

# STARJET 15/200

## USER MANUAL



**PUMPS AUSTRALIA**  
**BETTER BY DESIGN**



1800 790 915



[pumpsaustralia.com.au](http://pumpsaustralia.com.au)



Thank you for purchasing a quality Pumps Australia Unit. We reserve the right to make changes at any time without incurring any obligation.

**Owner/User Responsibility:** The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this Stand Alone Boiler. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

Owner and/or user must study and maintain for future reference the manufacturers' instructions.

The operator must know how to stop the machine quickly and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.

This manual should be considered a permanent part of the machine and should remain with it if machine is resold. When ordering parts, please specify model and serial number. Use only identical replacement parts. This machine is to be used only by trained operators.

### IMPORTANT SAFETY INFORMATION



**WARNING: To reduce the risk of injury, read operating instructions carefully before using.**

1. Read the owner's manual thoroughly. Failure to follow instructions could cause malfunction of the machine and result in death, serious bodily injury and/or property damage.

2. Know how to stop the machine and bleed pressure quickly. Be thoroughly familiar with the controls.

3. Stay alert — watch what you are doing.

4. All installations must comply with local codes. Contact your electrician, plumber, utility company or the selling distributor for specific details. If your machine is rated 250 volts or less, single phase will be provided with a ground fault circuit interrupter (GFCI). If rated more than 250 volts, or more than single phase this product should only be connected to a power supply receptacle protected by a GFCI



**WARNING: Keep wand, hose, and water spray away from electric wiring or fatal electric shock may result.**

5. To protect the operator from electrical shock, the machine must be electrically grounded. It is the responsibility of the owner to connect this machine to a UL grounded receptacle of proper voltage and amperage ratings. Do not spray water on or near electrical components. Do not touch machine with wet hands or while standing in water. Always disconnect power before servicing.



**WARNING: Flammable liquids can create fumes which can ignite, causing property damage or severe injury.**

**WARNING: Risk of explosion — Operate only where open flame or torch is permitted.**

6. In oil burning models, use only kerosene, No. 1 home heating fuel, or diesel. If diesel is used, add a soot remover to every tankful.



**WARNING: Risk of fire — do not add fuel when the product is operating or still hot.**

**WARNING: Do not use gasoline crankcase draining or oil containing gasoline, solvents or alcohol. Doing so will result in fire and/or explosion.**

7. Oil burning appliances shall be installed only in locations where combustible dusts and flammable gases or vapours are not present. Do not store or use gasoline near this machine.

8. Do not allow acids, caustic or abrasive fluids to pass through the pump.

9. Never run pump dry or leave spray gun closed longer than 1-2 minutes.










10. Keep operating area clear of all persons.



**WARNING: High pressure spray can cause paint chips or other particles to become airborne and fly at high speeds. To avoid personal injury, eye, hand and foot safety devices must be worn.**

11. Eye, hand, and foot protection must be worn when using this equipment.



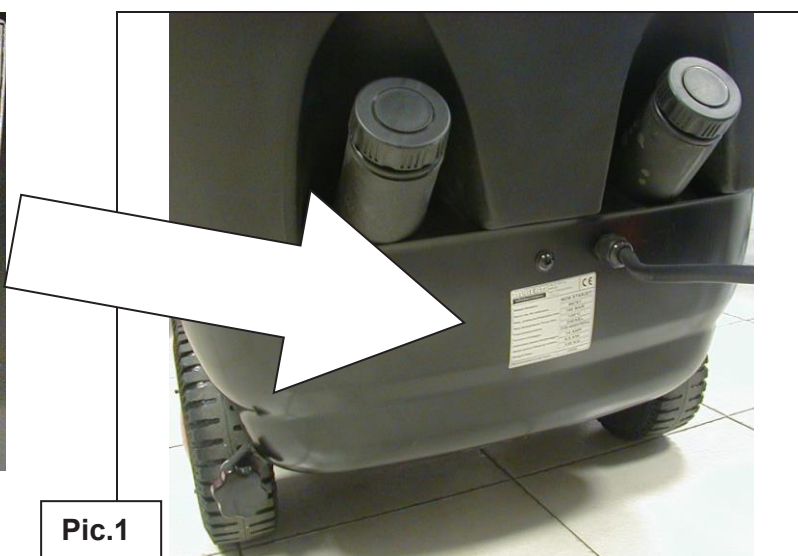
	<p><b>WARNING:</b> This machine exceeds 85 dB appropriate ear protection must be worn.</p>
	<p><b>WARNING:</b> Hot discharge fluid. Do not touch or direct discharge stream at person(s)</p>
	<p><b>WARNING:</b> This machine produces hot water and must have insulated components attached to protect the operator.</p>
	<p><b>WARNING: Risk of injury. Hot surfaces can cause burns. Use only designated gripping areas of spray gun and wand. Do not place hands or feet on non-insulated areas of the pressure washer.</b> 12. To reduce the risk of injury, close supervision is necessary when a machine is used near children. Do not allow children to operate the pressure washer. This machine must be attended during operation.</p>
	<p><b>WARNING: Grip cleaning wand securely with both hands before starting. Failure to do this could result in injury from a whipping wand.</b> 13. Never make adjustments on machine while in operation. 14. Be certain all quick coupler fittings are secured before using pressure washer</p>
	<p><b>WARNING: High pressure developed by these machines will cause personal injury or equipment damage. Keep clear of nozzle. Use caution when operating. Do not direct discharge stream at people, or severe injury or death will result.</b></p>
	<p><b>WARNING: Protect machine from freezing.</b> 15. To keep machine in best operating conditions, it is important you protect machine from freezing. Failure to protect machine from freezing could cause malfunction of the machine and result in death, serious bodily injury, and/or property damage. Follow storage instructions specified in this manual.</p>
	<p><b>WARNING: Risk of asphyxiation. Use this product only in a well ventilated area.</b> 16. Avoid installing machines in small areas or near exhaust fans. Adequate oxygen is needed for combustion or dangerous carbon monoxide will result.</p>
<p>17. Manufacturer will not be liable for any changes made to our standard machines or any components not purchased from Pumps Australia Pty Ltd. 18. The best insurance against an accident is precaution and knowledge of the machine.</p>	
	<p><b>WARNING: Be extremely careful when using a ladder, scaffolding or any other relatively unstable location. The cleaning area should have adequate slopes and drainage to reduce the possibility of a fall due to slippery surfaces.</b> 20. Do not overreach or stand on unstable support. Keep good footing and balance at all times. 21. Do not operate this machine when fatigued or under the influence of alcohol, prescription medications, or drugs.</p>





## 2. Machine Identification

Picture 1 below indicates where the identification plate is fixed



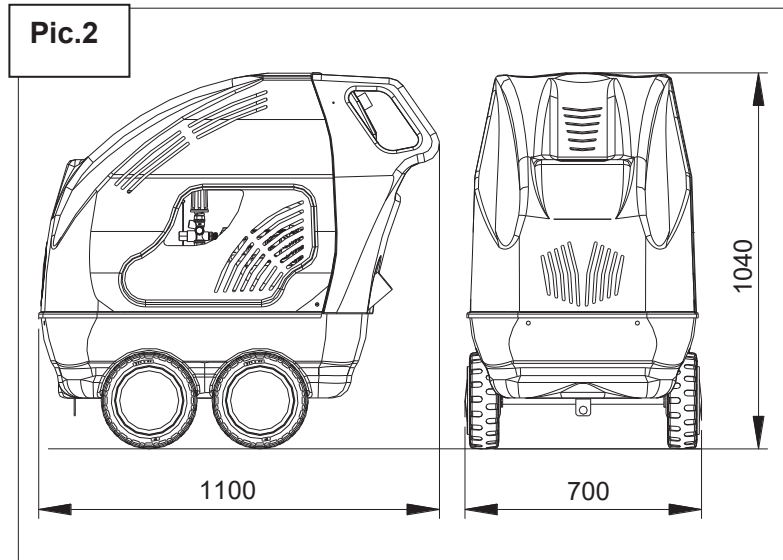
**Pic.1**

## 3. Technical Data

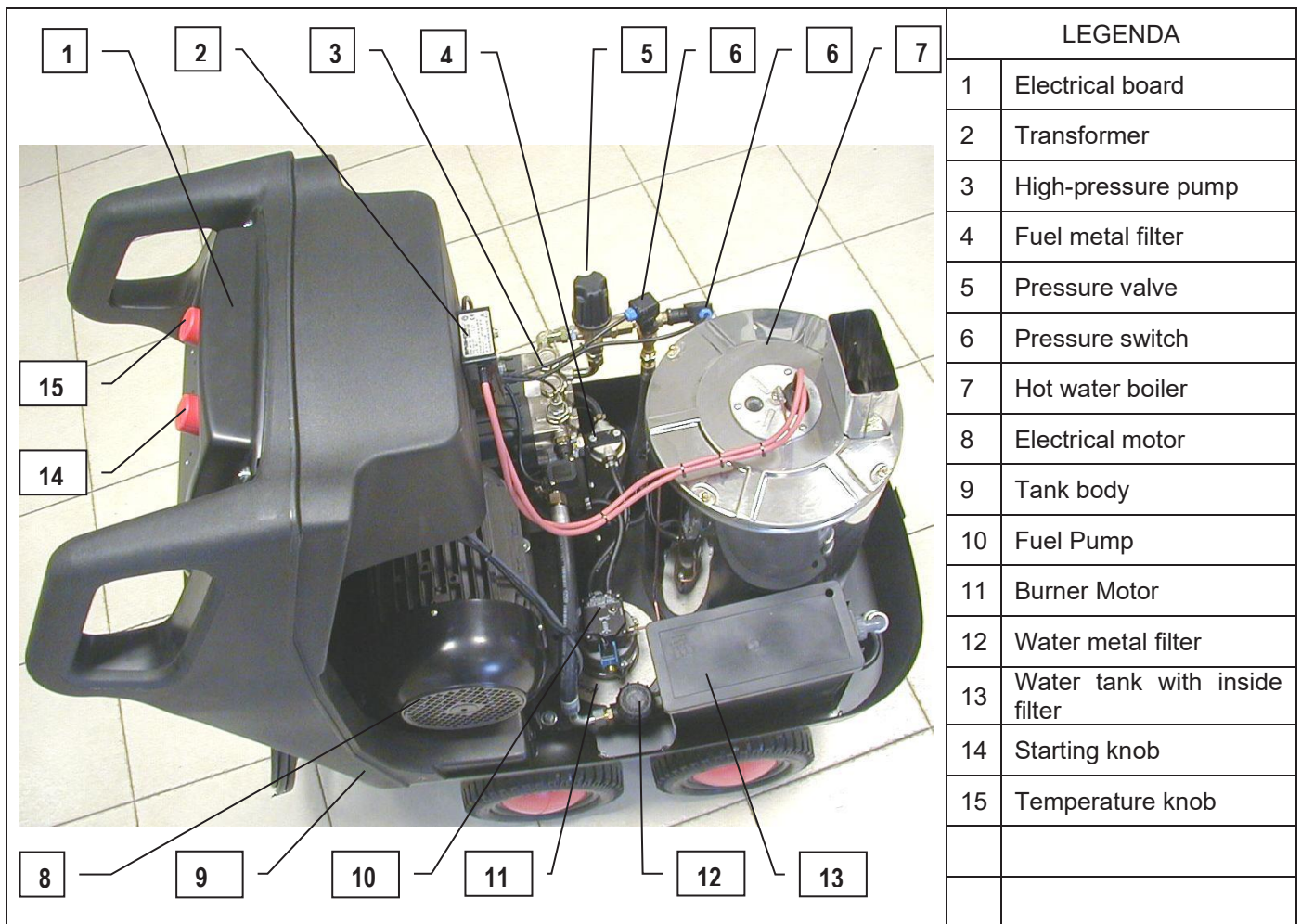
MODEL		12/10	15/15	20/15	15/21	20/21
Pressure	BAR	120	150	200	150	200
	P.S.I.	1750	2175	2900	2175	2900
Motor Power	HP	3	5.5	7.5	7.5	10
	KW	2.2	4	5.5	5.5	7.5
	RPM	1450	1450	1450	1450	1450
Tension	V	230-50Hz Single Phase	400-50Hz Three Phase	400-50Hz Three Phase	400-50Hz Three Phase	400-50Hz Three Phase
Maximum Flow	L/H	600	900	900	1260	1260
	Gal/h	158	237	237	332	332
Temperature	°C	30 - 100	30 - 120	30 - 150	30 - 150	30 - 150
Water Tank	Lt.	5	5	5	5	5
Fuel Tank	Lt.	24	24	24	24	24
Detergent Tank	Lt.	8	8	8	8	8
Dimensions	H.	1040	1040	1040	1040	1040
	L.	700	700	700	700	700
	P.	1100	1100	1100	1100	1100
Weight	Kg.	120	125	135	135	145



## 4. Dimensions of the Machine



## 5. Main Parts





### 6. Working and Safety Norms

- Make sure that the machine is constantly supplied with water. Dry working would cause serious damages to the cleaner seal system.
- Electrical connections must be carried out by skilled/trained personnel only.
- Never pull the power cord to disconnect the plug nor pull the hose to move the machine.
- Don't leave the machine in a low-temperature place and protect it from frost and general bad weather conditions.
- Avoid vehicle transit on the high-pressure hose.
- While the machine is running do not cover it and avoid placing it where there's low air supply.
- Avoid vehicle transit on the high-pressure hose.
- While the machine is running do not cover it and avoid placing it where there's low air supply.
- If you are working indoors, it's compulsory to install a fan to discharge the exhaust gases outside.
- The fan terminal must not be obstructed. Don't leave the lance or any other object near the exhaust outlet.
- The nature of the gases as well as the high-temperature area to be considered very dangerous, the operator must thus be adequately informed to avoid being scalded.
- Don't leave the machine outside when it rains or when the weather conditions are bad. The operators must wear protection clothes while using the machine.
- Do not leave the machine for more than 5 minutes working with the gun closed, the water temperature would increase rapidly causing serious damages to the seal system.
- Each time the cleaner has to be switched off blow off the hose residual pressure by using the gun.
- Don't put the hands in front of the cleaner's water jet while the machine is working.
- Do not use different fuels other than the ones recommended by the manufacturer.



#### **WARNING!**

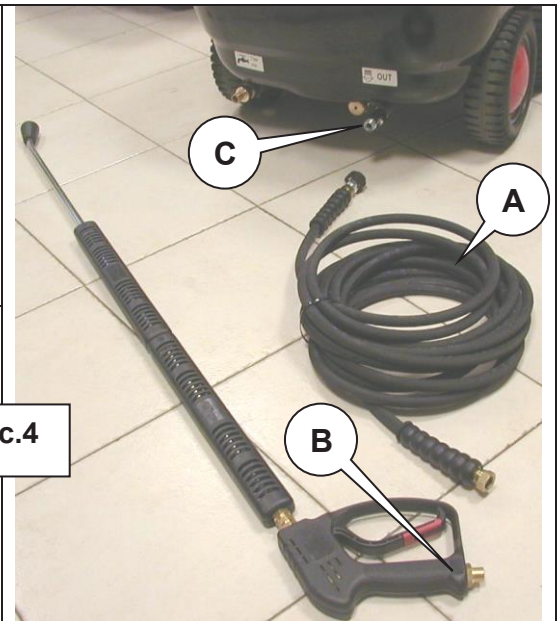
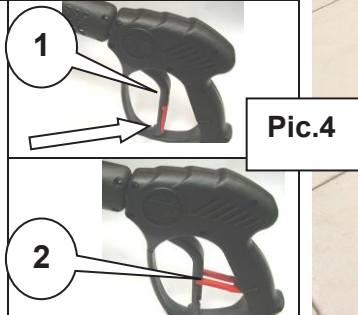
- Don't carry out any operation on the machine before having unplugged it.
- Don't carry out any unwary operation on the electric cable and make sure the same is not damaged.
- Never direct high-pressure water jets towards people, animals, electrical installations or the machine itself
- Use always only clean water. Dirty water and chemical corrosive products are harmful to the machine.
- The cleaner is equipped with idle wheels; it thus recommendable to avoid placing the machine on ramps or slanted floors. Do not tilt the machine by more than 20°C (with a full tank)
- It is forbidden to use plug extensions if the work environment is subject to water/humidity presence which could cut the isolating conditions of the system. Always check the isolation of the electric cable as well as the equipment's integrity



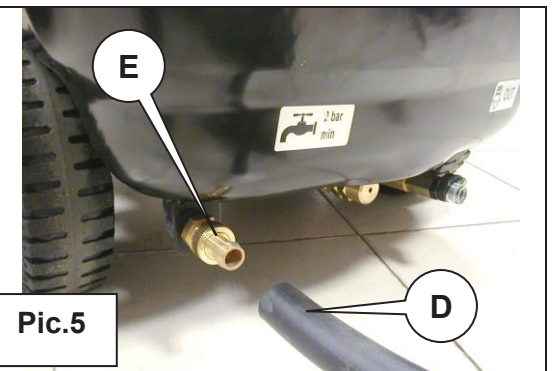
## 7. Machine Installation

The cleaner you are about to use will operate at its best if all instructions are duly followed. Before turning on the machine, make sure it is perfectly horizontal on a surface. Connect the high-pressure hose **A** to the gun **B** and the other end of the hose to the intake fitting, fixing tightly the fastening nut **C** (See picture 4)

To start working press the lever pos. **1** and the water jet will come out from the lance. To stop the water jet just release the lever pos. **1**. Once you finished working release the lever, rotate the switch pos. **Picture 8** and set it on the **OFF** position. To place the lance safely away once finished working insert the safety catch see picture **2**.



Connect the water feeding hose **D** to the inlet fitting **E** (See picture 5). It is recommended to use a reinforced hose having an inner diameter of at least 16 to 18 mm. The water intake must be of at least 15 l/min and have a max inlet temperature of 60°C.



Fill tank **F** (See picture 6) with gas oil (Diesel).  
Fill the detergent tank **G** (See picture 6) with a biodegradable product.



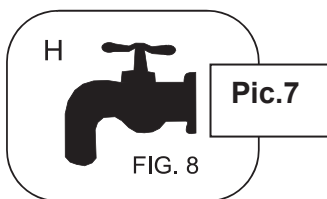
Make sure that the electrical tension and amperage are suitable for the machine. The cleaner must be connected to a suitable feeding point equipped with an efficient contact to earth and controlled by an overload cut out switch.





### 8. Machine Start-up

After having installed the machine, to operate it, open the water supply faucet **H**.



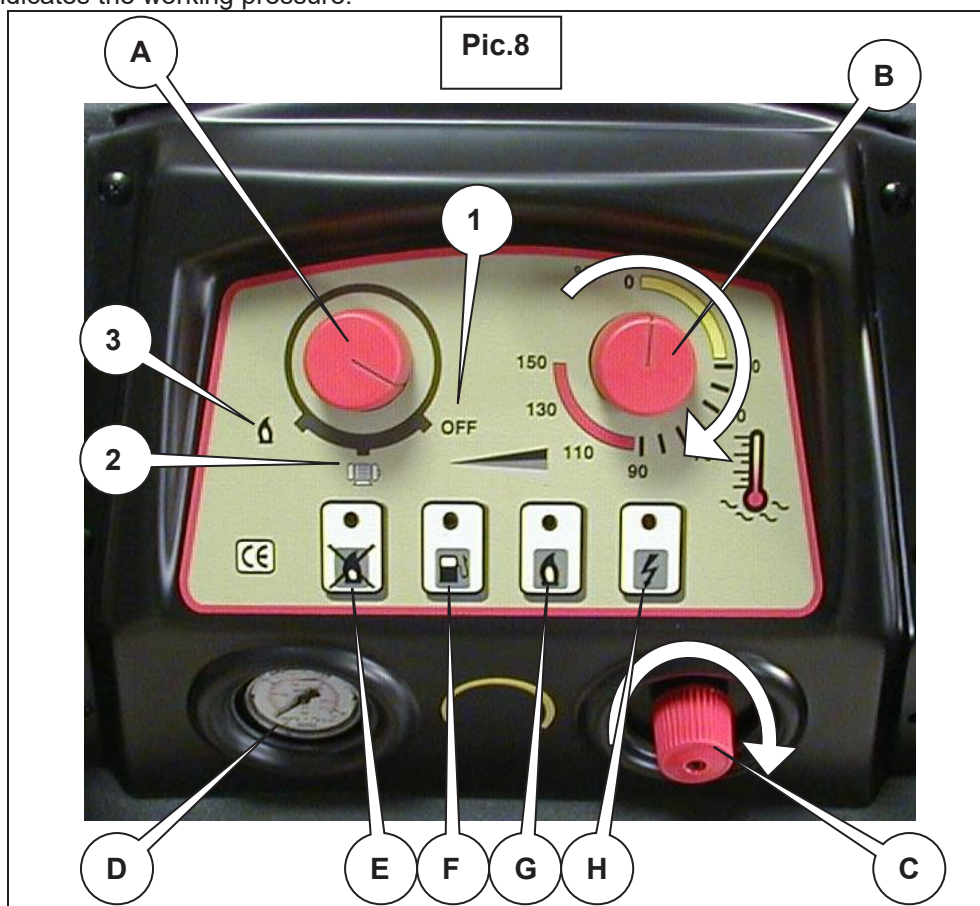
The control panel has been designed to run the operations easily. The knob **A** has three main functions

Pos.1	<b>OFF</b> indicates that the machine is turned off	Pos.2	The second position indicates that the motor pump is on.	Pos.3	The third position <b>ON</b> indicates that the boiler is on.
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Knob **B** turns on the thermostat and permits to reach temperatures from 0 to 150° C.

Knob **C** permits the operator to add chemical biodegradable detergent while the machine.

Manometer **D** indicates the working pressure.



On the machine's board are found also 4 lighted LEDs which indicate the following functions:

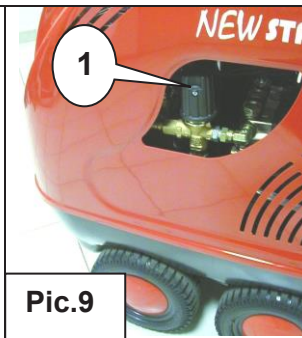
	This is lit when the machine is working. It flashes when the flame turns off inside the boiler.		This is lit when there's a lack of gas in the tank.		This is lit when the burner is on.		This is lit when there's tension in the electrical installation.
<b>E</b>		<b>F</b>		<b>G</b>		<b>H</b>	



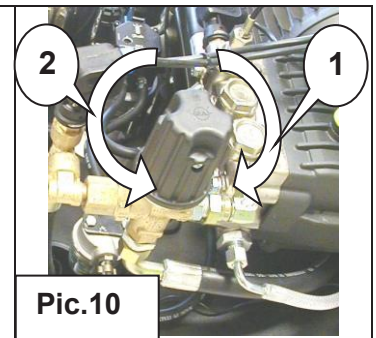


## 9. Regulation of the Operating pressure

It is possible to regulate the operating pressure. From the opening placed on the side of the cover, see picture 9, rotate the black knob pos. 1 clockwise picture 10 pos.1 . Pressure increases when rotating the knob picture 10 pos. 2 anti-clockwise.



Pic.9



Pic.10



**IMPORTANT!** Make sure that the operating pressure never exceeds the pressure indicated on the pump's plate.

The hydraulic installation is equipped with a safety valve which operates in case of exceeding pressures.

## 10. Machine Shelter

Once finished working after having discharged the remaining pressure in the hose and after having inserted the safety catch on the gun picture 4 pos. 1, wind-up the electrical hose and the high-pressure hose in order not to damage them. Place the high-pressure cleaner in a sheltered away from the possibility of non-authorized people to use it.

## 11. Standard Equipment

Check the machine as soon as you receive it. The high-pressure cleaner must be equipped with a thermic lance, a 10 mt. High-pressure hose and a nozzle suitable for the model.

## 12. Accessories

The company ALBERTI INTERNATIONAL can supply, upon request, a nozzle with rotating jet suitable to clean up the hardest dirt present on the surfaces to be cleaned.

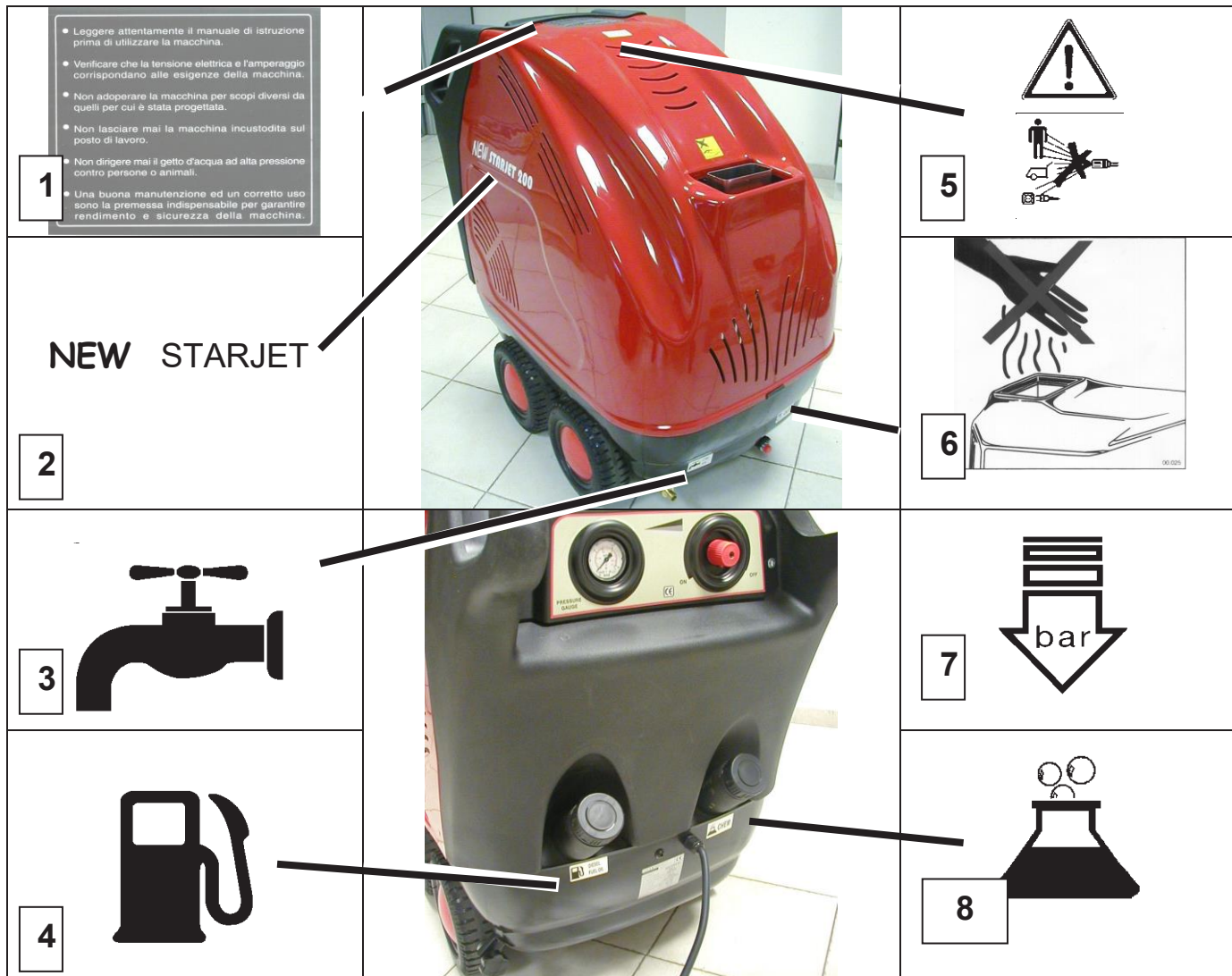
## 13. Detergents

It is recommended to use only liquid detergents to avoid using **powder detergents**. The detergents must be biodegradable as per the laws in force.



### 14. Labels

Here below are listed all labels used and their meaning.



1	Important notes	5	Warning! Do not direct the high-pressure jet towards people, animals or objects
2	Type of machine	6	Warning! The outlet of high-pressure exhaust gases
3	Water feeling	7	Lance Delivery.
4	Fuel tank	8	Detergent Tank

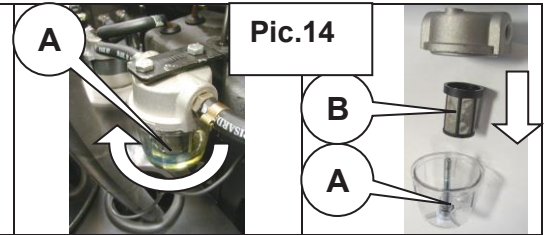


#### WARNING!

Make sure that the labels are present on the machine and that they are readable; if they are missing or erased, please attach new ones or replace them. They are available from licensed dealers.



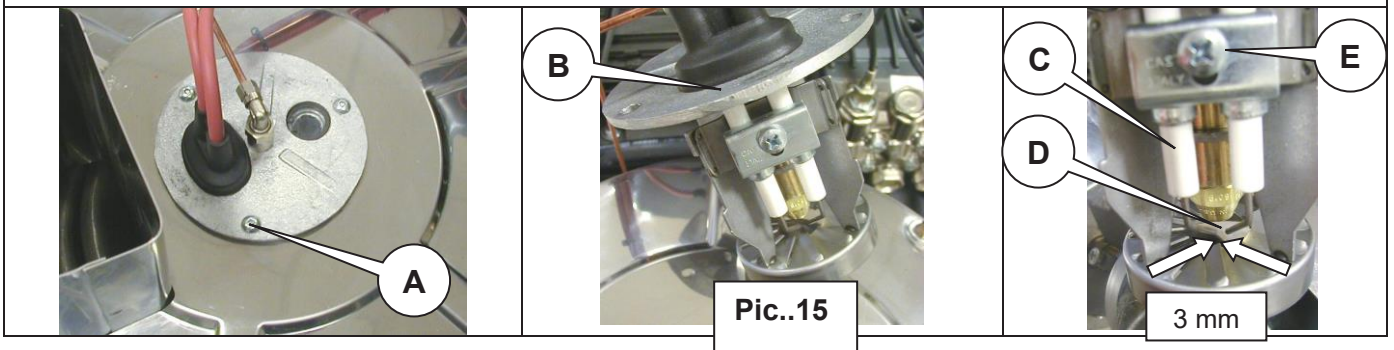
**Clean the fuel filter.** Remove the cover of the machine, unscrew the transparent glass see picture 14 pos. **A** extract the plastic filter by pulling it downwards pos. **B**, blow into it with an air jet. Re-assemble making sure the glass is tight well.



### Every month or after 100 hours of work

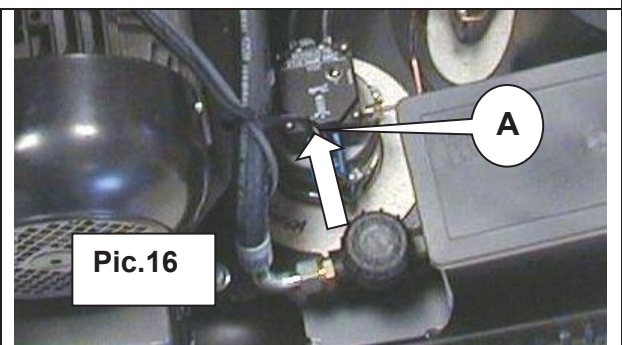
**Clean the combustion head and check the electrodes.** Remove the cove, unscrew the three screws picture 15 pos. **A**, extract the combustion head group pos. **B**. Clean with an air jet the head and check the glow plug pos. **C**. The distance between the electrodes must be 3 mm. If the distance must be adjusted, unscrew glow plug screw pos. **E**, remove the glow plug, adjust the distance to achieve the 3 mm. distance. Reassemble the glow plug while checking it is fixed correctly. Reinststate the combustion pack in place using the three screw locations on top of the boiler

**This maintenance operation must be carried out by skilled personnel.**



### Every month o after 200 hours of work

**Clean the combustion filter.** Remove the cover. Near the pump picture 16 pos. **A** on the side of the filter symbol, extract the plastic filter using a 4 mm. socked head screw. Clean the filter with a light air-jet a place it places back. I necessary to replace it.







## 15. Maintenance



**WARNING!**

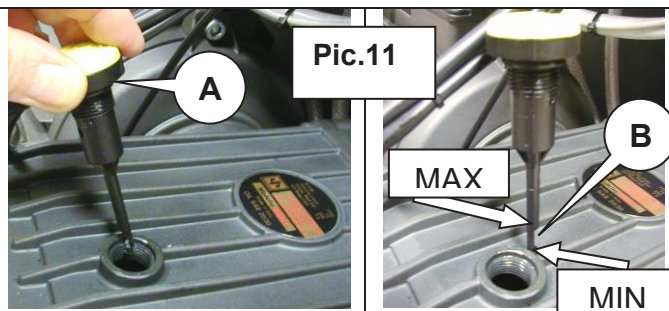
- All fixing and maintenance operations must be carried out by authorized personnel.
- All maintenance operations must be carried out keeping the machine on an even floor. The machine must be disconnected from the main power and the water supply
- A correct use and maintenance are necessary to guarantee the machine's reliability and it's best performance.
- To ensure regular and constant performances it is recommended to use original spare parts only.
- The machine you have bought has undergone a factory test which ensures correct running at standard conditions.
- Beware! In case the cleaner has been kept inoperative for a long time, run some water through the coil until it comes out before using it again.

Besides preliminary controls, the cleaner needs constant checks that are to be carried out according to the following time schedules:

### Daily

**Check the oil level of the pump**, after having removed the cover unwind the cap picture 11 pos. **A**, check the level which should be between the max and the min., picture 11 pos. **B** and if necessary, add some. After having checked the level place back the cap and the cover.

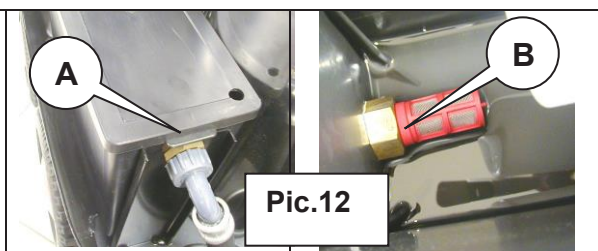
It is recommended to use oil-type SAE 15W/40. The first oil top-up should be carried out after one week of work.



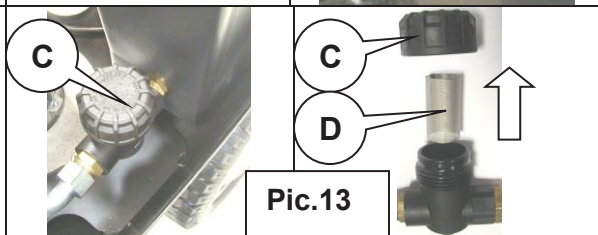
Check the working condition of the feeding hose and the extension cable.

### Every 2 weeks or after 50 hours of work

**Clean the water filter inside the tank.** Remove the cover and the cap of the tank picture 12 pos. **A** Unscrew the plastic filter pos. **B** . Blow into it with an air jet and screw back the cap place back the machine's cover.



**Clean the water filter placed outside the tank.** Remove the cover, unscrew the cap see picture 13 pos. **C** extract the filter by pulling it up pos. **D** , blow into it with an air jet. Re-assemble making sure the cap is tight well.





## **16. Inner coil cleaning**

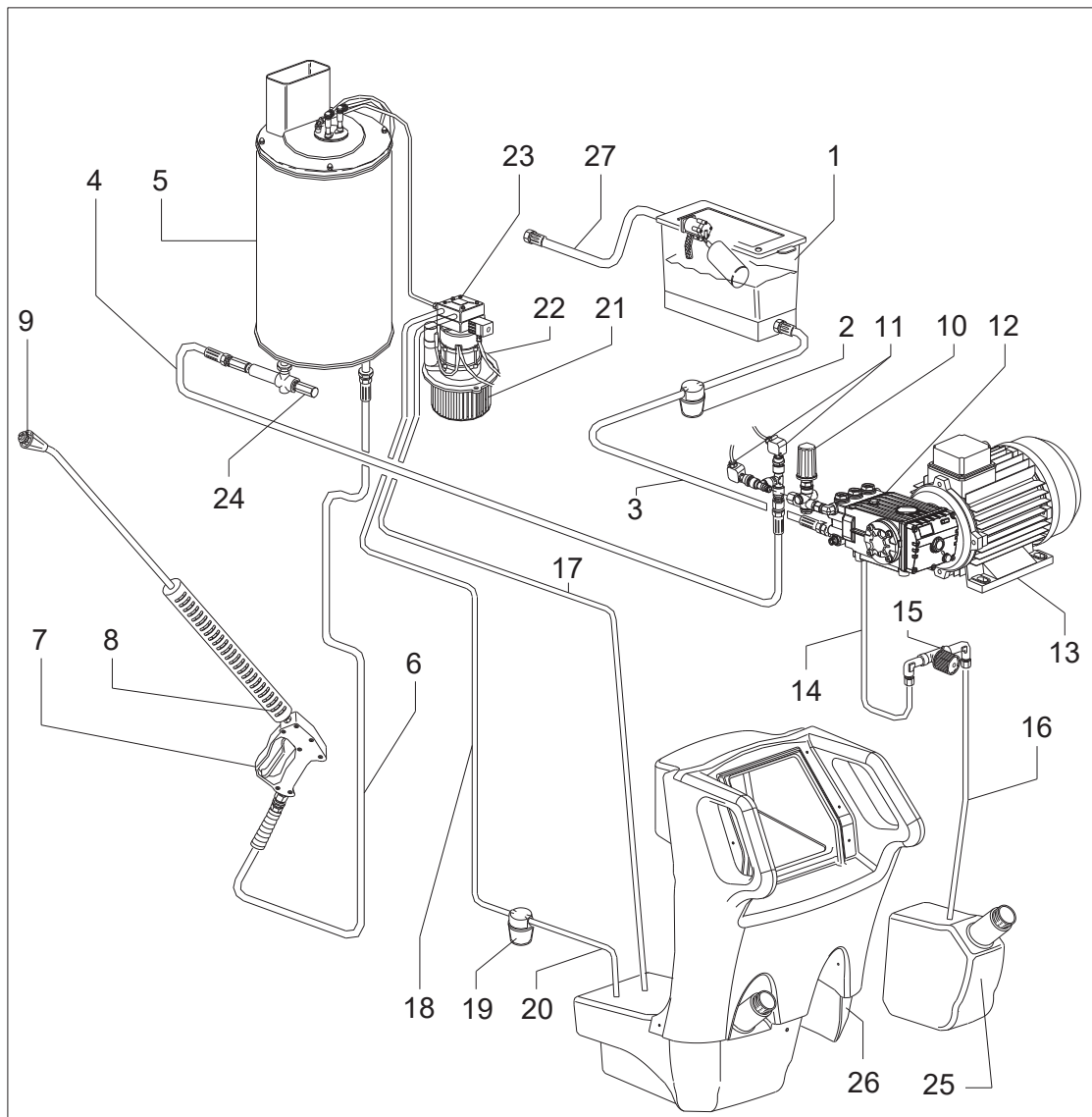
Dilute 1 Kg of a scaling product into a container filled with 10 Lt. of water. Disconnect the water supply, remove the cover of the cleaner, pull out the intake cable from the detergent tank, and put it into the container containing scaling product. Take the lance and remove the nozzle, run the machine with cold water for 20 minutes. Once this operation is over, replace the detergent intake cable into the tank and place the cover back. Connect the water supply, run the machine by using the lance without the nozzle until the water comes out clean than fit back the nozzle to the lance.

## **17. Machine Demolition**

If you want to junk your cleaner, please comply with the laws in force in your Country. The cleaner is manufactured with parts containing recyclable metals and plastics. The oil found inside the pump is highly dangerous and pollutant and **must not** be wasted in the environment or poured into civic drains. **For further information, please contact your local committee for exhaust oil drainage**



### 18. Hydraulic Diagram

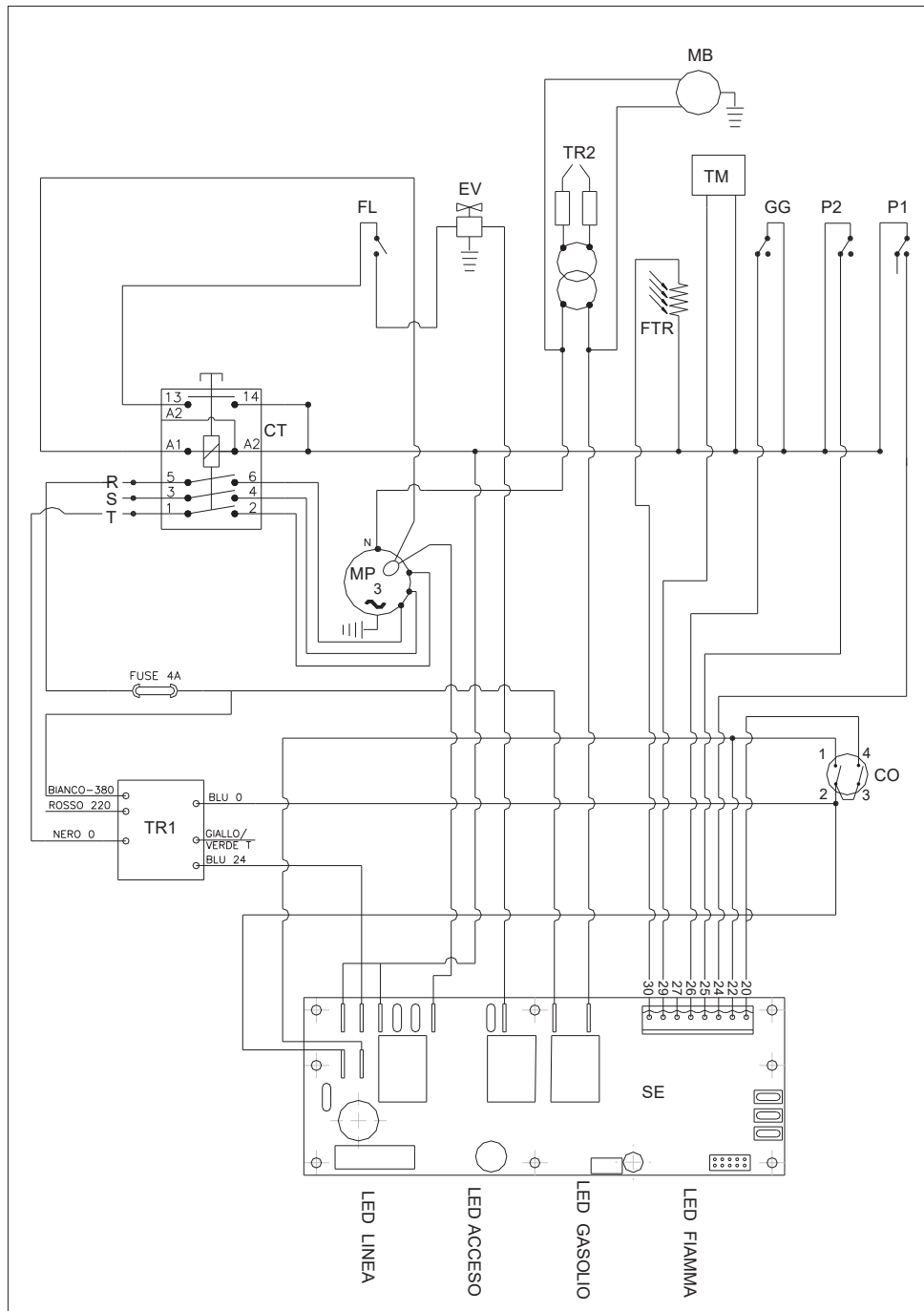


1	Water tank	10	Pressure regulation valve	19	Fuel filter
2	Outer water filter	11	Pressure switch	20	2° Fuel intake hose
3	A water intake hose	12	Pump	21	Motor fan
4	Boiler delivery hose	13	Electric Motor	22	Burner motor
5	Boiler	14	Detergent intake hose	23	Fuel pump
6	High-pressure hose	15	Detergent tap	24	Safety valve
7	Gun	16	Tank detergent hose	25	Detergent tank
8	Lance	17	Fuel discharge hose	26	Fuel tank
9	Nozzle	18	1° Fuel intake hose	27	Water net connecting hose





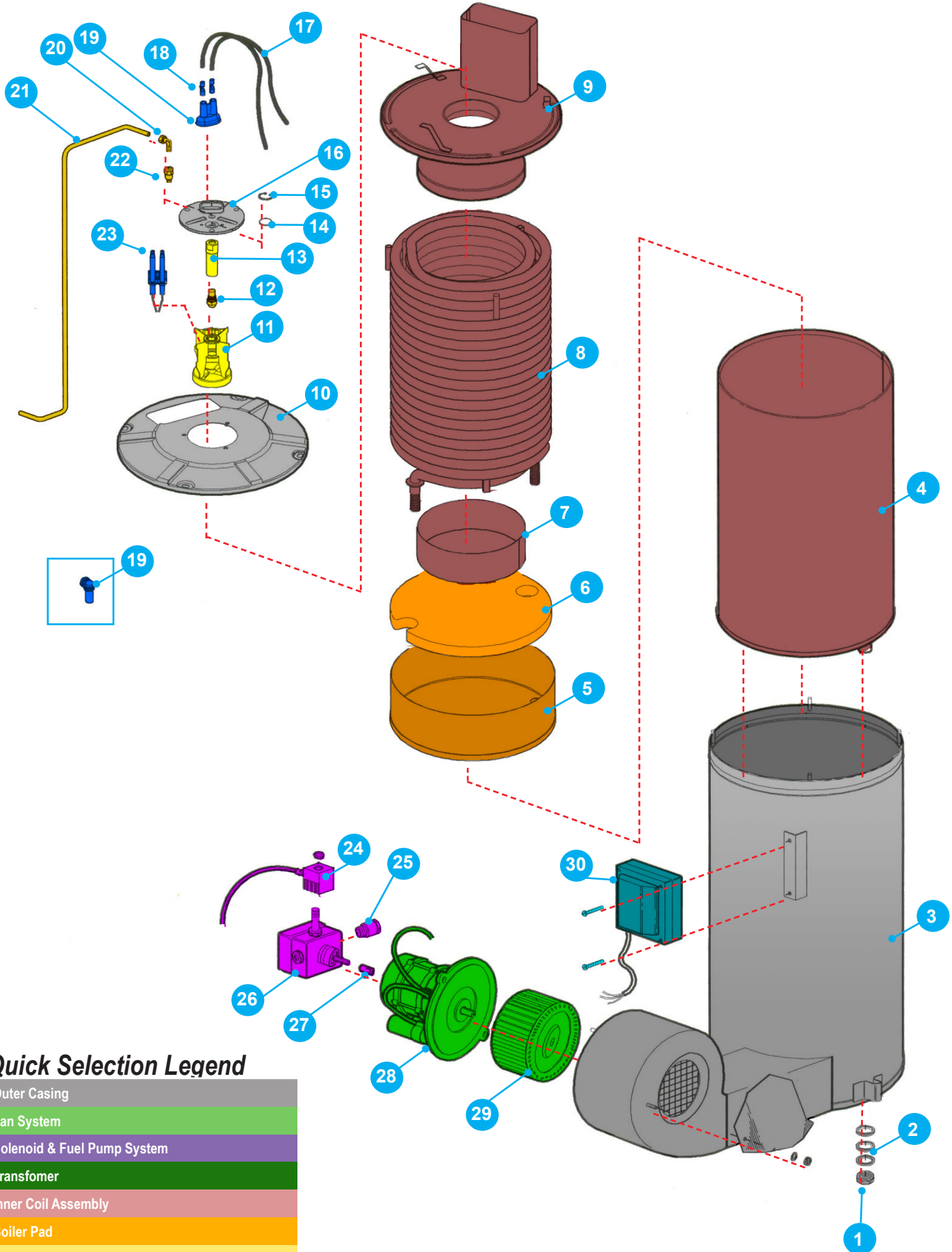
## 19. Three Phase Electrical Diagram



FTR	PHOTORESISTANCE	P2	PRESSURE SWITCH 15 BAR
SE	ELECTRICAL CARD	P1	PRESSURE SWITCH 40 BAR
TR1	LOW-PRESSURE TRANSFORMER	GG	FUEL FLOATING DEVICE
TR2	ELECTRODES HIGH-PRESSURE TRANSFORMER	EV	ELECTRO-VALVE
TM	THERMOSTAT	MP	PUMP MOTOR
CO	COMMUTATOR	MB	BURNER MOTOR
FL	FLOW SWITCH	CT	CONTACTOR



Pos	Qty	Description
1	3	HEXAGONAL NUT M16
2	3	MEDIUM FLAT WASHER M16 ISO 7089
3	1	EXTERNAL BOILER COIL (STAINLESS STEEL OR BLACK STEEL)
4	1	INTERNAL BOILER COIL
5	1	COIL COVER
6	1	INSULATING DISK
7	1	FLAME CONTAINMENT RING
8	1	WATER BOILER COIL (10 TO 23 LITRES)
9	1	INTERNAL BOILER FLUTE
10	1	EXTERNAL BOILER COVER
11	1	FUEL SUPPORTING NOZZLE
12	1	ATOMISATION FUEL NOZZLE WITH FILTER
13	1	NOZZLE HOLDER
14	1	INSPECTION BOILER GLASS
15	1	CIRCLIP RING
16	1	BOILER MOUNTING PLATE
17	1	ELECTRODES CABLES 11,000 VOLTS (240VAC SYSTEM)
17A	1	ELECTRODES CABLES 22,000 VOLTS (12VDC SYSTEM)
19	1	DOUBLE ELECTRODE COVER
20	1	COPPER FUEL LINE ELBOW
21	1	COPPER FUEL SUPPLY LINE
22	1	COPPER FUEL LINE CONNECTOR
23	1	DUAL ELECTRODES
24	1	240VAC / 24VAC FUEL SOLENOID
24A	1	12VDC FUEL SOLENOID
25	1	FUEL SUPPLY LINE FITTING
26	1	DIESEL FUEL PUMP
27	1	FUEL PUMP ADAPTOR
28	1	240VAC BURNER MOTOR
28A	1	12VDC BURNER MOTOR
29	1	FAN BLADE (LEFT ROTATION)
29A	1	FAN BLADE (RIGHT ROTATION)
30	1	240VAC IGNITION TRASFORMER
30A	1	12VDC IGNITION TRANSFORMER



### Quick Selection Legend

Outer Casing
Fan System
Solenoid & Fuel Pump System
Transformer
Inner Coil Assembly
Boiler Pad
Fuel System
Electrical System

Please Note: 240VAC Option Shown, 12VDC will vary.

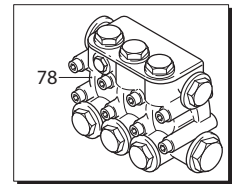
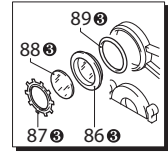
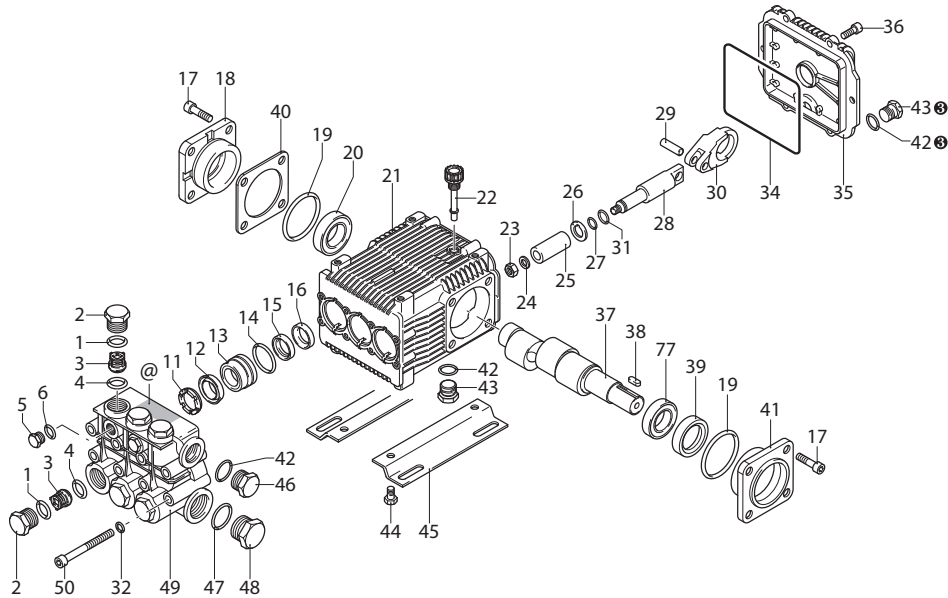




# RK

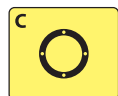
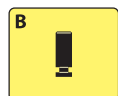
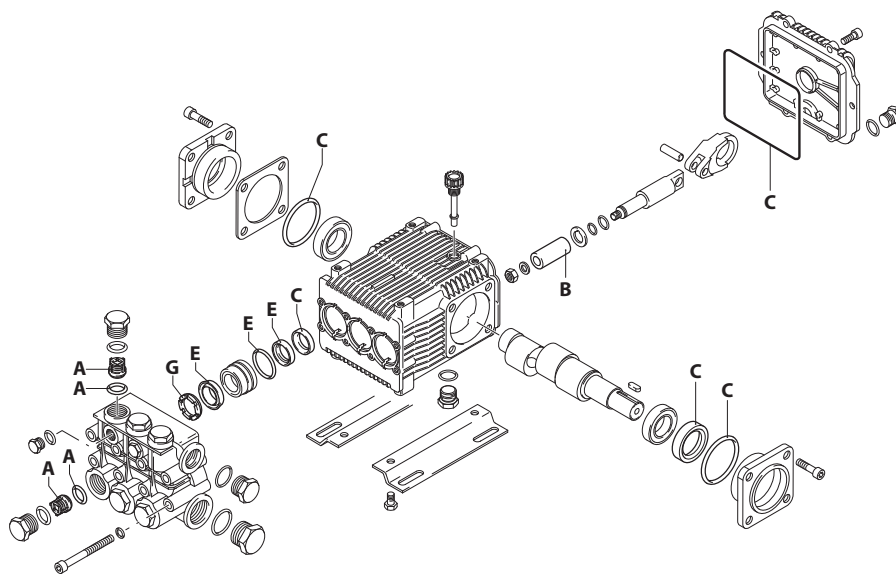
VERSION **N** 1450<sub>rpm</sub>

∅ 24x30 mm



UN003304-MR

### KIT RICAMBI / PART KITS



UN003305-AS



## 228 Series

RK 1450 rpm N version ø 24 mm

11.14 (20630) 13.17 (20634) 15.15 (20637) 15.20 (20897) (FC) 18.20 H (20643) 21.15 (20645) 18.16 H (FP)  
11.20 H (20631) 13.20 H (20635) 15.20 H (20638) 15.28 H (20640) 18.28 H (21467) 21.20 H (21129)  
11.25 H (20632) 14.16 (20636) 15.25 H (20639) 18.12 (20641) 21.10 (20644) 13.12 (FP)



Pos.	Cod.	Denominazione	Description	Qt	Note	Pos.	Cod.	Denominazione	Description	Qt	Note
1	960160	Guarnizione OR Ø 17,86x2,62	O-ring	6		34	1780510	Guarnizione OR Ø 106x3	O-ring	1	
2	960090	Tappo	Plug	6	● RK C=54Nm	35	1789010	Coperchio completo	Cover	1	
	960850	Tappo	Plug	6	● RK H=54Nm	36	1343510	Vite TCEI M6x14	Screw	6	C=10Nm
	1380740	Tappo	Plug	6	● RK H C=54Nm	37	2280100	Albero marcato 5	Shaft	1	○
1389051	Valvola completa	Complete valve	6		2280080		Albero marcato 3	Shaft	1	□	
4	880830	Guarnizione OR Ø 15,54x2,62	O-ring	6			2280070	Albero marcato 2	Shaft	1	● ★
5	880581	Tappo 1/4" G	Plug	2	● RK C=15Nm	2280060	Albero marcato 1	Shaft	1	★ ☆	
	1380690	Tappo 1/4" G nickel	Plug	2	● RK H - H=15Nm	38	1380520	Linguetta	Key	1	
6	820510	Guarnizione OR Ø 10,82x1,78	O-ring	2		39	180340	Anello tenuta	Ring	1	(b)
11	960110	Anello appoggio Ø 18	Ring	3	○ □ ● ☆	40	1380120	Spessore 0,10 mm	Shim 0.10 mm	1÷3	
	840300	Anello appoggio Ø 20	Ring	3	☆		1380130	Spessore 0,19 mm	Shim 0.19 mm	1÷3	
	840320	Anello appoggio Ø 22	Ring	3	★		1380530	Spessore 0,25 mm	Shim 0.25 mm	1÷3	
12	1382740	Tenuta acqua Ø 18	Water seal	3	○ □ ● ☆	1382810	Spessore 0,05 mm	Shim 0.05 mm	1÷3		
	840290	Tenuta acqua Ø 20	Water seal	3	☆	41	1380040	Supporto cuscinetto aperto	Support	1	
	840330	Tenuta acqua Ø 22	Water seal	3	★	42	740290	Guarnizione OR Ø 14x1,78	O-ring	3	③
13	1380090	Guida pistone Ø 18	Piston guide	3	○ □ ● ☆	43	1980740	Tappo 3/8" G ottone	Plug	2	③ C=20Nm
	1380150	Guida pistone Ø 20	Piston guide	3	☆	44	1263130	Vite TE M8x12	Screw	4	Optional C=20Nm
	1380160	Guida pistone Ø 22	Piston guide	3	★	45	1380141	Piede	Foot	2	Optional
14	961240	Guarnizione OR Ø 31,47x1,78	O-ring	3		46	1980740	Tappo 3/8" G ottone	Plug	1	RK C=25Nm
880330	Tenuta acqua Ø 18	Water seal	3	○ □ ● ☆	1981180		Tappo 3/8" G nickel	Plug	1	RK H - H=25Nm	
840280	Tenuta acqua Ø 20	Water seal	3	☆	47		180101	Guarnizione OR Ø 17,5x2	O-ring	1	
15	840340	Tenuta acqua Ø 22	Water seal	3	★	48	820361	Tappo 1/2" G ottone	Plug	1	RK C=40Nm
	1383130	Anello tenuta	Ring	3			960870	Tappo 1/2" G nickel	Plug	1	RK H - H=40Nm
	17	850370	Vite TCEI M8x16	Screw	8		C=24,5Nm	1381071	Testa	Head	1
18	1380050	Supporto cuscinetto chiuso	Support	1		1381070	Testa nikelata	Head	1	Ø18 RK H - H=40Nm	
19	640030	Guarnizione OR Ø 59,99x2,62	O-ring	2		1380020	Testa	Head	1	Ø20-22 RK	
20	2280340	Cuscinetto	Bearing	1		1380680	Testa nikelata	Head	1	Ø20-22 RK H	
21	1382770	Corpo pompa	Pump body	1		50	820150	Vite TCEI M8x70	Screw	8	C=24,5Nm
22	880130	Tappo	Plug	1		77	1383140	Cuscinetto	Bearing	1	
23	962010	Dado	Nut	1	● C=20Nm	49	1389270	Premontaggio testa	Head assembly	1	Ø18 RK
24	962000	Rondella	Washer	3			1389272	Premontaggio testa	Head assembly	1	Ø18 RK H
25	1380940	Pistone Ø 18	Piston	3	○ □ ● ☆		1389271	Premontaggio testa	Head assembly	1	Ø18 RK H=40Nm
	1380930	Pistone Ø 20	Piston	3	☆	1389208	Premontaggio testa	Head assembly	1	Ø20 RK	
	1382360	Pistone Ø 22	Piston	3	★	1389212	Premontaggio testa	Head assembly	1	Ø20 RK H	
26	1380950	Disco	Plate	3		1389216	Premontaggio testa	Head assembly	1	Ø22 RK	
27	600180	Guarnizione OR Ø 7,66x1,78	O-ring	3		1389220	Premontaggio testa	Head assembly	1	Ø22 RK H	
28	1380920	Pistone di guida	Piston	3		86	1260250	Indicatore livello	Level gauge	1	③
29	1380060	Spina	Pin	3		87	1260430	Anello	Ring	1	③
30	1383050	Biella alluminio	Connecting-rod	3		88	1780690	Disco	Plate	1	③
	1383020	Biella bronzo	Connecting-rod	3		89	1140450	Guarnizione OR Ø 20,24x2,62	O-ring	1	③
31	1080401	Anello antiestrusione	Ring	3		③ Compreso nel cod. 1789010 / Part of part n° 1789010					
32	1381850	Rondella	Washer	8							

### KIT RICAMBI - PART KITS

A=KIT 2864 valvole valves		pistoni pistons		B=KIT 2757 ø 18 B=KIT 2758 ø 20 B=KIT 2759 ø 22		C=KIT 1855 tenute olio oil seals	
Pos.	Q.ty	Pos.	Q.ty	Pos.	Q.ty	Pos.	Q.ty
3	6	25	3	16	3	34	1
4	6			19	2	39	1

tenute acqua water seals		E=KIT 1857 ø 18 E=KIT 1887 ø 20 E=KIT 1888 ø 22		anelli appoggio support rings		G=KIT 1829 ø 18 G=KIT 1815 ø 20 G=KIT 1816 ø 22	
Pos.	Q.ty	Pos.	Q.ty	Pos.	Q.ty	Pos.	Q.ty
12	3	11	3				
14	3						
15	3						

### SIMBOLOGIA - SYMBOLS

○ Per / For RK 11.14 cod. 20630 RK 11.20 H cod. 20631 RK 11.25 H= cod. 20632	● Per / For RK 14.16 cod. 20636	☆ Per / For RK 18.12 cod. 20641 RK 18.16 H RK 18.20 H cod. 20643 RK 18.28 H= cod. 21467	★ Per / For RK 21.10 cod. 20644 RK 21.15 H cod. 20645 RK 21.20 H cod. 21129
□ Per / For RK 13.12 RK 13.17 cod. 20634 RK 13.20 H cod. 20635	● Per / For RK 15.15 cod. 20637 RK 15.20 cod. 20897 RK 15.20 H cod. 20638 RK 15.25 H= cod. 20639 RK 15.28 H= cod. 20640		

- C Tolleranza coppia di serraggio +0÷-10% / Tightening torque tolerance +0÷-10%  
 ● Avvitare con Loxeal 55-14 / Screw with Loxeal 55-14  
 (b) Montare anello tenuta con attrezzo cod. 2281010 / Fit the seal with tool code nr. 2281010  
 H= OLTRE 250 bar - OVER 3600 psi  
 @ Posizionamento targa di identificazione / Identification plate positioning

### PARTI SPECIALI IN VITON SPECIAL PARTS

Cod. - Part n°	Denominazione - Description	Q.tà - Q.ty
2809	Tenute acqua/Water seals ø 18	1
2810	Tenute acqua/Water seals ø 20	1
2811	Tenute acqua/Water seals ø 22	1

### Olio - Oil

Tipo / Type	Quantità / Quantity
SAE 15W40	0,435 Kg



### 20. WARRANTY

For as much as the machine's warranty is concerned apply to paragraph **WARRANTY CONDITIONS** and **WARRANTY CERTIFICATE** given with the machine.

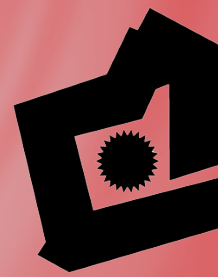
### 21. Trouble Shooting

PROBLEM	CAUSES	SOLUTIONS
WATER DOESN'T COME OUT	Dirty water filter Blocked intake valves Clogged lance nozzle	Clean or replace Check Clean
WEAK OR IRREGULAR PRESSURE	Open detergent valve intaking air Insufficient water supply Pump intaking air Worn out valve Worn out or not suitable nozzle Worn out gaskets Exceeding water temperature Encrusted coil	Check  Check the capacity Check Replace Replace Change Check Descale
THE BURNER DOESN'T TURN ON	Exceeding air intake Dirty fuel filter Dirty fuel pump filter Dirty burner nozzle Defected thermostat Obstruct or broken electrovalve Insufficient spark to the electrodes Defected flow meter and/or pressure switch Motor pump joint Insufficient or non-existing voltage	Check Replace Clean or replace Replace Replace Replace Replace  Replace  Replace Check
NOISY MACHINE	Air intake Worn out, dirty or obstructed valves Exceeding water temperature	Check the intake tubes
PRESENCE OF WATER IN THE OIL	Worn out water-oil seals High level of humidity in the air.	Replace  Check
OIL LEAKAGE FROM THE HEAD	Worn out O-Rings in the seal system	Replace
MOTOR DOESN'T START WHEN PRESSING THE SWITCH	The plug is not working due to overheating	Check the plug, the hose, and the switch
MOTOR STOPS SUDDENLY	The thermic protection is not working due to overheating	Make sure that the tension is suitable





**PUMPS AUSTRALIA guarantees the quality of the cleaner's components for 12 months starting from the date of purchase. The warranty consists and is limited to the obligation of fixing or replacing -free of charge – all the components that have faults due to manufacturing or to the quality of the materials. This obligation is valid where the warranty certificate is effective. PUMPS AUSTRALIA cannot be responsible for any improper use, for parts subject to wear, for the electrical parts, for the labour, for the delivery costs of the components under warranty. PUMPS AUSTRALIA does not acknowledge any warranty for the cleaners or/and for the parts which have been tampered by the customers or someone else; for problems caused by the users or someone else not qualified or from the non-observance of the norms contained in this manual. The warranty is not acknowledged for those cleaners on which have been carried out any operation not approved by the manufacturer. PUMPS AUSTRALIA recommends to use only original spare parts and to contact the licensed technicians. The warranty certificate must be fully filled in and sent to PUMPS AUSTRALIA. within 10 days from the date of purchase. Failure to conform to these warranty stipulations can automatically void the warranty. The warranty certificate is effective only if the customer can exhibit the present warranty certificate.**



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Clinton Farmer; Kutkabubba Aboriginal Corp.



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