

# USER'S MANUAL

## MINIJET



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### RIONED

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P.O. BOX 5070  
The Netherlands  
5004 EB Tilburg

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# 1 INTRODUCTION

RIONED thanks you for your purchase of the RIONED drain and sewer-clearing machine. We recommend that you read this manual thoroughly and see that the machine is handled and maintained in the proper manner. If your machine should give trouble and need servicing, when you want to order parts, or if you have any questions, contact your RIONED dealer.

The machine is built by:

## **RIONED**

P.O. Box 5070

5004 EB Tilburg

The Netherlands

Telephone: +31 13 5479100

Telefax: +31 13 5479104

Your machine is specifically designed to clean drain- and sewer pipes and to clean floors or terraces/ surfaces with hot or cold water. For cleaning drains, special nozzles are included in the delivery.

For all other purposes, the spraying-gun which is also included can be used.

Authorised personnel may only use the machine.

The machine can not be used in an explosive environment.

In this manual, you will find all necessary information concerning operation and maintenance of your machine. If handled properly, your machine is guaranteed according the general delivery conditions.

## **1.1 Use**

The electric motor drives the high pressure pump. This pump receives water and pressurizes it. The pressure can be continuously adjusted. The pressurized water leaves the machine through the high pressure hose.



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## 2 SECURITY

Be responsible for other people when you are working with this machine.

This manual contains instructions for fundamental conditions that must be followed by use and maintenance of this machine.

That is why it is necessary that authorised and qualified personnel must read the user's manual and the user's manual must always be available with the machine. Near the general regulations in this chapter, you must also follow the security regulations in the other chapters.

### 2.1 Instruction indications in this manual

The in this manual containing security instructions, which are dangerous if they are not obeyed, are marked with general security signs.



Security sign DIN 4844-W9.

### 2.2 Descriptions security measures

• Pressure regulator  
This machine is equipped with a pressure regulator. By turning the control knob of the pressure regulator you can regulate the pressure. This pressure regulator prevents the pressure from becoming too high and works as a safety measure

### 2.3 Personnel protection outfit

- Protection looking glasses
- Ear protector
- Gloves (Recommended)
- Work clothing (Recommended)

### 2.4 Warnings

It is strongly forbidden to spray on humans and animals.

Never block any lever then otherwise is mentioned.

Put on protection looking glasses and ear protectors before starting the machine.

Ensure that the spraying nozzle does not leave the drain! Water under high-pressure may cause severe injuries!

Always begin to set the pressure half of the maximum when using a spray gun.

### 2.5 Personnel qualification and education

Personnel that use, maintain and inspect the machine must have the right qualifications for this job.

Responsibility and authorisation of the personnel and the supervision on the personnel must be embedded. If the knowledge is not present, the user must provide for the necessary education.

### 2.6 Danger that can occur if the security regulations aren't observed

If the security regulations are not observed, danger can occur for personnel and for the environment.

No amendments are given if the regulations are not observed.

If the regulations are not observed, this can result in:

- Failure of important functions of the machine.
- Failure of prescribed methods for maintenance.
- Exposure of persons to dangers of electrical or mechanical failures

**2.7 Working safely** The in this manual named security prescriptions, the national prescriptions to prevent accidents and the internal labour, company and security prescriptions must be followed by the user.

**2.8 Security regulations for the user and technical service**

- Protections of moving parts (for example couplings) may not be removed if the machine is working.
- Leakage of dangerous mediums must be disposed in a manner that there is no danger for the personnel and environment. Statutory regulations must be followed.
- Danger caused by electricity must be excluded.

**2.9 Security regulations for maintenance, inspection and mounting activities**

- The user sees to it that qualified technicians do all maintenance, inspection and mounting activities. They must study the manual thoroughly.
- Maintenance may only be done when the machine is not functioning and the plug is out of wall socket.
- The in the user's manual mentioned handling to stop the machine must be notified.
- Directly after maintenance of the machine, all the security and protection facilities must be functionally.
- Before starting the machine again, you must follow the instructions correctly.

**2.10 Making changes and fabricate spare parts** Changes to the machine are only permitted if Rioned has given written authorisation. The use of original spare parts and accessories are for the safety necessary. Rioned is not responsible for injuries or damages if other spare parts are used.

**2.11 Improper use** The security during working with the machine is only guaranteed if the use of the machine is conforming the user's manual. The limits that are written in chapter "Technical Specifications" and "Appendix" may never be overstep.

If the Rioned machine does not work or give troubles, it is forbidden to work further with the machine. Telephone your dealer or the technical department of your dealer RIONED.

Rioned Telephone: +31 13 547 91 00

This manual contains all the necessary information concerning control and maintenance. If the device is positioned correctly, properly controlled, and regularly maintained, a warranty will be given according to the general conditions of delivery. However, should it arise that the control and maintenance procedures are not diligently followed, the warranty will become invalid.

### 3 TECHNICAL DATA

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#### 3.1 General

---

Description ( <i>symbol</i> )	Technical unit	( <i>SI unit</i> )
Colour	:	Black
Length HP hose	:	20 m
Diameter HP hose	:	NW8 (1/4" outside, 3/8" wartel)
Length 2e HP hose	:	10 m
Diameter 2e HP hose	:	NW5 (1/8" outside, 1/8" with ST30 nipple)
Fill medium	:	Water ( $H_2O$ )
Maximum temperature medium	:	60 °C (333,15 K)
Year of construction ( <i>month/year</i> )	:	See type plate on frame

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#### 3.2 Motor

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Description ( <i>symbol</i> )	Technical unit	( <i>SI unit</i> )
Power ( <i>P</i> )	:	1,85 kW (2,5 PK)
Voltage ( <i>U</i> )	:	230 Volt
Current ( <i>I</i> )	:	13,5 Amp

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More information, concerning your motor, you can find it in the motor manual which is delivered on the machine.

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#### 3.3 Pump

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Description ( <i>symbol</i> )	Technical unit	( <i>SI unit</i> )
Type	:	Speck NP 10 (100B-10L)
Maximum pressure ( <i>p</i> )	:	See type plate on frame
Oil	:	Transmission oil 150 according to ISO VG (DIN 51519), for example: Aral Degol BG 150 (SAE 90)
Maximum water temperature ( <i>T</i> )	:	90 °C (363,15 K)

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More information, concerning your pump, you can find it in the pump manual which is delivered on the machine.

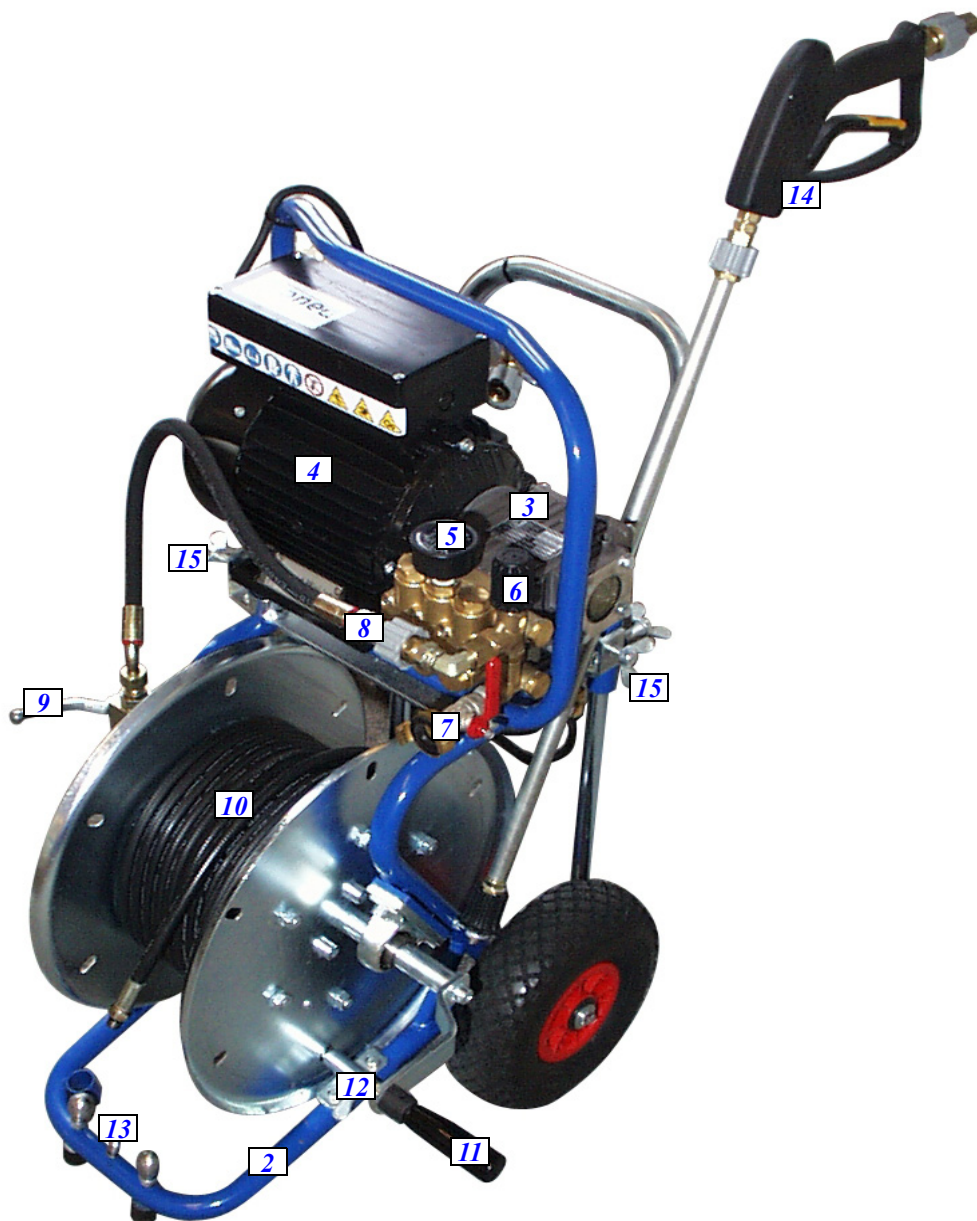




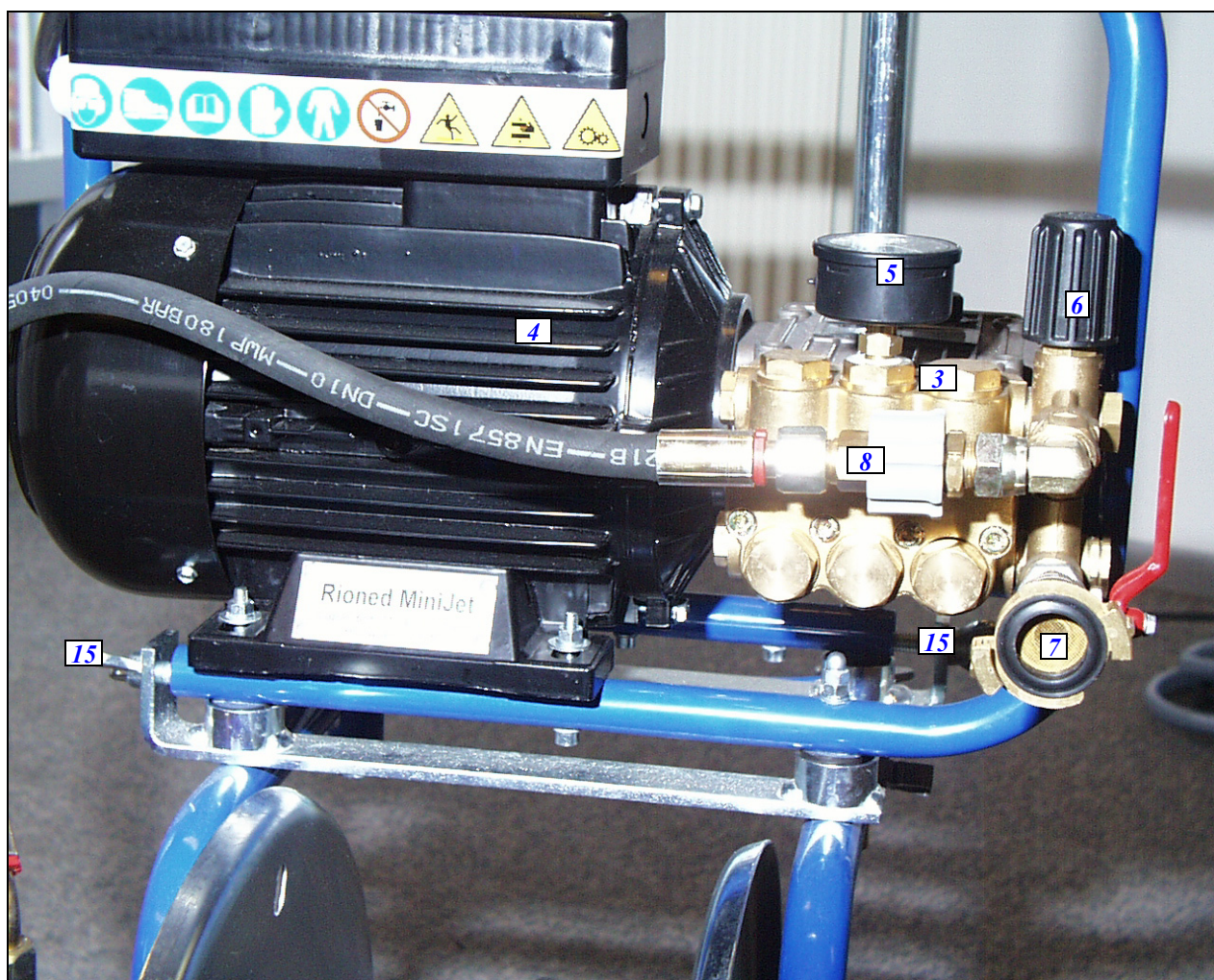
## 4 CONSTRUCTION

This machine contains the following main parts:

- |    |                          |     |                                   |
|----|--------------------------|-----|-----------------------------------|
| 1. | On/off switch            | 10. | High-pressure hose on reel        |
| 2. | Frame                    | 11. | Reel crank                        |
| 3. | High pressure pump       | 12. | Reel locking device               |
| 4. | Electric motor           | 13. | Connection nozzles                |
| 5. | Pressure gauge           | 14. | Spray gun with lance              |
| 6. | Pressure regulator/knob  | 15. | Wing bolt Engine/Pump combination |
| 7. | Connection water supply  | 16. | Wing bolt carrying handle         |
| 8. | Connection High-pressure |     |                                   |
| 9. | High-pressure (HP) valve |     |                                   |











## 5 CONTROL



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If you control, maintain or inspect the machine, you must have the right qualifications for this job. If you do not have the necessary knowledge, you may not use the machine. Further, you must convince yourself that you understand this manual thoroughly.

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**5.1 Transport** When you observe damage, during unpacking the machine, you have to notify Rioned.

**5.2 Line up**

1. Put the machine on the right spot.
2. Mark the surrounding.

**5.3 Before starting**

1. Check the oil level in the high-pressure pump (3). Add oil, if necessary.
2. Check if electrical wire is damaged, if so repair the wire.
3. Check if the water supply is connected (7).  
The maximum water temperature 60°C.
4. Turn the pressure regulator (6) counter clock wise.
5. Put the power plug in the wall socket.

**5.4 Starting**



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Put on protection looking glasses and ear protectors before starting the machine.

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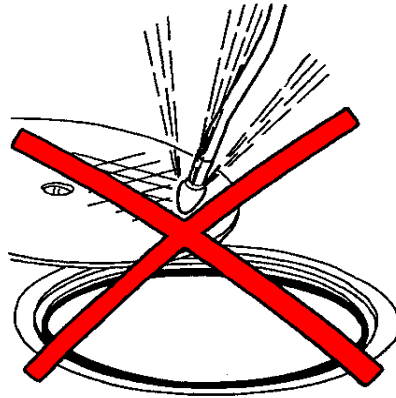


## 5.5 Unclogging a drain



### Attention!

Ensure that the spraying nozzle does not leave the drain! Water under high-pressure may cause severe injuries!



6. Screw the appropriate attachment onto the high-pressure hose.
7. Put the high-pressure hose into the sewer.
8. Turn the switch (1), to position “on”.
9. Turn the pressure regulator knob (6) clockwise until the required pressure reached, this pressure can be read on the pressure gauge (5).
10. Check if water drains away.  
Continue to flush for a while. At the same time wind the hose slowly up. Turn the pressure slowly back by turning the pressure regulator knob counter clockwise .
11. Turn the switch (1) position “off”, to stop spraying.

Treat your high pressure hose carefully:

- Clean after use.
- Ensure that no sharp objects are near the hose .
- Ensure that no traffic crosses the hose.
- If the hose has to be repaired, just use special repair couplings.

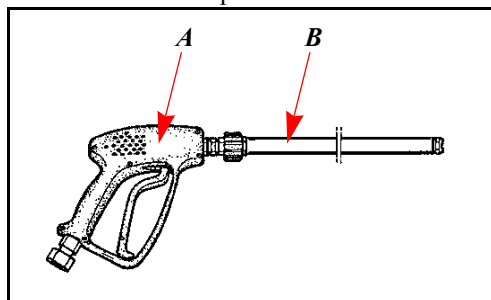
## 5.6 Cleaning wall, floors and terraces.



### Attention !

Before using a spraying gun, you must always set the pressure below the maximum (~ half of the max.pressure) . You have to do this before you turn the machine “on”. If the machine is turned on, you can increase the pressure by turning the pressure regulator knob clockwise until working pressure is reached.!

1. Screw the spray gun (A) on the lance (B). Then screw the gun onto the HP-hose, by using the two open ends.

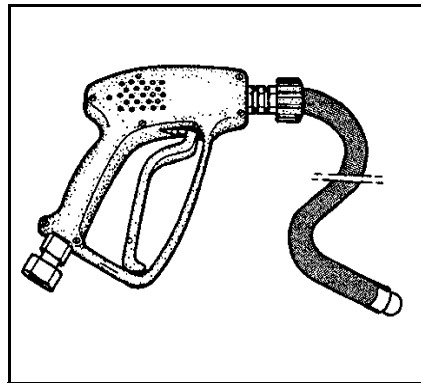


2. Completely unroll the high pressure hose (**11** and **12**).
3. If needed, attach the high pressure hose to the HP-connection (**8**).
4. Push the switch on (**1**).
5. Turn the pressure regulator knob (**6**) clockwise .
6. Point your lance (**14**) to the surface that has to be cleaned.
7. Pull the trigger of the spray-gun.  
The working pressure can be read from the pressure gauge (**5**).
8. Release the trigger (stop spraying).



#### Attention !

Always stop the electromotor and depressurize the system before servicing or repairing the machine.



Instead of the spray lance, you can also mount a NW 5-hose with small nozzle on the gun. This set can be used to unclog small pipes.

Always treat the high pressure hose well!

#### 5.7 Stop engine

1. Turn the regulator knob counter clockwise.
2. Turn the power switch “**off**”.
3. Close the water supply.

#### 5.8 Ending activities

At the end of the activities the following aspects must be fulfilled:

1. Stop the motor.
2. Remove HP hose and clean the hose.
  - a Close water supply and discharge the pressure.
  - b Disconnect the supply hose.
3. Store all auxiliaries.
4. Disconnect power plug.

Now you can move the machine.



#### Attention:

Always keep your machine free from frost. It can freeze up internal. Therefore always let out the water from the system !





## 6 MAINTENANCE



### Attention!

Always stop the engine first and depressurize the system before serving or repairing the machine.

To depressurize the system, you open the HP valve close the water supply. If the spray lance gun is attached you must also pull the trigger.

#### 6.1 Daily maintenance

##### 1. Oil level

Check oil level once a week. Add oil, if necessary.

If an oil level has dropped, this implies a leak in the system. In which case, check all gaskets, couplings. Immediately repair damage and fill the system with the correct oil.

### Mark!

During the settling-in period, the oil consumption of the pump can be more than usually.

#### 6.2 Weekly maintenance

Clean the carriage weekly. Use moist cloth, not wet.

#### 6.3 Minor servicing

Minor servicing must be carried out EVERY 250 WORKING HOURS (or at least once every 6 months) and includes the following parts of the machine:

#### 6.4 Extensive periodical maintenance

Have the high-pressure machine checked and maintained from time to time by the technical service of Rioned. In this way, long life and quality will be guaranteed.

#### 6.5 Maintenance scheme

##### Interval

Check oil levels	:	Every time before use
Cleaning carriage	:	weekly or with strong pollution.
Lubricate moving parts	:	Every 250 working hours or at least once every six month
Cleaning pressure regulator	:	Every 250 working hours or at least once every six month
Renew pump oil	:	Every 250 working hours or once a year
Decalcify suction valves	:	Once a year
Decalcify pressure valves	:	Once a year
Puncture nozzle holes	:	Every 50 working hours

Replace all parts immediately if there is wastage or defect.



## 7 TROUBLESHOOTING

Failure	Reason	Solution
Engine does not start or stops abruptly.	Plug loose	Attach the plug
	Main or secondary fuse blown	Replace fuse and start motor. If problem repeats, contact Rioned +31 13 547 91 00
The high-pressure pump does not produce the required pressure.	Water supply closed/cut off	Turn on supply/make supply
	Supply valve to water filter closed.	Open the supply valve
	Water filter clogged.	Stop the machine and clean the water filter
	Air in high-pressure pump	Allow the machine to run a few minutes. The failure will normally disappear. If not, contact the service department of your dealer
	Suction valves blocked	Carefully loosen the valves and descale them, if necessary
	Suction valves worn out.	Contact the service department of your dealer.
Pressure varies.	Water level in tank too low	Stop the engine, refill the tank and restart engine
	Water supply valve not sufficiently opened	Open the supply valve completely
	Water filter clogged.	Stop the machine and clean the filter
	Pump sucks air	Stop the machine and check all hoses and couplings for leakage
	Nozzle clogged	Stop the machine and clean the nozzle (clean the nozzle holes)
	Pressure valves dirty or worn	Stop the machine. Check the condition of the pressure valves. Clean or replace them
	Pump gasket worn out	Stop the machine and replace gasket
	Ceramic plungers in the pump damaged	Contact your dealer +31 13 547 91 00
	Pressure control clogged or internally damaged.	Contact your dealer. +31 13 547 91 00

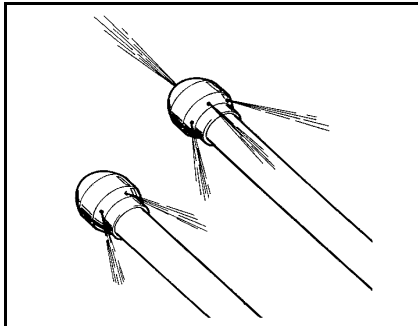


## 8 ACCESSORIES

Delivered with this machine are several accessories:

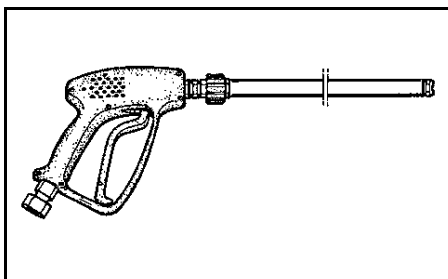
1. Two nozzles.

First place the seal over the thread, than turn the nozzle (open) over the thread with a little grease, turn the nozzle hand tight. Than after declogging the drain, remove open nozzle and replace for the closed one to flush for a while.



2. One gun with lance.

Mount the spray gun on the high pressure hose using the open ends. Always place a seal over the thread with a little grease. After mounting the gun onto the hose you place the lance on the gun.



3. One manual.
4. One motor/pump book.



## 9 APPENDIX

**9.1 EC declaration** RIOR B.V. / RIONED  
**Of Conformity For** Centaurusweg 45, Tilburg, The Netherlands,  
**Machinery**

Herewith declares that:

### **High pressure device MiniJet,**

Machine number:

- is in compliance with the Machinery Directive (2006/42/EC);
- is in conformity with the provisions of the following other EEC directives:  
2004/108/EC
- the following harmonized standards have been applied:

NEN-EN-ISO 12100-1, NEN-EN-ISO 12100-2, NEN-EN-ISO 13850,  
NEN-EN-ISO 13857, NEN-EN-349, EN 60204-1

Tilburg, The Netherlands, Thursday 28 January 2010

A handwritten signature in black ink, appearing to read 'J. Pieters', written over a horizontal line.

J. Pieters  
Managing Director



## 9.2 Contact

### EXPORT

D.Maas / H. de Laat  
Area Sales ManagerRior B.V. / Rioned  
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