persons, animal, live electrical equipment or the machine itself.



warning symbol : do not inhale

SAFETY PRECAUTIONS

> WARNINGS

- ⚠ **01WARNING:** This appliance is for outdoor use only.
- ⚠ **Warning: do not use combustion engine powered appliances indoors, unless adequate ventilation is assessed by national labour authorities.**
- ⚠ **WARNING: Ensure that any exhaust emissions are not a vicinity of air intakes**
- ⚠ **WARNING:** In case of operation indoors, adequate ventilation and gas venting must be assured.
- ⚠ **WARNING:** Always disconnect the electricity and water supplies on completion of every job.
- ⚠ **WARNING:** Do not use the machine if a supply cord or important parts of the machine are damaged, e.g. safety devices, high pressure hoses, trigger gun.
- ⚠ **WARNING:** This appliance has been designed for use with the detergent provided or the detergent specified by the manufacturer, such as a neutral shampoo based on biodegradable anionic surface active detergents. The use of other detergents or chemicals may put the appliance's safety at risk.
- ⚠ **a WARNING:** Do not use the machine within range of persons unless they wear protective clothing.
 - b** - Do not allow other people or animals within a range of 5m when operating the machine.
 - c** - Always wear suitable protective clothing in order to protect yourself against ricocheting parts.
 - d** - Do not touch the plug and the appliance with wet hands or when barefoot.
 - e** - Wear safety goggles and non-slip rubber footwear.
- ⚠ **WARNING:** Do not direct the nozzle toward mechanical parts containing lubricant grease, as the grease will dissolve and spread over the surrounding ground. Vehicle tyres/tyre valves may only be cleaned from a minimum distance of **30 cm**, otherwise the vehicle tyre/tyre valve could be damaged by the high-pressure jet. The first indication of this is a discoloration of the tyre. Damaged

vehicle tyres/tyre valves can be deadly dangerous.

- ⚠ **WARNING:** High pressure jets can be dangerous if subject to misuse. The jet must not be directed at persons, animal, live electrical equipment or the machine itself.
- ⚠ **WARNING:** High pressure hoses, fittings and couplings are important for the safety of the machine. Use only hoses, fittings and couplings recommended by the manufacturer. (it is extremely important to protect these components against damage by avoiding their improper use and protecting them against bending, knocks and scratches).
- ⚠ **WARNING:** Appliances not equipped with **T.S.** – Total Stop : must not be left in operation for more than 2 minutes with the gun released. The recycled water heats up considerably, seriously damaging the pump.
- ⚠ **WARNING:** Appliances equipped with **T.S.** – Total Stop : these appliances should not be left in standby for more than 5 minutes.
- ⚠ **WARNING:** Switch the appliance off completely (master switch on (0)OFF) whenever it is left unattended.
- ⚠ **WARNING:** Every machine is tested in its operating conditions, so it is normal for a few drops of water to be left inside it.
- ⚠ **WARNING:** Take care not damage the electric cable. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard
- ⚠ **WARNING:** Appliance with fluid under pressure. Keep a firm hold on the gun and be prepared to take the kickback pressure. Only use the high pressure nozzle provided with the appliance.
- ⚠ **WARNING:** This appliance is not intended for use by persons (including children) 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.
- ⚠ **WARNING:** Children should be supervised to ensure that they do not play with the appliance.
- ⚠ **WARNING:** Never start the high-pressure cleaner without first completely unwinding the high-pressure hose.
- ⚠ **WARNING:** When winding and unwinding the pipe take care not to cause the high-pressure cleaner to overturn.
- ⚠ **WARNING:** Before unwinding or winding the hose, switch the machine off and release the pressure in the hose itself (switching off).
- ⚠ **WARNING:** Risk of explosion — Do not spray flammable liquids.
- ⚠ **WARNING:** To ensure machine safety, use only original spare parts from the manufacturer or approved by the manufacturer.
- ⚠ **WARNING:** Do not direct the jet against yourself or others in order to clean clothes or foot-wear.
- ⚠ **WARNING:** High pressure cleaners shall not be used by children or untrained personnel.
- ⚠ **WARNING:** Water that has flown through backflow preventers is considered to be non-potable.
- ⚠ **WARNING:** the machine shall be disconnected from its power source, by removing the plug from the socket-outlet, during cleaning or maintenance and when replacing spare parts
- ⚠ **WARNING:** Improper extension cables can be dangerous. If an extension cord is used, it must be suitable for outdoor use, and the connection must be kept dry and clear of the ground. It is recommended that this be done using a cable reel that holds the plug at least **60 mm** from the ground.
- ⚠ **WARNING:** If an extension cord is used, the plug and socket must be of watertight construction.
- ⚠ **WARNING:** During the use of high pressure cleaners, aerosols may form. Inhalation of aerosols can be dangerous to health.
- ⚠ **WARNING:** Depending on the application, shielded nozzles can be used for high pressure cleaning, which will drastically reduce the emission of hydrated aerosols. However, not all applications allow the use of such a device. If the armored nozzles are not applicable for aerosol protection, a respiratory mask of class FFP 2 or equivalent may be necessary, depending on the cleaning environment.
- ⚠ **WARNING:** It is absolutely forbidden to use the machine in potentially explosive environments or areas.
- ⚠ **WARNING:** During operation, do not place the machine in areas of poor aeration and

much less cover it.

⚠ WARNING: Avoid using the machine in the rain and do not direct the jet at it.

⚠ WARNING: Do not use the unit on flammable surfaces.

⚠ WARNING:

- NEVER EVER TOUCH THE MACHINE WITH WET HANDS OR BARE FEET.
- NEVER PULL THE POWER SUPPLY CABLE OR MACHINE IN ORDER TO DISCONNECT THE PLUG FROM THE SOCKET.
- IF DURING FUNCTIONING THE POWER SUPPLY RUNS OUT, FOR SAFETY REASONS, TURN THE MACHINE OFF.

> SAFETY DEVICE

⚠ WARNING: the gun is fitted with a safety catch. Whenever use of the machine is interrupted it is important to operate the safety catch to prevent accidental activation of the jet.

- Safety features: gun equipped with safety locking device, appliance equipped with (Class I) overload cutout, pump equipped with by-pass valve or shutdown device.
- The safety button on the gun is not there to lock the lever during operation, but to prevent its accidental operation.

⚠ WARNING: The appliance is equipped with a motor protection device: in case of device intervention, wait some minutes or, in alternative, disconnect and re-connect the product to the electric system. In case this problem repeats again or if the product does not start again, take the product to the nearest After Sales Service Point

> STABILITY

⚠ WARNING: The machine must be always kept on horizontal bases, in a safe and stable way.

> WATER SUPPLY

Water supply collection

Water supply from the water main

- Connect a supply hose (not included) to the water inlet of the unit and to the water supply.
- Open the water supply.



⚠ WARNING: (symbol) machine not suitable for connection to the potable water mains.

The cleaner can only be connected to the water mains if the water mains is separated by a backflow preventer. Make sure that the hose is at least Ø 13mm-1/2 inch and that it is reinforced.

⚠ WARNING: Water that has flown through backflow preventers is considered to be nonpotable.

⚠ IMPORTANT: Only clean or filtered water should be used for intake. The delivery of the water intake tap should be equal to the double of the maximum pump range.

- Minimum delivery rate: 30 l/ min.
- Maximum intake water temperature: 40°C
- Max inlet water pressure: 1Mpa

Place the cleaner as close to the water supply system as possible.

Water supply from an open container

- Unscrew the coupling part for the water inlet.
- Screw the suction hose with filter (not included) onto the water connection of the unit.
- Hang the filter in the container.
- Vent the unit before operation.
- Unscrew the high-pressure line at the high-pressure outlet of the unit.
- Switch on the unit and let it run until water free of bubbles emerges at the high-pressure outlet.
- Switch off the unit and screw on the high-pressure hose again.

Failure to comply with the above conditions causes serious mechanical damage to the pump and the loss of warranty cover.

> ELECTRICITY SUPPLY

- The appliance's electrical connection must comply with the IEC 60364-1 standard. A QUALIFIED ELECTRICIAN must carry out the following:
- If the power supply cable is not available and if the device is not to be connected in a fixed manner to the power supply, fit a plug in compliance with the standard of the country

in which the machine is installed;

- ⚠ **IMPORTANT:** Before connecting the appliance, make sure that the nameplate data are the same as those of the electrical mains and that the socket is protected by a differential security breaker with tripping sensitivity below 0.03 A - 30 ms.
- If the appliance's plug is not compatible with the socket, have the socket replaced with another of suitable type by professionally qualified staff.
- Never use the appliance in ambient temperatures below 0° C if it is equipped with a PVC (H VV-F) cable.

⚠ **WARNING:** Improper extension cables can be dangerous. If an extension cord is used, it must be suitable for outdoor use, and the connection must be kept dry and clear of the ground. It is recommended that this be done using a cable reel that holds the plug at least 60 mm from the ground.

⚠ **WARNING:** If an extension cord is used, the plug and socket must be of watertight construction.

Information for supply may also be obtained from the plug manufacturer.

230-240V	400-415V
3G 2,5 mm ²	4G 2,5 mm ²
max 20 m	max 30 m

> POSITIONING OF THE CHIMNEY FOR INDOOR APPLICATION

(see fig. **M**)

⚠ **WARNING:** In case of operation indoors, adequate ventilation and gas venting must be assured.

Sometimes a chimney is necessary to remove the exhausts from the pressure cleaner.

This problem hasn't to be faced when the machine operates outdoor, but when it's installed indoor, the following recommendations must be followed:

- The chimney path must be always in ascent, straight vertical if possible, and preferably not exceeding a 5 m length.
- The exit of the chimney must be sheltered to avoid the dripping of rain and to allow the

exhaust flow.

- The chimney section A must be 3 times the outlet chimney of the machine B and at distance of at least 20 cm.

It must be underlined that the above recommendations are extremely important to prevent the condensate from back dripping into the machine. The exhausts contain sulphuric acid, condensating at a temperature of approximately 180° C. The condensation shall be avoided, but in any case the condensate from chimney shall not enter the machine.

The non observance of these recommendations may lead to the damage of the machine.

CHIMNEY SECTION: 3 times the area of chimney

Chimney pipe diameter = 150 mm

CHIMNEY SECTION FOR 2 BOILER: 6 times the area of chimney

Chimney pipe diameter = 225 mm

USAGE

> UNPACKING

(see fig. **B**)

Take out the upper and the lower hooks, which fix the cardboard box to the pallet, take the cardboard box off, put two wheels of the machine on ground and take the pallet off.

> DESCRIPTION OF THE MACHINE

- ① Electropump switch
- ② Regulator burner
- ③ Detergent regulator
- ④ Pressure gauge
- ⑤ Burner switch
- ⑥ Pilot lights (OPTIONAL)
- ⑦ High pressure water outlet
- ⑧ Water inlet + filter
- ⑨ Gun
- ⑩ Lance
- ⑪ High pressure hose
- ⑫ Rubber hose fitting

- 13 Nozzle
- 14 Diesel tank
- 15 Detergent tank

Pilot lights:

- ⑥ Pilot lights: DIESEL shortage (OPTIONAL)
 - ⑥ **A:** Motor pump ON green pilot light
 - ⑥ **B:** Leak pilot light
 - flashes when the pistol lever is repeatedly operated in a short time or when a leak occurs in the high pressure circuit. Remove the leak, referring to an authorized service centre.
 - remains ON when the machine is left in stand-by for over 20 minutes.
- Switch on and off the motor pump switch.
- ⑥ **C:** Burner switch
 - flashes when the gasoil tank is empty; the burner is stopped. Refuel.
 - remains ON when the burner switches on.

> INSTALLATION AND START-UP

(fig. **A**)

FILLING UP WITH FUEL

Information on the type of diesel fuel to be used: Diesel for transport uses and without additives.

Fill the tank with the fuel indicated on the technical data plate (**Diesel**)

Avoid that the tank is empty when the machine is running in order not to damage the fuel pump.

⚠ WARNING: Incorrect fuel shall not used as they as provide hazard.

FILLING UP WITH DETERGENT

the detergent tank with the suggested products, suitable for the kind of washing to be carried out.

⚠ WARNING: Make use only of liquid detergent, do not absolutely use acid or too much alkaline products. We suggest you to make use of our products, which have been studied for the use with washer machines.

> INSTALLATION

(fig. **CDEFG**)

- Check that the master switch is turned to "OFF" and that the water filter is fitted into the pump's inlet pipe.
- Screw the snap connection into place by hand, without the aid of tools.
- Connect the water supply hose to the snap

connection. The hose must have an inside diameter of at least 13 mm (1/2").

- Connect the high pressure hose to the pump's outlet pipe. Press the high pressure hose coupling fully down and then screw into place by hand without the aid of tools.
 - Connect the high pressure hose to the gun.
 - Turn the water tap fully on. The water temperature absolutely must be below 40°C.
- ⚠ IMPORTANT:** The washer machine has to operate with clean water in order to avoid any damages to the washer machine itself.
- Release the gun safety catch and keep the trigger pressed, allowing the water to flow until all the air has been expelled.
 - Fit the lance into the gun.
 - Fit the nozzle into the lance.
 - Connect the plug to the power socket.

> 1ST START-UP

When starting up for the first time or after a long period out of use, connect the intake line only for a few minutes so that any dirt is vented from the delivery outlet

> START-UP

(fig. **H**)

- Whenever using the high-pressure cleaner, users are urged to hold the gun in the correct position, with one hand on the grip and the other on the spray rod.
- To start the machine, press the gun trigger and at the same time turn the master switch to "ON"

> TO WASH WITH HOT WATER

(fig. **A**)

- turn the burner switch and select the desired temperature setting.
- To add detergent or disinfectant to the water jet, open the regulator to the setting for the quantity required as described in the "DETERGENT SUCTION" section.

⚠ WARNING: In case of operation indoors, adequate ventilation and gas venting must be assured.

> THERMOSTAT SET ABOVE 100 °C: USE WARNINGS.

When working with temperatures exceeding 100° C, follow these steps:

- The working pressure must not exceed the limit of 32 bar.
- Through the knob on the bypass valve of the pump, you can adjust the pressure.
- Assemble steam nozzle 3.749.0183 (optional)

> **DETERGENT SUCTION**

at low pressure (if included)

(see fig. **I**)

The adjusting head allow you to select water jet at low and high pressure. The pressure selection is carried out by rotating the adjusting head. To increase the pressure, rotate the adjusting head clockwise, to reduce the pressure rotate it anti-clockwise. The detergent suction is automatic when the adjusting head of the lance is rotate for low pressure operation (anti-clockwise).

> **DETERGENT SUCTION**

at hight pressure (if included)

(see fig. **II**)

When you start the machine, the mixing of the detergent with the water is automatic at the water passage. The quantity of sucked detergent depends on the quantity set with the detergent adjusting knob.

⚠ CAUTION: Make use only of liquid detergent, do not absolutely use acid or too much alkaline products.

We suggest you to make use of our products, which have been studied for the use with washer machines.



Total Stop 24V (if fitted)

Machines equipped with delayed, low-voltage Total Stop:

When the machine is working, by releasing the gun lever, after approximately 15 seconds the motor stops automatically to prevent component wear during the pump by-pass phase (motor in stand-by). By pressing the gun lever the motor starts automatically.

⚠ WARNING: do not leave the stand-by mode active for more than 5 minutes.

At the end of the operation, set the switch to "OFF". Activate hand spray gun until device is pressure less.



Machines equipped with delayed, low-voltage Total Stop with intelligent switch-off:

When the machine is working, by releasing the gun lever, after approximately 15 seconds the motor stops automatically to prevent component wear during the pump by-pass phase (motor in stand-by). By pressing the gun lever the motor starts automatically.

⚠ WARNING: do not leave the stand-by mode active for more than 5 minutes.

If the machine remains in stand-by mode for more than 20 minutes, it switches off automatically and completely: in fact, by pressing the gun lever the machine does NOT start working.

For this reason, if you need to start the machine it is necessary to set the switch to (0) "OFF" and then to (I) "ON".

At the end of the operation, set the switch to "OFF". Activate hand spray gun until device is pressure less.

PRESSURE REGULATOR:

If the appliance is equipped with a **pressure regulator**:

- when the pressure is set to minimum the **T.S.** may not trigger. Therefore, do not allow the appliance to function in by-pass for more than 1 minute.
- do not act on the gun lever too frequently (this may cause a malfunction).

Turn off the appliance

⚠ WARNING:

Danger of scalding by hot water. After the operation with hot water or steam, the device must be operated with openend gun with cold water for at least two minutes.

- Set the appliance switch to "0/OFF".
- Shut off water supply.
- Open the hand spray gun.
- Turn on pump shortly (appr. 5 seconds) with device switch.
- Pull main plug out of socket with dry hands only.
- Remove water connection.

- Activate hand spray gun until device is pressure less.
- Lock the trigger gun.

Storing the Appliance

- Lock in the steel pipe into the holder of the appliance hood.
- Roll up high pressure hose and electrical conduit and hang them into the respective holders.

Device with hose drum:

- Before rolling up, stretch out the high pressure hose.
- Turn the hand crank clockwise (Direction of the arrow).

Note: Do not twist high pressure hose and electrical conduit.


- Store the appliance and the accessories in a dry safe place, out of the reach of children.
- Store the appliance and the accessories in a frost-safe room.
- This appliance must only be stored in interior rooms.

CARE AND MAINTENANCE

(vedi fig. 14)

SCHEDULED MAINTENANCE PLAN

Visit www.lavorservice.com website and download the scheduled maintenance plan.

 **IMPORTANT:** Before doing any work on the cleaner, discharge the pressure and disconnect the electricity and water supplies.

CHECKING THE PUMP OIL LEVEL

Check the oil level periodically. The oil must be changed for the first time after 50 working hours, with subsequent changes every 500 hours. SAE 20/30 , 15W-40, 20W-40 oil is recommended .

CHECKING THE WATER INTAKE FILTER

Inspect and clean the water intake filter on the intake union periodically. This is important to prevent fouling which may impair operation of the pump.

CLEANING THE FUEL FILTER

Check the fuel filter periodically and replace if it has

deteriorated or is excessively dirty.

DESCALING


The descaling procedure must be carried out periodically with specific products. The interval depends on the hardness of the water. Pour one litre of product for every 15 litres of water into a drum containing at least 30 litres of water. Disconnect the gun from the high pressure line and place its free end in the drum, in order to form a closed circuit, and draw the solution into the machine for at least 10 minutes. The delivery end of the line should discharge into a canvas or mesh bag so that the scale removed is not returned to the circuit. Then restore the normal connection and rinse with plenty of cold water. This operation should be carried out by our after-sales service, since the descaling product may cause wear of components. Comply with the regulations in force when disposing of the descaling agent.

Liquid softener tank integrated (Optional - if included)

The descaling procedure must be carried out periodically with specific products. The interval depends on the hardness of the water. This operation should be carried out by our after-sales service, since the descaling product may cause wear of components. Comply with the regulations in force when disposing of the descaling agent.

- Fill the softener tank with our products (in all cases, with non corrosive products). The dispensing rate is set at a medium value; the **After Sales Services** will be able to adapt the setting to local conditions.

BOILER CLEANING

 **WARNING:** For all maintenance of the boiler, of the high pressure pump and of the machine, it is necessary to address to qualified personnel or to an authorized assistance center.

The boiler cleaning must be periodically executed every 180 ÷ 200 hours of working proceeding as follows:

- Carefully remove the nozzle holder flange and the electrodes holder (boiler head).
- Clean with compressed air the nozzle filter and check the electrodes position.
- Remove the boiler cap, clean the deflector.
- Manually take away the interior cap.
- Unscrewing the locking nuts and take the boiler coil out.
- Clean the coil by an iron brush.
- Suck the residuums from the boiler.
- Replace every parts doing the operations in the

inverse way.

⚠ WARNING: The general checking and combustion regulation must be periodically executed by specialized personnel as prescribed by the law.

ELECTRIC DIAGRAM

See illustrations, page 9.

WATER DIAGRAM

See illustrations, page 8.

> **REPAIRS - SPARE PARTS**

For any problems not mentioned in this manual, or if the machine breaks down, you are urged to contact an **Authorized After-Sales Service** for the relative repair or for any replacement of components with original spare parts. Use exclusively original replacement parts.

> **WARRANTY CONDITIONS**

All our machines are subjected to strict tests and are covered against manufacturing defects in accordance with applicable regulations (minimum 12 months). The warranty is effective from the date of purchase. If your high pressure washer or accessories are handed in for repair, a copy of the receipt must be enclosed.

Guarantee repairs are being made on the following conditions:

- That defects are attributable to flaws or defects in materials or workmanship. - That the directions of this instruction manual have been thoroughly observed. - That repair has not been carried out or attempted by other than authorized service staff. - That only original accessories have been applied. - That the product has not been exposed to abuse such as knocks, bumps or frost. - That only water without any impurities has been used. - That the high pressure washer has not been used for rental nor used commercially in any other way.

The following are not included in the warranty:

- Parts subject to normal wear. - The high-pressure tube and optional accessories. - Accidental damage, caused by transport, neglect or inadequate treatment, incorrect or improper use and installation failing to comply with the indications in the instruction manual. - The warranty shall not cover any cleaning operations to which the operative components may be subjected.

Repairs under this guarantee include replacement of defective parts, exclusive of packing and postage/courierage. The warranty shall not cover replacement of the machine or extension of the guarantee resulting from a breakdown. The manufacturer declines all responsibility for damage to persons or property caused by bad

installation or incorrect use of the machine.

WARNING! Failures, such as clogged nozzles, valves and mechanism blocked due to limestones, damaged pressure cleaner accessories (like kinked high pressure hose) and/or appliances normally working without any defects ARE NOT COVERED BY THE WARRANTY.

> **DISPOSAL**



As the owner of electrical or electronic equipment, the law (in accordance with the EU Directive 2012/19/EU n waste from electrical and electronic equipment and the national laws of the EU Member States that have implemented this Directive) prohibits you from disposing of this product or its electrical / electronic accessories as municipal solid waste and obliges you to make use of the appropriate waste collection facilities.

The product can be disposed of by returning it to the distributor when a new product is purchased. The new product must be equivalent to that being disposed of.

Disposing of the product in the environment can cause great harm to the environment itself and human health.

The symbol in the figure indicates the urban waste containers and it is strictly prohibited to dispose of the equipment in these containers. Non-compliance with the regulations stipulated in the Directive 2012/19/EU and the decrees implemented in the various EU Member States is administratively punishable.

TROUBLESHOOTING

Before doing any work on the machine, disconnect the electricity and water supplies and discharge the pressure. Proceed systematically to identify Faults following the chart below; if you are still unable to eliminate the problem, call in the **Authorized After-Sales Service**.

Fault	When the main switch is turned on the machine does not start
Cause	- Plug not properly connected. - Connection panel fuses are burnt out.
Repair	- Carefully check the plug and the electric cable. - Check them and replace them.
Fault	The motor hums but does not start
Cause	- A phase is missing (in three phase models). - Lows voltage. - High pressure pump is blocked.
Repair	- Contact an authorised service centre. - Contact an authorised service centre. - Contact an authorised service centre.
Fault	The motor stops suddenly or after a while
Cause	- The motor-protecting switch is on because of insufficient mains voltage.
Repair	- Check the value of the mains voltage. - Contact an authorised service centre.
Fault	When the lance is turned on pressure values decrease and increase
Cause	- The nozzle is either clogged or deformed. - Either boiler coil or lance are clogged with limestone.
Repair	- Either clean it or replace it. - Descaling.
Fault	To much vibrations at the delivery
Cause	- The pressure tank is run down. - The valve are worn out or dirty.
Repair	- Check the pressure in the tank. - Check and/or replace.
Fault	The pump does not reach the fixed pressures
Cause	- The pump sucks air. - The valves are worn out. - The setting valve area is worn out. - The nozzle is unsuitable or worn out. - The seals are worn out.
Repair	- Check the suction pipes. - Check and/or replace. - Contact an authorised service centre. - Contact an authorised service centre.
Fault	Irregular pressure fluctuations

Cause	- The suction and/or delivery valves are worn out. - Presence of foreign matters in the valves, which generate bad functioning. - Air suction. - The seals are worn out.
Re-pair	- Check and/or replace. - Check and clean the replace. - Check the suction pipe. - Check and/or replace the seals.
Fault	Pressure leakage
Cause	- The nozzle is worn out. - The suction and/or delivery valves are broken or down. - Presence of foreign matters in the valves, which generate the valves bad functioning. - The setting valve area is worn out. - The seals are worn out.
Repair	- Replace the nozzle. - Check and/or replace the valves. - Check and clean the valves. - Check and/or replace the setting valve area. - Replace the seals.
Fault	Noisiness
Cause	- Air suction. - The suction and/or delivery valve springs are broken or down. - Foreign matters in the suction and delivery valves. - The bearings are worn out. - Extreme liquid temperature.
Repair	- Check the suction pipes. - Replace the valve springs. - Check and clean the suction and delivery valves. - Replace the bearings. - Reduce the liquid temperature.
Fault	Water is in the oil
Cause	- The O-ring casing is worn out. - High moisture in the air. - The seals are completely worn out.
Repair	- Check and/or replace the O-ring. - Replace the oil with double frequency in respect of the one suggested. - Replace the seals.
Fault	Filtrations of water from the drains between casing and head
Cause	- The seals are worn out. - The piston is worn out. - The O-ring of the piston cap is worn out.

Repair	<ul style="list-style-type: none"> - Replace the seals. - Replace the piston. - Replace the seal.
Fault	Filtrations of oil from the drains between head and casing
Cause	<ul style="list-style-type: none"> - O-ring seals of casing are worn out.
Repair	<ul style="list-style-type: none"> - Replace the seals.
Fault	Turning on the burner switch the boiler does not start
Cause	<ul style="list-style-type: none"> - No fuel. - Fuel filter is clogged. - Fuel pump is either blocked or burnt out. - Damaged thermostat. - Ignition spark insufficient or totally lacking. - The space among the electrodes is not correct. - Burn out fuse.
Repair	<ul style="list-style-type: none"> - Check the level in the tank and check whether the rigid suction pipe is clean. - Replace the line filter. - Replace it. - Replace it. - Contact an authorised service centre. - Check the positioning. - Replace it.
Fault	Water is not hot enough
Cause	<ul style="list-style-type: none"> - Poor boiler performance. - Boiler coil clogged with limestone.
Re-pair	<ul style="list-style-type: none"> - Clean burner nozzle filter. - Clean fuel filter. - Check diesel pump pressure. - Descaling.
Fault	Too much smoke from the chimney
Cause	<ul style="list-style-type: none"> - Combustion is not correct. - Impurities or water in the fuel.
Re-pair	<ul style="list-style-type: none"> - Clean fuel filter. - Clean the boiler. - Empty the tank and clean it carefully. - Clean fuel filter as well.
Fault	Insufficient detergent suction
Cause	<ul style="list-style-type: none"> - No detergent in the tank. - Incrusted injector. - Either coil or tube or lance are clogged.
Re-pair	<ul style="list-style-type: none"> - Fill the detergent tank. - Clean it. - Either cleaning or descaling.

Water connection.

40 ° C Supply temp. (max.)

30 l/min Supply rate (min.)

1 MPa Supply Pressure (max.)

940 x 650 x 900 mm Dimensions



ℓ 4,8 Detergent tank capacity



ℓ 18 Gas oil tank capacity

m/s² 2,2

Arm vibrations. A-weighted r.m.s. acceleration value to which the operators' arms are subjected in m/s². -
Values according to standard **EN 60335-2-79**

MODEL			1211	1310	1510	1515	1614	1713	1813	2015	2021
Recoil force of gun at operating pressure (max)	N	26	26	26	36,8	36,8	43	43	43	50	

EN - Pressure max.

EN - Power connection.

EN - Working pressure.

EN - Power consump. W



EC/EU DECLARATION OF CONFORMITY
according to Directive (and following amendments):

2006/42/EC
(+2009/127/EC)
2014/30/EU
2000/14/EC

2005/88/EC
2011/65/EU
2014/68/EU

GENPOWER LTD
Isaac Way, Pembroke Dock,
Pembrokeshire, SA72 4RW.

Declares under its responsibility that the machine:

PRODUCT: HOT HIGH-PRESSURE WASHER
MACHINE

MODEL: HY150HPW-1

complies with directives **EC/**
EU and subsequent modifications,
and the standards EN:

EN 60335-1
EN 60335-2-79
EN 62233:2008
EN 50581
EN 55014-1:2006
+A1:2009+A2:2011
EN 55014-2:2015
EN 61000-3-2:2014.
EN 61000-3-3:2013.

2000/14/EC - 2005/88/EC
The appliance is defined by no.
27 of the enclosure I. Conformity
evaluation procedure in accordance
with enclosure V.

LpA 85dB(A)

The A-weighted sound pressure level Lpa in db(A), emitted by the
appliance, K (uncertainty) 1.5dB (A)

LwA 99.7dB(A)

K (uncertainty) 2dB (A) $3L_{Aeq}(T)_{U_{bair}} - V_{d} - V_{segd}W$

LwA 101dB(A)

Acoustic power granted

Technical booklet at

GENPOWER LTD
Isaac Way, Pembroke Dock,
Pembrokeshire, SA72 4RW.

R J Llewellyn

Roland Llewellyn
(Managing Director) 29/10/20

The manufacturer reserves the right to modify the declared data without advance notification

HYUNDAI

POWER PRODUCTS



GENUINE PRODUCT OF
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