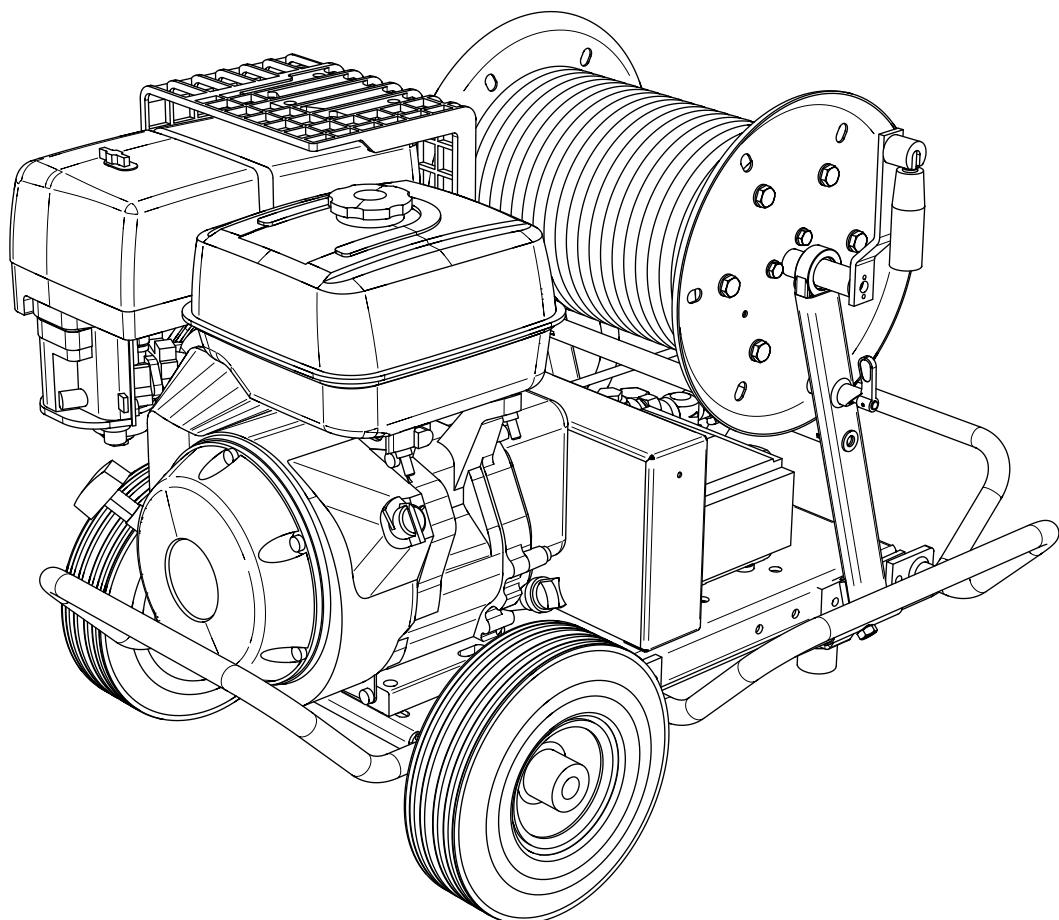


# **HD30**

## **user manual**



**Rioned**

## **Operating and maintenance manual**

Identification number: vo . . . . .

Serial number: . . . . .

Type **HD30**

Year of manufacture: . . . .

### **Manufacturer:**

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For information about adjustments, maintenance or repairs not contained in this user manual, contact Rioned.

Original user manual

Publication date: 14-01-2019

Version: 07

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## Preface

**This user manual is intended for the professional user. It is intended to enable the user to operate the machine and must always be kept with the machine.**

**The photographs and drawings in the manual are intended to support the text.**

**In this user manual you will first find an introduction that describes, among other things, the intended purpose of the machine. Then there is an explanation of how the machine is constructed and how it works in general. This is followed by an overview of the most important safety aspects.**

**Then the best way to start up and operate the machine is explained. The standard functions and additional functions are described separately. The information in the Maintenance section allows you to perform simple maintenance work yourself. Troubleshooting tips to help you correct minor malfunctions yourself are also provided.**

**Finally, at the end of this user manual you will find an index to help you quickly find information and a number of annexes containing, among other things, Rioned's contact details.**



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# 1 Introduction



Congratulations on the purchase of the *HD30*! The *HD30* is suitable for cleaning house connections, rainwater drains and grease-blocked and industrial pipes. The *HD30* is also suitable for cleaning street furniture, terraces etc. The *HD30* is directly connected to a water supply, so a tank is not necessary.

Read this user manual carefully before putting the machine in service, and always use the machine in accordance with the instructions. If problems occur, consult Rioned.

This user manual contains all the information about operation and maintenance. If the machine is set up and operated correctly and regularly maintained, we provide the warranty specified in the general terms and conditions of delivery. The warranty is void and your safety and that of people in the vicinity cannot be guaranteed if the operating and maintenance instructions are not followed or are not followed correctly.

The following requirements must be met when working with the machine:

## **Use in enclosed spaces:**

- > When working in an enclosed space, the space must be well ventilated.
- > Make sure the combustion gases are properly discharged. Prevent CO poisoning!

## **Spray site:**

ALWAYS follow the instructions below for the spray site:

- > Demarcate the site clearly. The minimum distance between the spray site and the demarcation is six metres.
- > Remove anything within the demarcation that is not firmly anchored.
- > NEVER spray from an unstable location. Examples: ladder, boat, or hanging scaffolding.
- > If it is necessary to use artificial lighting, ALWAYS use waterproof light fixtures.

## INTRODUCTION

## 2 Description and principle of operation

### 2.1 Introduction

In this chapter we briefly describe the operation, the main components and the symbols used for the machine and the accompanying accessories.

### 2.2 Machine

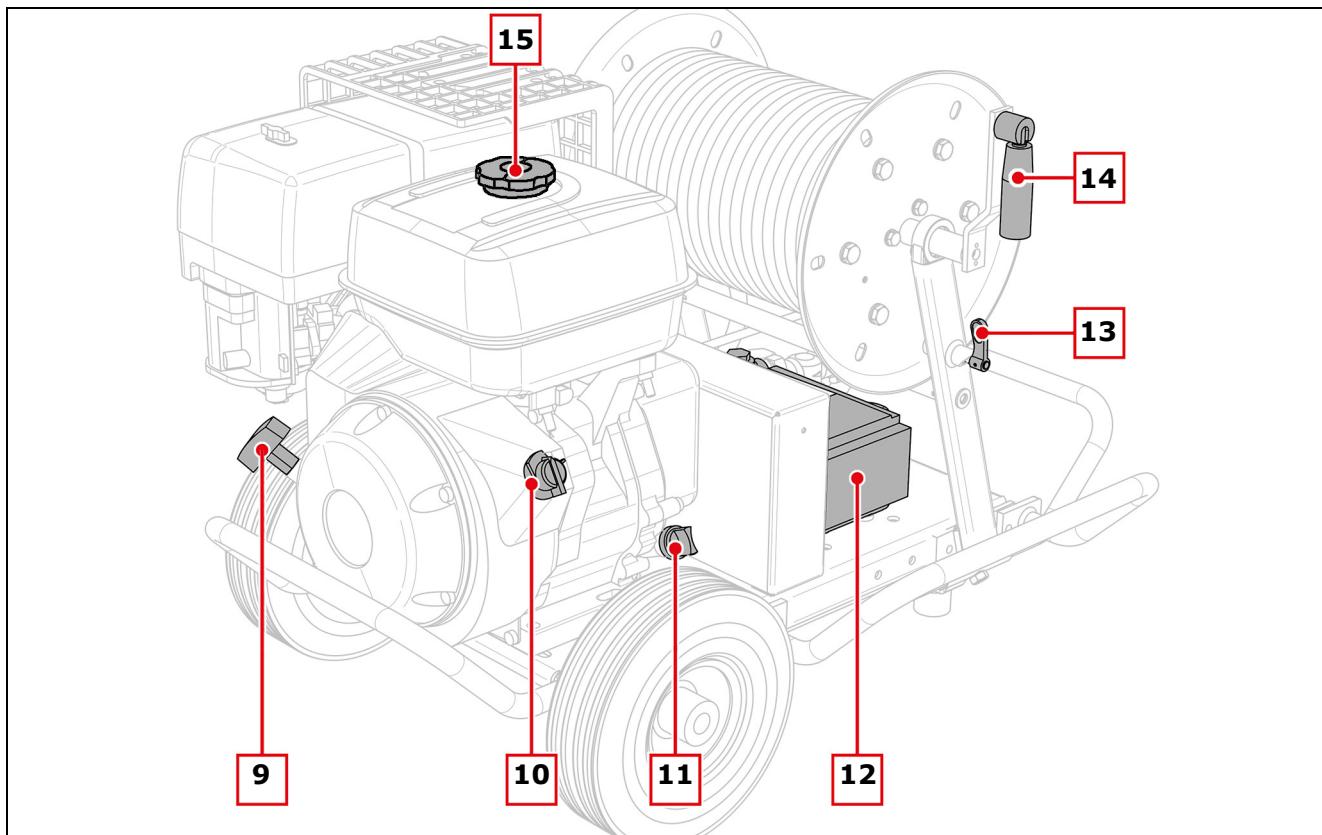
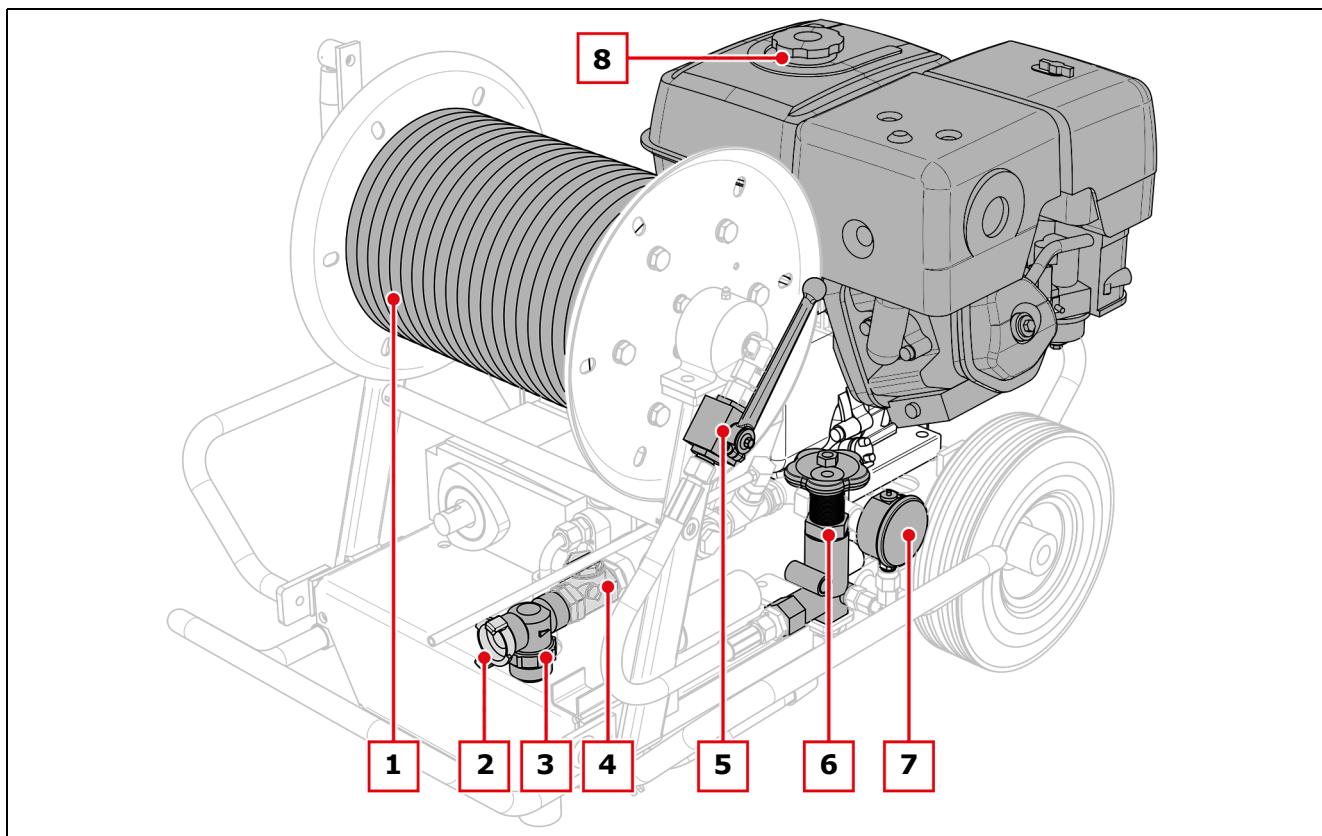
#### 2.2.1 Design and principle of operation

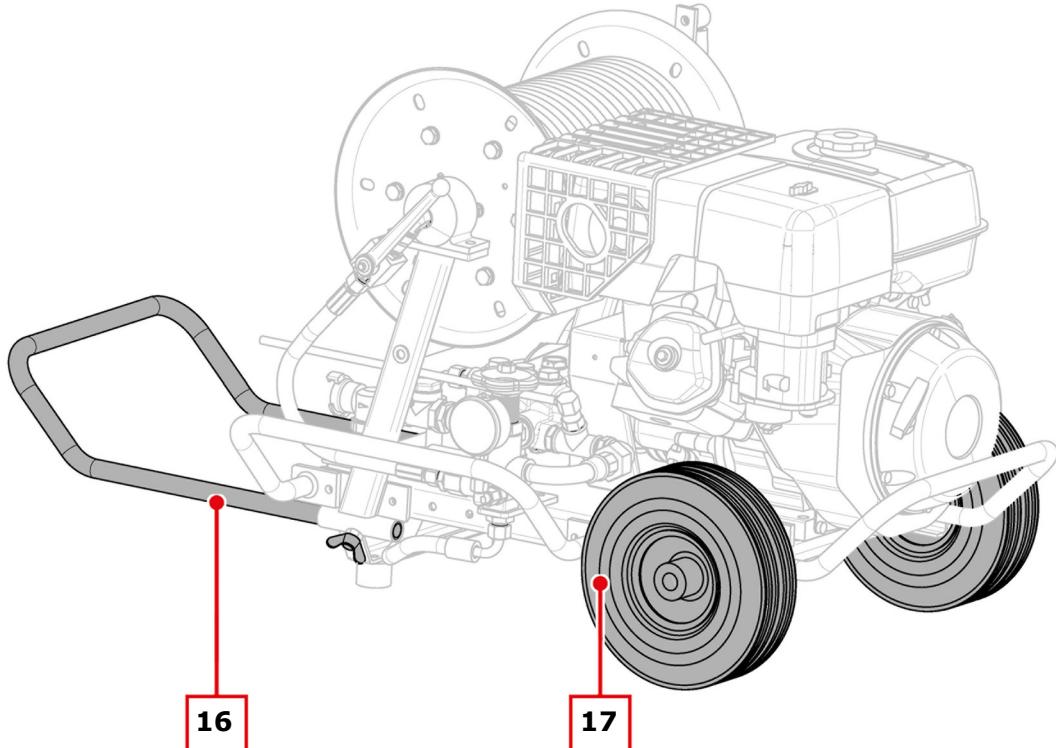
The engine drives the high-pressure pump via a V-belt. The high pressure pump draws water from the water supply network via the non-return valve and pressurizes it. The water then exits the machine at high pressure via the high pressure hose on the reel.

The machine consists of the following parts:

- |                                      |  |
|--------------------------------------|--|
| <b>1. High pressure hose on reel</b> | <b>11. Dipstick and oil filler opening</b> |
| <b>2. Connection, filling hose</b>   | <b>12. High pressure pump</b>              |
| <b>3. Water filter</b>               | <b>13. Reel latch</b>                      |
| <b>4. Non-return valve</b>           | <b>14. Handle, reel</b>                    |
| <b>5. High pressure valve</b>        | <b>15. Fuel tank</b>                       |
| <b>6. Pressure regulator</b>         | <b>16. Carrying handle</b>                 |
| <b>7. Pressure gauge</b>             | <b>17. Wheels</b>                          |
| <b>8. Engine Honda GX340</b>         |  |
| <b>9. Starter handle</b>             |  |
| <b>10. On/off switch, engine</b>     |  |

## DESCRIPTION AND PRINCIPLE OF OPERATION





The following is a brief explanation of parts from the illustrations above that are not discussed further in the manual.

#### **Non-return valve (4)**

The valve ensures that the contaminated water used by the HD30 cannot get back into the water supply network.

#### **High pressure valve (5)**

This valve regulates the supply of water to the high pressure hose.

The high pressure valve acts as a safety valve in an emergency: this allows you to immediately interrupt the supply of water to the high pressure hose.

#### **Reel latch (13)**

This latch prevents the reel from turning. It is operated by twisting the wings.

#### **Handle, reel (14)**

Fold out to reel up the high pressure hose.

Fold the handle in when storing or moving the HD30.

#### **Carrying handle (16)**

The HD30 can be moved by extending and lifting this handle.

Loosen the wing bolt to extend the carrying handle. Then tighten the wing bolt again to secure the carrying handle in place.

Push the carrying handle in when using or storing the HD30.

## DESCRIPTION AND PRINCIPLE OF OPERATION

### **Wheels (17)**

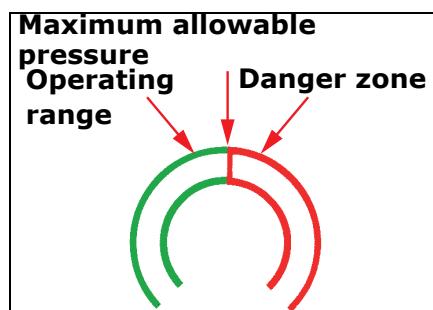
The HD30 rolls on these when you move it.

## 2.2.2 Symbols on pressure gauge, pressure regulator and valve controls

### Pressure gauge (7)

The maximum operating pressure is indicated on a sticker near the pressure gauge.

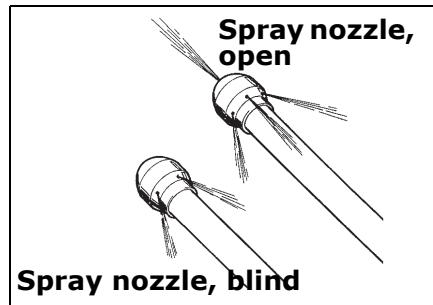
Reduce the operating pressure with the handwheel of the pressure regulator until the indicator of the pressure gauge is halfway between 0 and the maximum operating pressure.



## 2.2.3 Accessories

The following are included as standard with the machine:

1. Three nozzles for unblocking sewers: 'Open nozzle' and 'Blind nozzle' 1/4" and one 1/8" nozzle, which are fitted on the end of the high pressure hose.

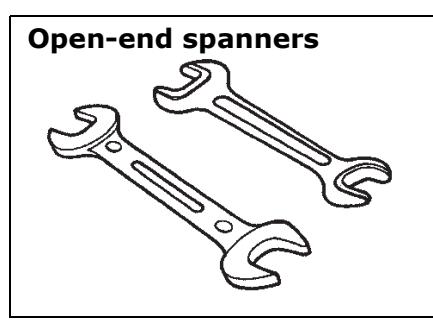


2. One spray gun with lance for cleaning façades, terraces and floors.

The spray gun is attached to the end of the high pressure hose using the open-end spanners. These open-end spanners are also supplied as standard.



3. Two open-end spanners for tightening and loosening the spray gun.
4. This user manual
5. Engine documentation
6. One suction hose with strainer.
7. Attachment: high pressure pump
8. Attachment: exploded view drawings and diagrams.



### NOTE

**Set of accessories may differ between models!**

## **DESCRIPTION AND PRINCIPLE OF OPERATION**

# 3 Safety

## 3.1 Introduction

This user manual contains very important safety instructions. In this chapter we provide general instructions. **ALWAYS** follow these instructions for use and maintenance. In other chapters we provide specific safety instructions for each action or situation. **ALWAYS** follow these instructions too.

Also observe the following safety instructions:

- > internal work, operating and safety instructions
- > national accident prevention regulations

## 3.2 General danger symbol

In this user manual we provide various safety instructions. If these instructions are not followed, there is a danger to persons. Such a safety instruction is indicated by this general danger symbol (in accordance with DIN 4844-W9):



## 3.3 Working safely

**ALWAYS** take these three important points into account when working and maintaining the machine:

- > You must **NEVER** remove protection from moving parts while the machine is in operation.
- > You must dispose of leaked hazardous substances in such a way that there is no danger to yourself, your colleagues or the environment. Observe the environmental regulations.
- > Prevent all electrical hazards.

## 3.4 Dangers of non-compliance with safety instructions

Possible consequences of non-compliance with safety regulations:

### Dangers to persons

This concerns the exposure of persons to electrical, mechanical or chemical hazards.

### Dangers to environment

This includes, for example, the danger to the environment due to leakage of hazardous substances.

### Dangers to the machine

This concerns:

- > failure of important functions of the machine
- > failure of prescribed maintenance and repair methods

### NOTE

**Failure to comply with the instructions may result in the loss of any right to compensation.**

### **3.5 Use only by authorized personnel**

Your employer must carefully document the following:

- > the level of responsibility
- > the authorizations of the personnel
- > the supervision of personnel

You may ONLY operate, service and inspect the machine if you are authorized by your employer and have the necessary qualifications. Rioned can provide training if necessary.

You must have read and understood these operating instructions completely before you start working with the machine. You must keep the manual with the machine.

### **3.6 Bystanders**

- > ALWAYS consider your responsibility to other people when working with this machine.
- > Keep unauthorized persons, especially children or animals, out of range of the machine.

### **3.7 Restrictions on use**

The machine may ONLY be used for:

- > unblocking sewers
- > for cleaning façades, terraces and floors

NEVER suck up the following substances (option filling hose with strainer):

- > combustible liquids
- > chemical substances
- > substances subject to special rules

Do NOT use the machine in an explosive environment.

Rioned ONLY guarantees the safety when working with the machine if the machine is used as described in this user manual.

NEVER exceed the following limit values (EN IEC 60204-1):

- > ambient temperature: +5 to +40 °C
- > storage temperature: -25 to +55 °C
- > humidity: 50% at +40 °C (higher at lower temperatures, e.g. 90% at +20 °C)
- > elevation of operation: the machine works up to a maximum elevation of 1000 m without any problems. Above this elevation the machine may not function as well due to the lower air pressure.

If the machine is not functioning or displays faults, DO NOT continue working. In that case, contact Rioned by phone (tel. no. +31 13-5479100).

### **3.8 Thunderstorm**

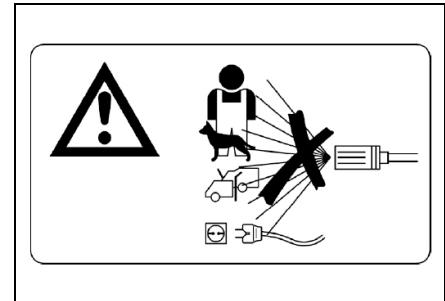
We ADVISE AGAINST working with the machine when the weather conditions or forecasts are unfavourable. Consider thunder and lightning in particular!

### **3.9 Spraying**

ALWAYS follow the instructions below when spraying:

- > NEVER point the jet at people or animals.
- > If skin penetration occurs, consult a DOCTOR immediately.
- > NEVER spray on live parts, such as electrical equipment.
- > NEVER spray the machine itself.
- > Prevent damage from splashing or flying parts.

This safety sticker shows you what you should not spray on:  
Recommendation: do not use spray lances shorter than 75 cm.



### **3.10 Spray break**

If you leave the spraying area for a short time, do the following:

1. Stop the machine (see section 'Stopping spraying' in 'Unblocking a sewer' and section 'Stopping spraying' in 'Cleaning a wall, terrace or floor').
2. Depressurize the high pressure hose. Do this as follows:
  - Open the high pressure valve.
  - Squeeze the trigger of the spray gun.

### **3.11 Sewer gases**

If you use the machine for sewer cleaning, you may be exposed to bacteria and sewer gases. This is your own responsibility.

### **3.12 Engine stop**

The machine is equipped with an engine stop in the form of a twist knob.

If you need to switch off the engine quickly in an emergency, follow this procedure:

- > Ensure that the engine stop is ALWAYS easily accessible.
- > Use the engine stop in the event of a dangerous situation or one that is likely to become dangerous.
- > Set the engine stop in the OFF position. The engine stops immediately.
- > Under normal circumstances, use the procedure described in section '>.

After use of the engine stop:

1. First make sure that the danger is no longer present.
2. Turn the engine stop to the ON position.

You can now continue working.

### **3.13 Levers and valves**

- > NEVER fasten the levers in position in any way whatsoever, unless otherwise instructed.

### **3.14 Personal protective equipment**

ALWAYS use the following personal protective equipment when working with the machine:

- > hearing protection
- > safety glasses or face shield
- > waterproof work gloves
- > waterproof workwear
- > helmet
- > spray boots with steel toes

### 3.15 Water discharge

Ensure that the water is drained off properly.

Clean the discharge water before discharging it into the sewer system in the following two cases:

- > when cleaning with harmful chemicals, or
- > when the object to be cleaned is contaminated with environmentally harmful substances.

### 3.16 Other machine safety provisions

#### 3.16.1 Pressure regulator

The pressure regulator ensures that the operating pressure never becomes too high and thus acts as a safety valve.

#### 3.16.2 Non-return valve

The valve ensures that the contaminated water used by the machine cannot get back into the water supply network.

#### 3.16.3 Temperature protection valve

The temperature protection valve ensures that the temperature of the water in the pump never gets too high and thus acts as a safety valve.

When the water exceeds the set temperature, the water flows out of the connected hose.

#### 3.16.4 Protective covers

Your machine is fitted with various protective covers and panels. It is forbidden to remove these protective covers unless maintenance is to be carried out on the machine. You should then stop the machine and let it cool down if necessary.

### 3.17 Supplied documentation



#### SUPPLIED DOCUMENTATION!

**Read the safety chapters of the documentation supplied with this machine!**

**It contains information that is not included in this manual.  
You can see which documentation is supplied in the 'Description and operation' chapter, section 'accessories'.**

### 3.18 Safety sticker

The safety sticker is located on the back of the vehicle. The symbols used have the following meaning:

1. Hearing, head and eye protection must be worn
2. Safety shoes with extra protection required
3. Reading the manual is mandatory
4. Safety gloves with wrist protection required
5. Protective workwear required
6. Not potable water
7. Risk of slipping
8. Beware of hand injury
9. Rotating machine
10. Warning for automatically starting machine





## 4 Operation: standard functions

### 4.1 Introduction

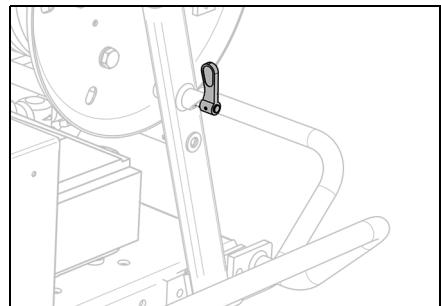
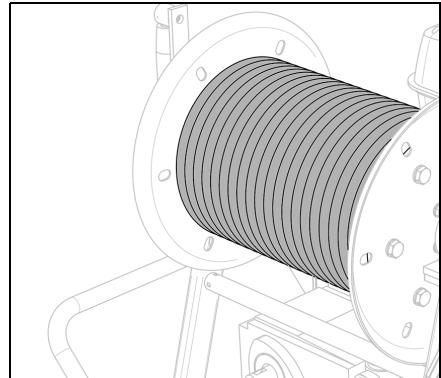
In this chapter we first describe the checks you must carry out before departure and the preparations required at the workplace. Then the different ways to start the engine are explained.

Next the work will be discussed: unblocking a sewer, properly handling the high pressure hose and cleaning a wall, terrace or floor.

### 4.2 Checks before departure

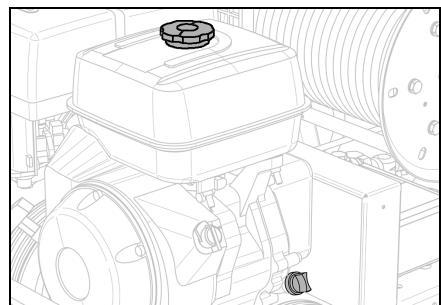
ALWAYS check the following before you drive off with your HD30:

- > Is the high pressure hose completely rolled up?
- > Is the reel fixed by means of the reel latch?



Check fluids:

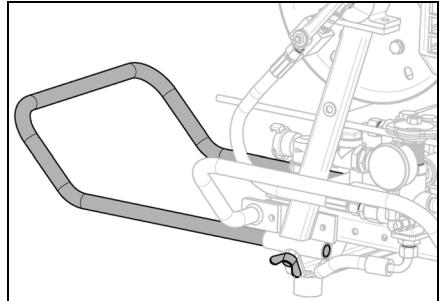
- > Check the oil level of the engine with the dipstick.
- > Top up as required.
- > Check that there is enough fuel in the fuel tank.
- > Top up the tank if necessary.



## 4.3 Preparations at the workplace

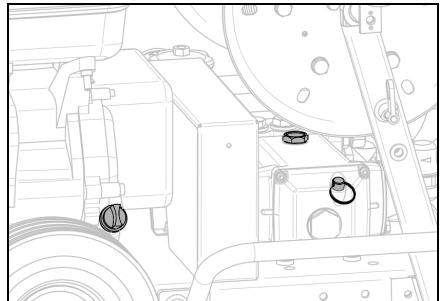
### 4.3.1 Preparing the machine

1. Place the machine at the desired location.
2. When used on a slope, block the wheels with wheel chocks.
3. Slide the bracket into the frame and secure it with the wing screw.
4. Mark the work area in accordance with local regulations.

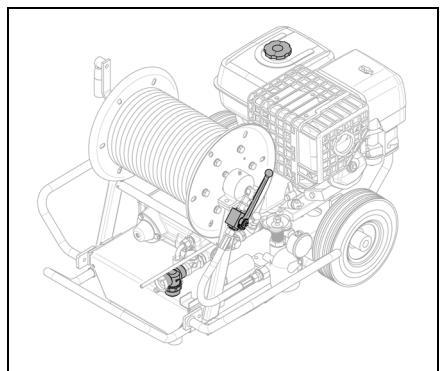


### 4.3.2 Before starting

- > Check the oil level of the high pressure pump and the engine.
- > Top up as required.



- > Check that the water filter is clean.
- > Clean the filter if necessary.
- > Check that the high pressure valve is closed.
- > Check that the supply valve to the water filter is open.
- > Check that there is enough fuel in the fuel tank. Top up as required.



- > Connect a hose to the filling hose connection.
- > Turn on the water tap.

The maximum water temperature is 60 °C.

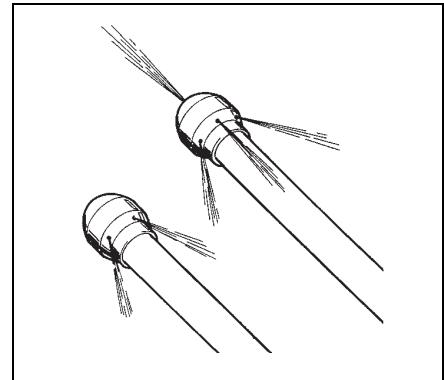


#### TAKE CARE!

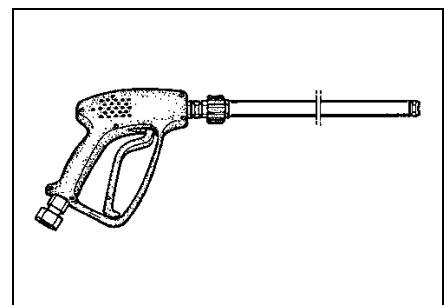
**If a temperature protection valve is fitted, it opens at 63 °C and hot water comes out of the hose!**

- > Turn the pressure regulator knob anticlockwise.
- > Screw the required attachment onto the high pressure hose:

For unblocking a sewer: the spray nozzle.



For cleaning façades, terraces and floors: the spray gun.



### 4.3.3 Workstations

The machine has different workstations. These workstations are:

#### **At the manhole or sewer pipe**

The following operation is possible here:

> operation at the engine at a distance of less than one metre

Risk at this workstation: The on/off switch to stop the engine can only be operated at a distance of less than two metres.

#### **At the spray site**

Here you work with the spray gun with lance.

## 4.4 Starting the engine



**ALWAYS wear personal protective equipment! See section 'Personal protective equipment' for all the protective equipment.**



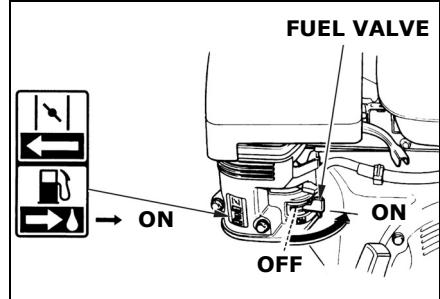
### 4.4.1 Starting Honda GX340

A brief explanation of the start procedure is provided below. Read the engine operating manual for the full explanation! The engine operating manual is supplied with this machine.

Brief starting procedure:

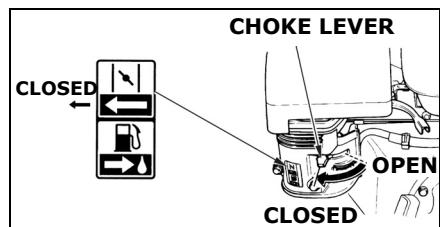
Start the engine in the following way:

1. Turn the fuel valve to the ON position.

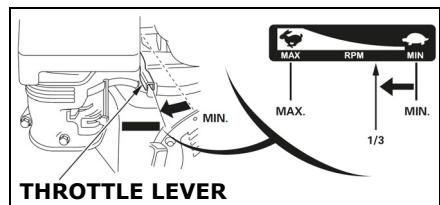


2. To start a cold engine, move the choke lever to the CLOSED position.

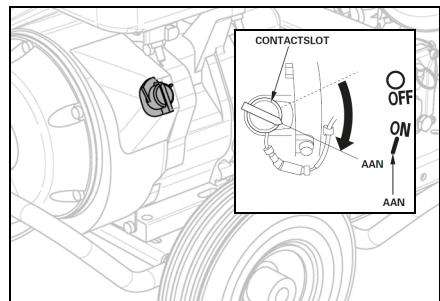
To start a warm engine, move the choke lever to the OPEN position.



3. Move the throttle away from the MIN position to approx. 1/3 of the distance to the MAX position.

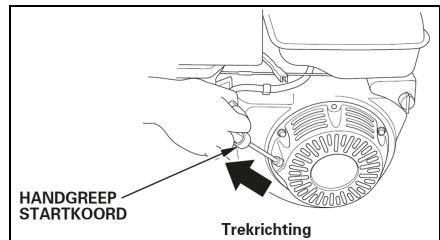


4. Set the engine switch to the ON position.



5. Operate the starter.

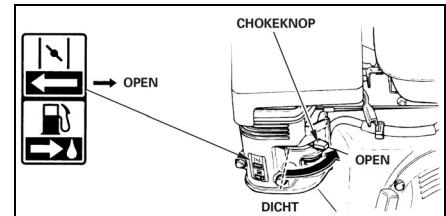
- > Pull slightly on the starter handle until you feel resistance and then pull quickly and firmly in the direction indicated by the arrow in the adjacent picture.
- > Let the starter rope retract gently.



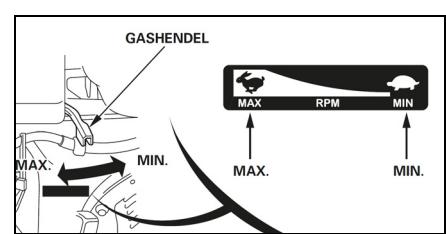
**TAKE CARE!**

**Do not let the starter handle fly back against the engine. Let the starter rope retract gently to prevent damage to the starter.**

6. If you moved the choke lever to the CLOSED position to start the engine, gradually move it to the OPEN position while the engine is warming up.  
After three minutes of warming up, the machine is ready for use.



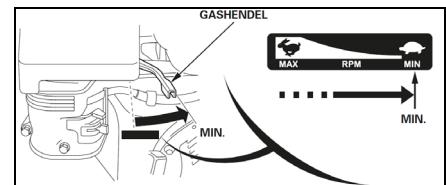
7. Move the throttle fully to the MAX position.  
The engine runs at full speed.



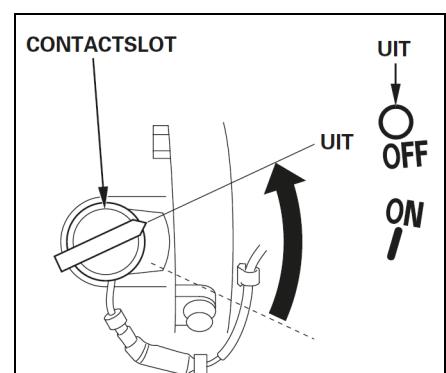
#### 4.4.2 Stopping the engine

#### 4.4.3 Stopping Honda GX340

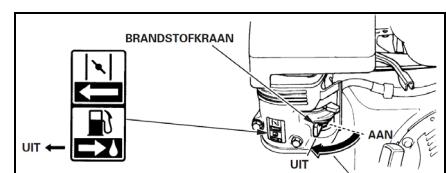
1. Move the throttle to the MIN position.



2. Set the engine switch to the OFF position.



3. Set the fuel valve to the OFF position.



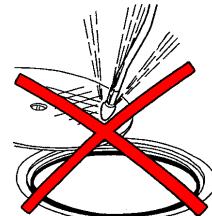
#### 4.4.4 Unblocking a sewer

#### 4.4.5 Spray nozzle warning



**WARNING!**

**Ensure that the spray nozzle never exits the sewer while spraying. A high pressure water jet can cause serious injuries!**



How do you prevent this?

A mark has been applied approximately five meters from the end of the hose. When you see this mark, do the following:

1. Turn off the high pressure.
2. Then pull the hose completely out of the pipe.

#### 4.4.6 Preparations for spraying

The machine has two spray nozzles for unblocking sewers: 'Open nozzle' and 'Blind nozzle'.

1. Attach the spray nozzle to the end of the high pressure hose as follows:
  - first fit the O-ring to the threads of the high pressure hose
  - screw the 'Open nozzle' onto the high pressure hose
2. Reel out the high pressure hose in one of the following ways:
  - manually (see section '*Manually reeling high pressure hose out*')
3. Place the spray nozzle in the pipe to be cleaned.
4. Open the high pressure valve at the high pressure reel manually.
5. Turn the pressure regulator knob completely open (clockwise).
6. Start the engine if it has not yet been started.

#### 4.4.7 Starting spraying



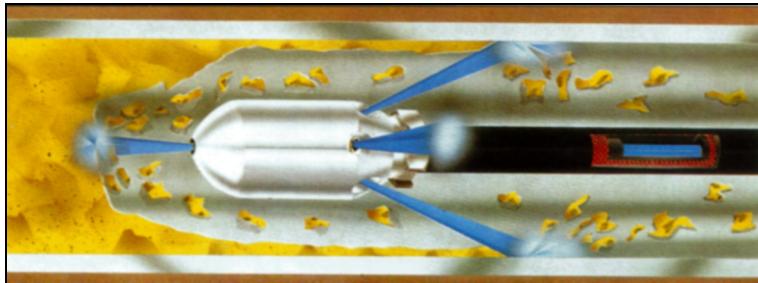
**TAKE CARE!**

**Only switch on the high pressure at idling speed!**

Spraying can only be started manually with the high pressure valve next to the reel.

#### Starting spraying

1. Set the lever of the high pressure valve to the open position.
2. Increase the engine speed with the throttle lever.  
The high pressure hose will now unwind and at the same time work its way into the blocked sewer:



3. Check whether the water is drained off.
4. Continue flushing for a while after the blockage is removed.
5. Reel the hose in slowly at the same time.

#### 4.4.8 Stopping spraying

After unblocking, it is important to flush as follows: replace the 'Open nozzle' with the 'Blind nozzle'.



##### TAKE CARE!

- **Reel the high pressure hose onto the reel under pressure. If you do not do this, the reel can be damaged by the squeezing action.**
- **Has the machine run out of water?**
- 1. First reel the high pressure hose out.**
- 2. Only then apply pressure to it.**

Spraying can be stopped in one way: with the high pressure valve.

##### Stopping spraying with the high pressure valve

- > Decrease the engine speed with the throttle lever.
- > Set the lever of the high pressure valve to the closed position.  
No more water comes out of the nozzle.

#### 4.4.9 Handling the high pressure hose

Handling the high pressure hose carefully:

- > Make sure there are no sharp objects near the hose.
- > Make sure no vehicles drive over the hose.
- > Clean the hose after each use.
- > Use only the special repair couplings if the hose requires repair.

## 4.5 Cleaning a wall, terrace or floor

### 4.5.1 Warnings for spray gun



#### **WARNING!**

**ALWAYS observe the following warnings when working with the spray gun:**

**Before use:**

- Set the pressure regulator to half of the maximum operating pressure (see section '*Symbols on pressure gauge, pressure regulator and valve controls*').
- Then start the machine.

**After starting and while working:**

- The operating pressure can be increased to the desired pressure. Do this by turning knob on the pressure regulator.
- **NEVER exceed the specified maximum operating pressure! (See section '*Symbols on pressure gauge, pressure regulator and valve controls*'.)**

See also the safety instructions for the spray site in the Introduction.

### 4.5.2 Preparations for spraying

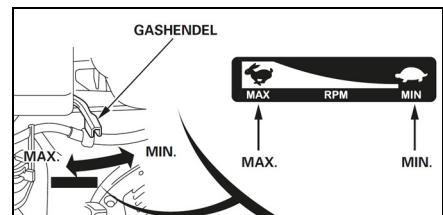
1. Attach the spray gun to the end of the high pressure hose as follows:
  - First fit the O-ring to the threads of the high pressure hose.
  - Then screw the spray gun onto the high pressure hose using the supplied spanners.
2. Unreel the high pressure hose ALL THE WAY.
3. Close the high pressure valve at the high pressure reel.
4. Start the engine if it has not yet been started.

### 4.5.3 Pressurizing the system

Pressurizing can be started in one way: with the high pressure valve.

#### **Pressurizing with the high pressure valve**

1. Set the lever of the high pressure valve to the open position.
2. Move the throttle lever on the engine to increase or decrease the engine speed.



### 4.5.4 Starting spraying

#### **Starting spraying with the spray gun**

1. Turn the pressure regulator knob clockwise until the desired pressure is reached. The set pressure can be read on the pressure gauge when the gun is spraying.

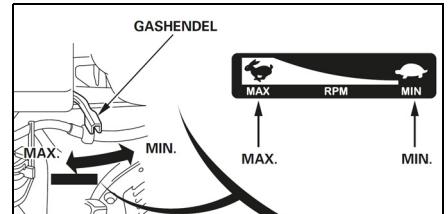
2. Squeeze the trigger of the spray gun to start spraying.  
Release the trigger to stop spraying.

#### 4.5.5 Depressurizing the system

The system can be depressurized in one way: with the high pressure valve.

##### Depressurizing the system with the high pressure valve

1. Move the throttle lever on the engine to decrease the engine speed:
2. Set the lever of the high pressure valve to the closed position.



3. Turn off the engine. See section 'Stopping the engine'

### 4.6 Ending the work

#### 4.6.1 Cleaning up and securing

At the end of the work, complete the following steps:

- > Is the high pressure hose completely rolled up?
- > Is the reel fixed by means of the reel latch?
- > Put away all the attachments.



##### WARNING!

**Drain water filter, water pipes, water hoses and water containers after EVERY service to prevent contamination with Legionella bacteria!**

#### 4.6.2 Additional steps during freezing temperatures

The high pressure section of the machine is at high risk of freezing during freezing temperatures. Therefore ALWAYS take the following precautions before departure after you have finished your work:

1. Unscrew the cap of the water filter.
2. Let the remaining water flow out.
3. Screw the cap of the water filter tight again.
4. Fill a jerrycan with 10 l antifreeze.
5. Turn the pressure regulator knob completely anticlockwise.
6. Check that the high pressure valve is closed.
7. Start the engine.
8. Let the engine idle.
9. Open the high pressure valve.  
All the water is now pumped out of the high pressure hose.
10. Close the high pressure valve when antifreeze comes out of the high pressure hose.  
You will see that the water turns blue.
11. Let the engine run for another minute. All the pipes now fill with antifreeze.

12. Stop the engine.

**NOTE**

**When pumping out the water, there is no need to place a spray nozzle or spray gun on the high pressure hose.**

**Removing antifreeze**

Complete the following procedure to remove the antifreeze from the lines:

1. Start the engine (see section 'Starting the engine').
2. Prepare a reservoir or jerrycan.
3. Pump all the antifreeze through the high pressure hose to the reservoir or jerrycan.  
The antifreeze can then be used again next time.
4. Check that the antifreeze has not been diluted too much. If the antifreeze is diluted too much, the high pressure section of the machine is not sufficiently protected against freezing.
5. If the antifreeze has been diluted too much, take it to your municipal recycling collection point for disposal.
6. Stop the engine.
7. Prepare it for use (see section 'Checks before departure').

# 5 Operation: extra functions

## 5.1 Introduction

In this chapter we describe the various extra functions.

## 5.2 Reel

### 5.2.1 Safety



#### **WARNING!**

**There is a danger of pinching/crushing during reel operation!**

**You may only operate the reels if there are no other people in the work area. This is YOUR responsibility.**



### 5.2.2 Manually reeling high pressure hose out

Turn the wings of the reel latch and secure it in the notch. You can now manually reel out the high pressure hose.



#### **WARNING!**

- **Never secure the reel latch in any other way!**

## 5.3 Suction hose

If your machine cannot be connected to a water tap, it is possible to obtain water from ditches or canals.

Proceed as follows:

ALWAYS check the following before you drive off with your HD30:

- > Is the high pressure hose completely rolled up?
- > Is the reel fixed by means of the reel latch?
- > Attach the suction hose to the filling hose connection.
- > Place the suction strainer in the surface water.
- > Start the engine.

The pump now draws in the surface water.



#### **Stopping suction:**

- > Set the lever of the high pressure valve to the other position.
- > Stop the engine.
- > Disconnect the suction hose and put it away.



# 6 Maintenance

## 6.1 Safety instructions

ALWAYS observe the following points during maintenance, inspection and installation:

- > You may only perform this work if you are qualified to do so. You must have read and understood the user manual.
- > You may only work on the machine when it is not running.
- > You must stop the machine (take it out of service) correctly (see section '*Ending the work*').
- > Clean the pump if it has pumped liquids that could pose a health hazard.
- > When you have finished your work, IMMEDIATELY reinstall all safety and protection provisions and make them functional.
- > Follow all instructions before you start the machine again (see section '*Starting the engine*').



### **WARNING!**

- **Before you start any maintenance or repair work, take the following precautions:**
- **ALWAYS stop the engine first.**
- **Depressurize the system by opening the high pressure valve.**
- **If the spray gun is attached to the high pressure hose, squeeze the trigger.**

## 6.2 Making changes to the machine

You may ONLY make changes to the machine if you have received written authorization from Rioned. The use of original replacement parts and Rioned-approved accessories is important for safety.

If you use other parts, Rioned is NOT liable for any consequential damage.

## 6.3 Maintenance schedule

Maintain the various parts of the machine according to the following schedule:

<b>Check oil levels</b>	Before the work
<b>Clean water filter</b>	Before the work and when very dirty
<b>Check high pressure hose and other hoses</b>	Before the work
<b>Clean bodywork</b>	Weekly or when very dirty
<b>Poke the nozzle holes clean</b>	Every 50 hours of operation
<b>Lubricate moving parts</b>	Every 250 hours of operation or at least once every six months
<b>Clean pressure regulator</b>	Every 250 hours of operation or at least once every six months
<b>Clean suction valves of high pressure pump</b>	Once a year
<b>Clean pressure valves of high pressure pump</b>	Once a year
<b>Major scheduled maintenance</b>	Once a year
<b>Engine service</b>	See the maintenance manual for the engine

### NOTE

**All other parts must be replaced IMMEDIATELY when worn or defective!**

### Wear

Insufficient or late maintenance can result in premature wear of the machine.

Other causes of premature wear are:

- > heat development caused by:
  - a. running the engine unnecessarily
  - b. not discharging water and/or
  - c. continuous circulation of the oil through the lines
- > lack of lubrication
- > contaminants in the high pressure pump
- > exceeding the maximum pressure
- > rust formation at standstill
- > running the machine while not cleaning

In the following sections, we first describe the maintenance of the machine per period.

**NOTE**

**The maintenance of the engine is beyond the scope of this user manual. That information can be found in the documentation you received with the machine.**

## 6.4 Maintenance before the work

The following parts must be checked or cleaned before the work:

### 6.4.1 Check oil levels

- > Check ALL the oil levels before the work.
- > Top up as required.

If the oil level has dropped, there is probably a leak in the system. In that case, do the following:

1. Check all the gaskets, connections and lines in the system concerned.
2. Repair the defects immediately.
3. Top up with the correct oil.

**NOTE**

**Oil consumption may be slightly higher than normal during the break-in period (20 hours).**

### 6.4.2 Clean water filter

Clean the water filter as follows:

1. Close the water tap.
2. Unscrew the filter cap from the filter body.
3. Clean the filter screen and other contaminated parts of the filter.
4. Screw the filter cap back onto the filter body.
5. Open the water tap.
6. Check the water filter for leaks.

Clean the water filter sooner if it is very dirty.

### 6.4.3 Check high pressure hose and other hoses

The high pressure hose may be damaged during use. Therefore perform the following checks:

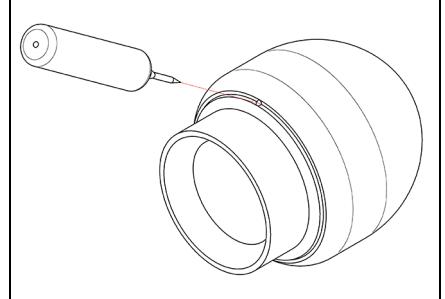
- > Check the high pressure hose for wear and damage every time you reel it in.
- > Also check all the other hoses for wear and damage.
- > Check all the hoses and connections for leaks.

## 6.5 Weekly maintenance

Clean the bodywork weekly. Use lots of water and automotive shampoo. The bodywork should be cleaned earlier if it is heavily soiled.

## 6.6 Maintenance every 50 hours of operation

The nozzle holes must be poked clean every 50 hours of operation:



## 6.7 Maintenance every 250 hours of operation or at least once every six months

The following parts must be maintained every 250 hours of operation or at least once every six months:

### 6.7.1 Lubricate moving parts

The following parts must be lubricated every 250 hours of operation or at least once every six months:

- > the reel feed-through bearing of the high pressure reel
- > Thread of wing bolt for securing carrying handle
- > Wheel axle frame

### 6.7.2 Clean pressure regulator

- > Clean the pressure regulator every 250 hours of operation or at least once every six months.
- > Carefully remove all the sand.

#### **NOTE**

**Proper maintenance considerably extends the service life of the pressure regulator!**

#### **Leakage, contamination or damage**

If the high pressure valve is closed, you CANNOT read the pressure on the pressure gauge. You also CANNOT read the pressure on the pressure gauge if the spray gun is connected but the trigger is not pulled.

If the pressure gauge nevertheless shows a pressure reading, there is leakage or the non-return valve is dirty or damaged. In that case, do the following:

1. Turn off the machine.
2. Unscrew the hose coupling.
3. Clean or replace the non-return valve.
4. Check that the O-ring is still in good condition.
5. Check that the sealing ring is still in good condition.

## **6.8 Maintenance every 1000 hours of operation or at least once a year**

The following parts must be maintained every 1000 hours of operation or at least once a year:

### **6.8.1 Clean suction valves of high pressure pump**

Clean the suction valves of the high pressure pump once a year.

See accompanying annex for more information.

### **6.8.2 Clean pressure valves of high pressure pump**

Clean the pressure valves of the high pressure pump once a year.

See accompanying annex for more information.

### **6.8.3 Major scheduled maintenance**

Have Rioned technical service inspect and maintain the machine once a year. This will ensure the continued good performance and long service life of the machine.



# 7 Malfunctions

## 7.1 Troubleshooting

Below you will find a list of faults, their possible causes and the corresponding solution for each cause.

Fault	Cause	Solution
Engine will not start or stops suddenly.	Fuel tank empty.	Refill the fuel tank.
	Main or accessory fuse blown.	1. Replace defective fuse. 2. Restart engine. 3. If the fuse blows again, contact Rioned.
	Battery voltage too low.	Charge the battery or replace the battery
	Air in fuel line.	Bleed air at engine.

Fault	Cause	Solution
High pressure pump does not produce required pressure.	Supply valve to water filter closed.	Open supply valve.
	Water filter restricted.	Stop machine. Clean water filter.
	Air in high pressure pump.	1. Let the machine run several minutes with the high pressure valve open. 2. If the fault is not cleared, contact Rioned.
	Suction valves of high pressure pump seized.	1. Carefully free the valves. 2. Remove any lime scale build-up.
	Suction valves of high pressure pump worn.	Contact Rioned.

Fault	Cause	Solution
High pressure pump does not produce required pressure.	Supply valve to water filter closed.	Open supply valve.
	Water filter restricted.	Stop machine. Clean water filter.

Fault	Cause	Solution
Water pressure fluctuates greatly.	Supply valve not opened far enough.	Open supply valve completely.
	Water filter restricted.	<ol style="list-style-type: none"> <li>1. Stop machine.</li> <li>2. Clean water filter.</li> </ol>
	High pressure pump draws in air.	<ol style="list-style-type: none"> <li>1. Stop machine.</li> <li>2. Check all the hoses and connections for leaks.</li> <li>3. Replace defective components.</li> </ol>
	Spray nozzle restricted or worn.	<ol style="list-style-type: none"> <li>1. Stop machine.</li> <li>2. Check spray nozzle condition.</li> <li>3. Poke through nozzle holes or</li> <li>4. Replace worn nozzle.</li> </ol>
	Pressure valves restricted with lime scale or worn.	<ol style="list-style-type: none"> <li>1. Stop machine.</li> <li>2. Check condition of pressure valves.</li> <li>3. Descale pressure valves or</li> <li>4. Replace pressure valves.</li> </ol>
	High pressure pump sealing ring worn.	<ol style="list-style-type: none"> <li>1. Stop machine.</li> <li>2. Replace sealing ring.</li> </ol>
	Ceramic pistons in high pressure pump damaged.	Contact Rioned.
	Pressure regulator internally restricted or damaged.	Contact Rioned.

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## 9 Attachments

## Annex 1 EC declaration of conformity

Rior, Industrie- en handelsonderneming B.V.  
declares that:

Brand: Rioned

Type: HD30

Machine number:



- > is in conformity with the Machinery Directive (2006/42/EC);
- > complies with the provisions of the following other EC Directives: 2014/30/EC
- > complies with the harmonized European Standards:  
NEN-EN-ISO 12100:2010, NEN-EN-ISO 13850:2015,  
NEN-EN-ISO 13857, NEN-EN-349 and EN 60204-1

Declaration issued in Tilburg, The Netherlands, Monday 22 February 2016

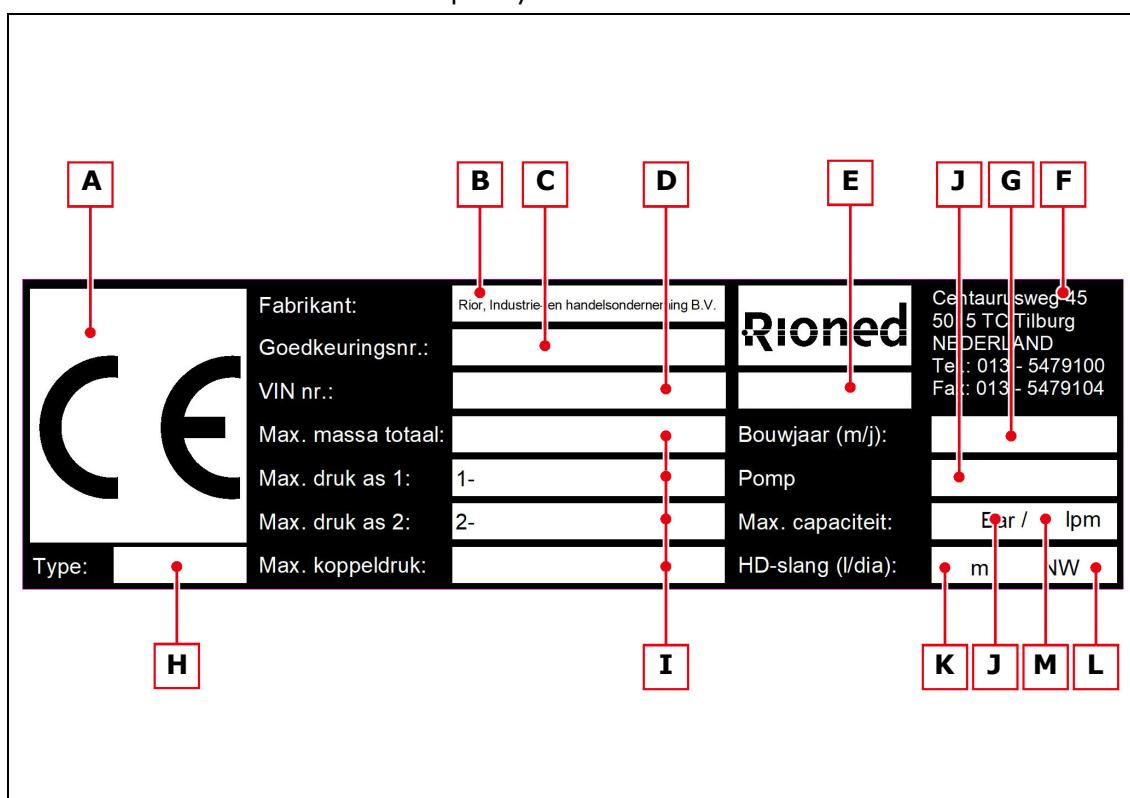


J. Pieters  
Managing Director

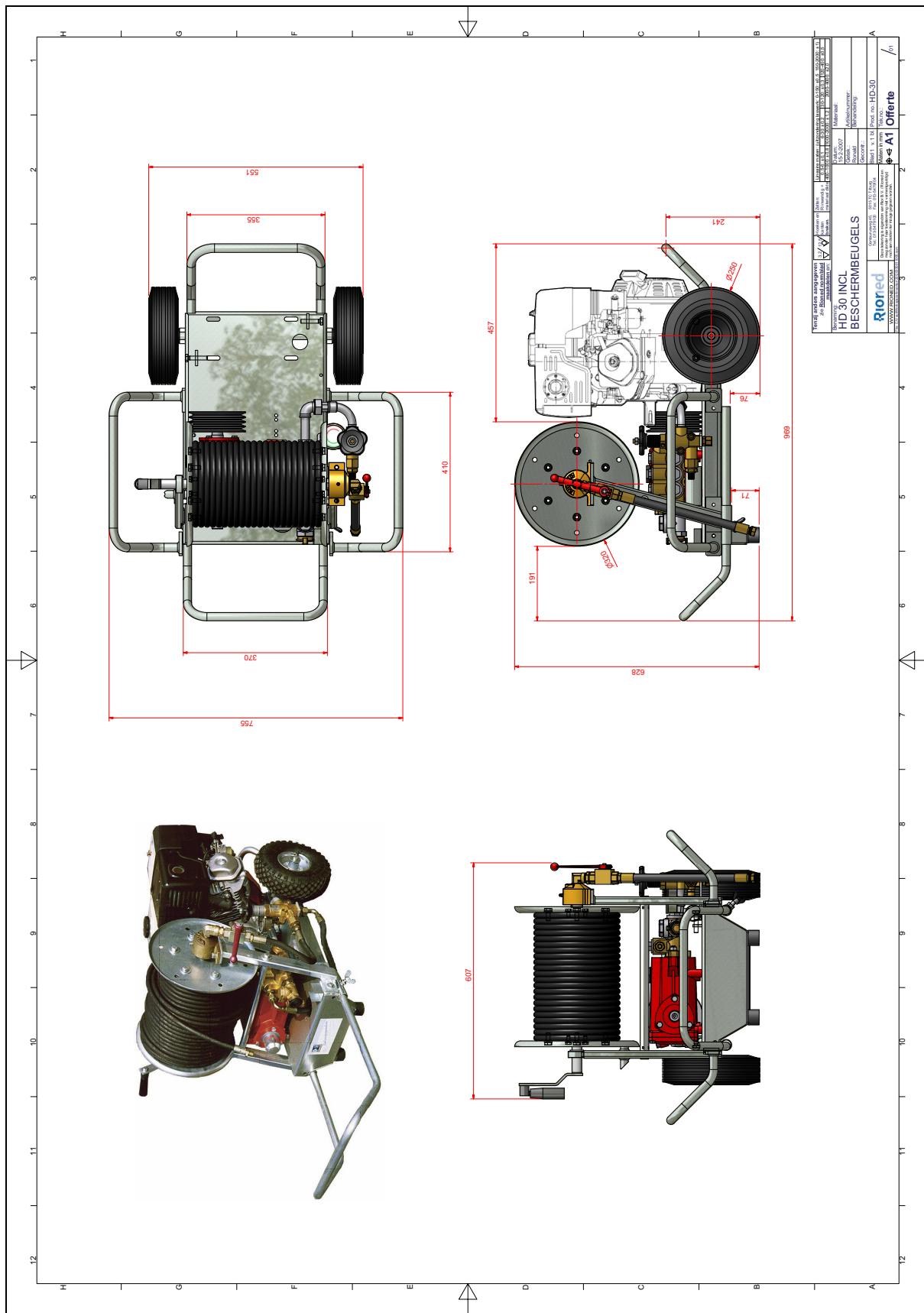
## Annex 2 Type plate

The type plate is located on the protective cover between the motor and the pump and contains the following information:

- A CE Marking
- B Manufacturer of the machine
- C Not applicable
- D Chassis number of the machine
- E Identification of the machine
- F Manufacturer's address details
- G Year of manufacture of the machine
- H Name of the machine
- I Not applicable
- J Type high pressure pump
- K Length of high pressure hose (for which the nozzles were calculated)
- L Diameter, high pressure hose
- M Maximum machine capacity



## **Annex 3 Dimensions**



## Annex 4 Technical specifications

### General

Length, high pressure hose:	40 m
Diameter, high pressure hose:	3/8" (NW10) 5/16" (NW8)
Weight:	90-100 kg
Capacity, fuel tank:	6.1 litres
Application range:	40 - 200 mm
Tyre size:	260 x 80 x 20 mm
Recommended tyre pressure:	2 bar

### Engine

Type	Honda GX340
Number of cylinders:	1
Bore x stroke (d x l):	82 x 64 mm
Cylinder displacement:	337 cc
Power (P):	7.1 kW (9.7 hp) Net power (SAE J1349) 6.3 kW (8.4 hp) continuous power at 3600 rpm
Fuel:	Petrol Euro 95
Cooling:	Air cooled
Mass (m):	31.5 kg
Battery (U,I):	12 V, 45 A
Oil:	10W30 API/SF-CC or better (P/N 71002001030)
Engine oil volume:	1.1 litres

Additional engine specifications can be found in the accompanying engine manual.

**High pressure pump**

Type	Speck P21
Number of cylinders:	3
Number of valves:	6
Maximum capacity:	see type plate
Mass:	8.5 kg
Maximum water temperature:	60 °C
Oil type:	GX 80W90 (P/N 71002000090)
Volume:	0.37 l

Type	Speck P30
Number of cylinders:	3
Number of valves:	6
Maximum capacity:	See type plate
Mass:	14.2 kg
Maximum water temperature:	60 °C
Oil type:	GX 80W90 (P/N 71002000090)
Volume:	0.7 l

Additional pump specifications can be found in the pump annex.

## Annex 5 Contact details

### Rioned Customer Service

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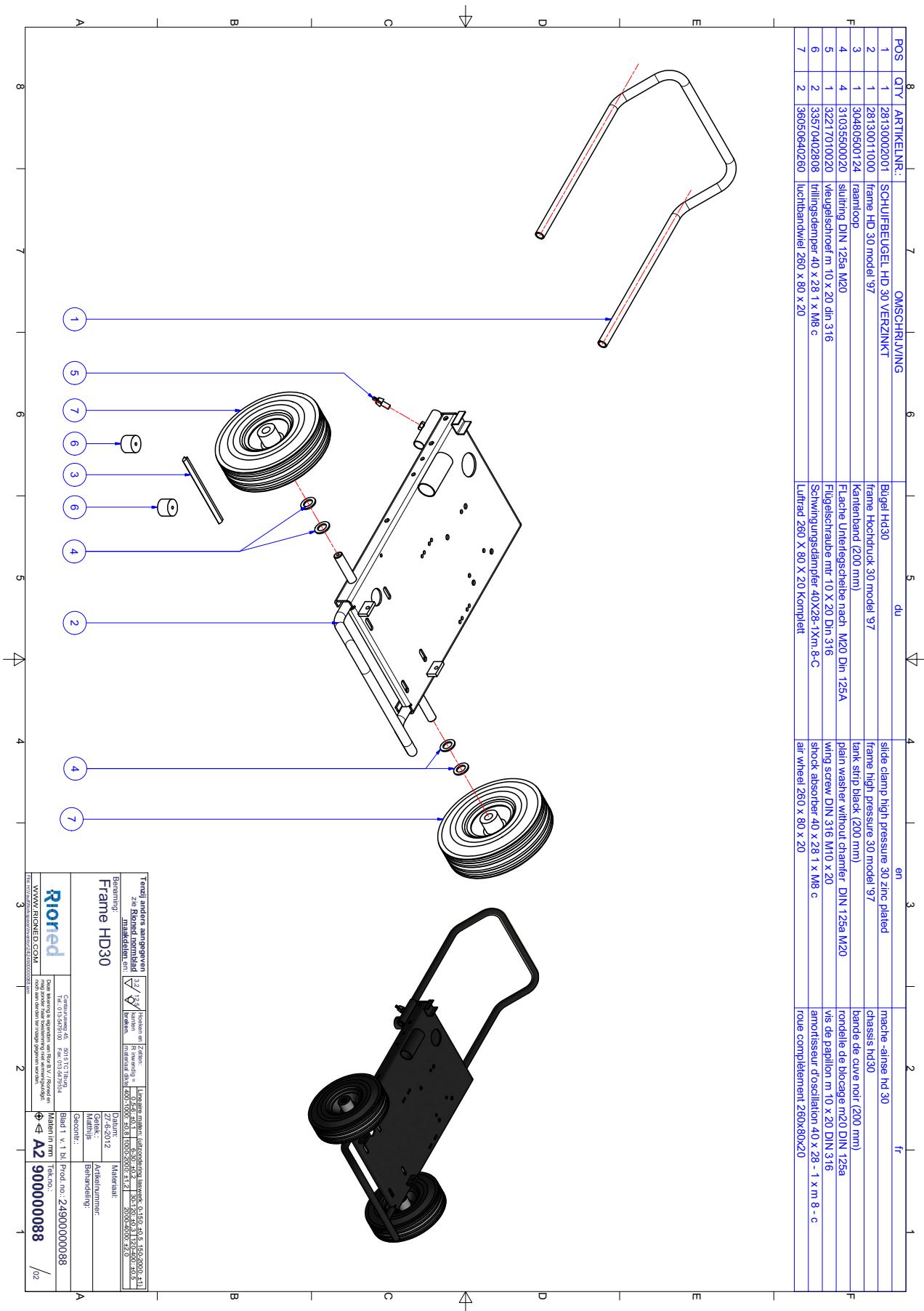
Dominique Vink  
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## ATTACHMENTS

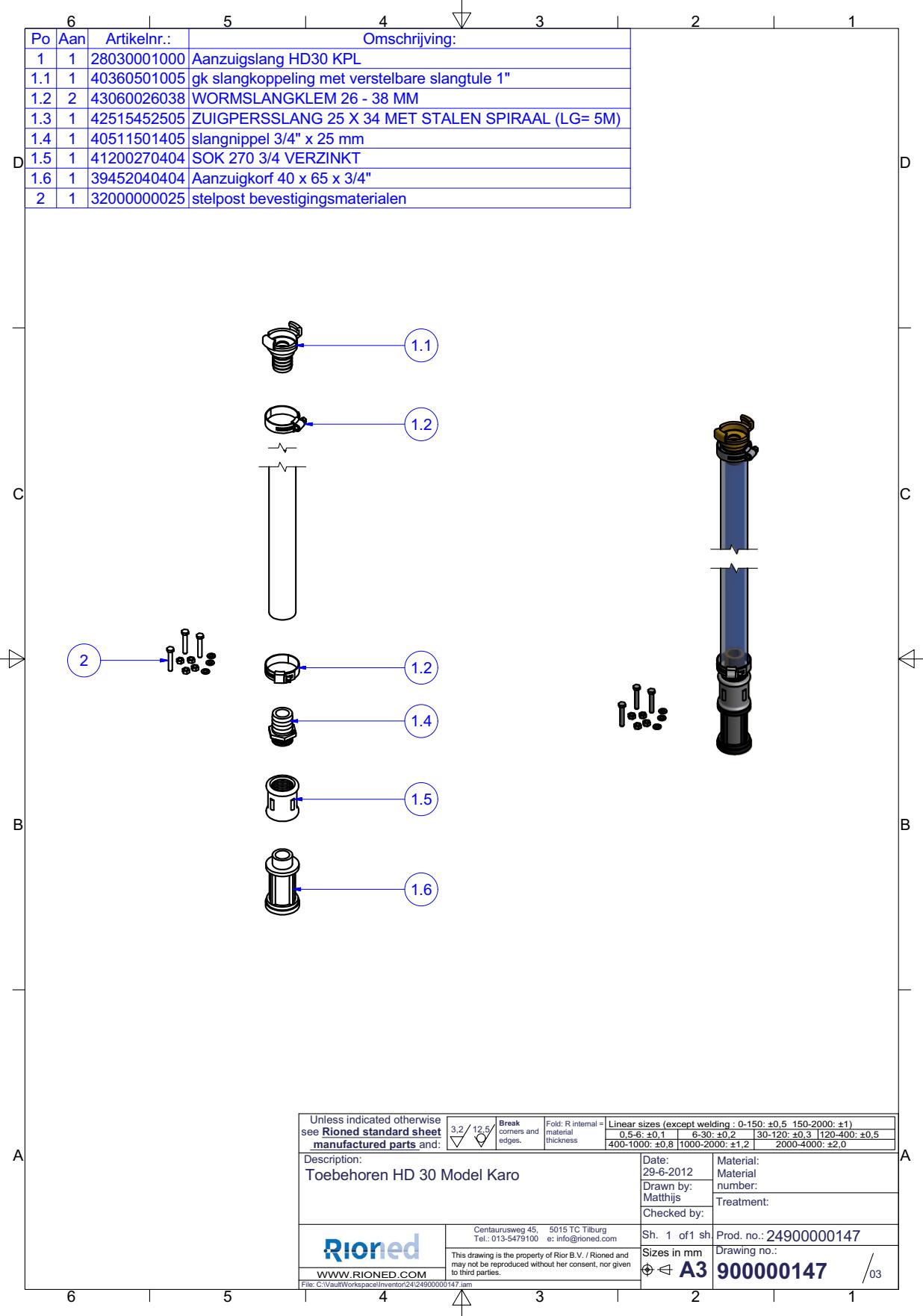
## 10 Exploded views



10.2 90000088 Frame

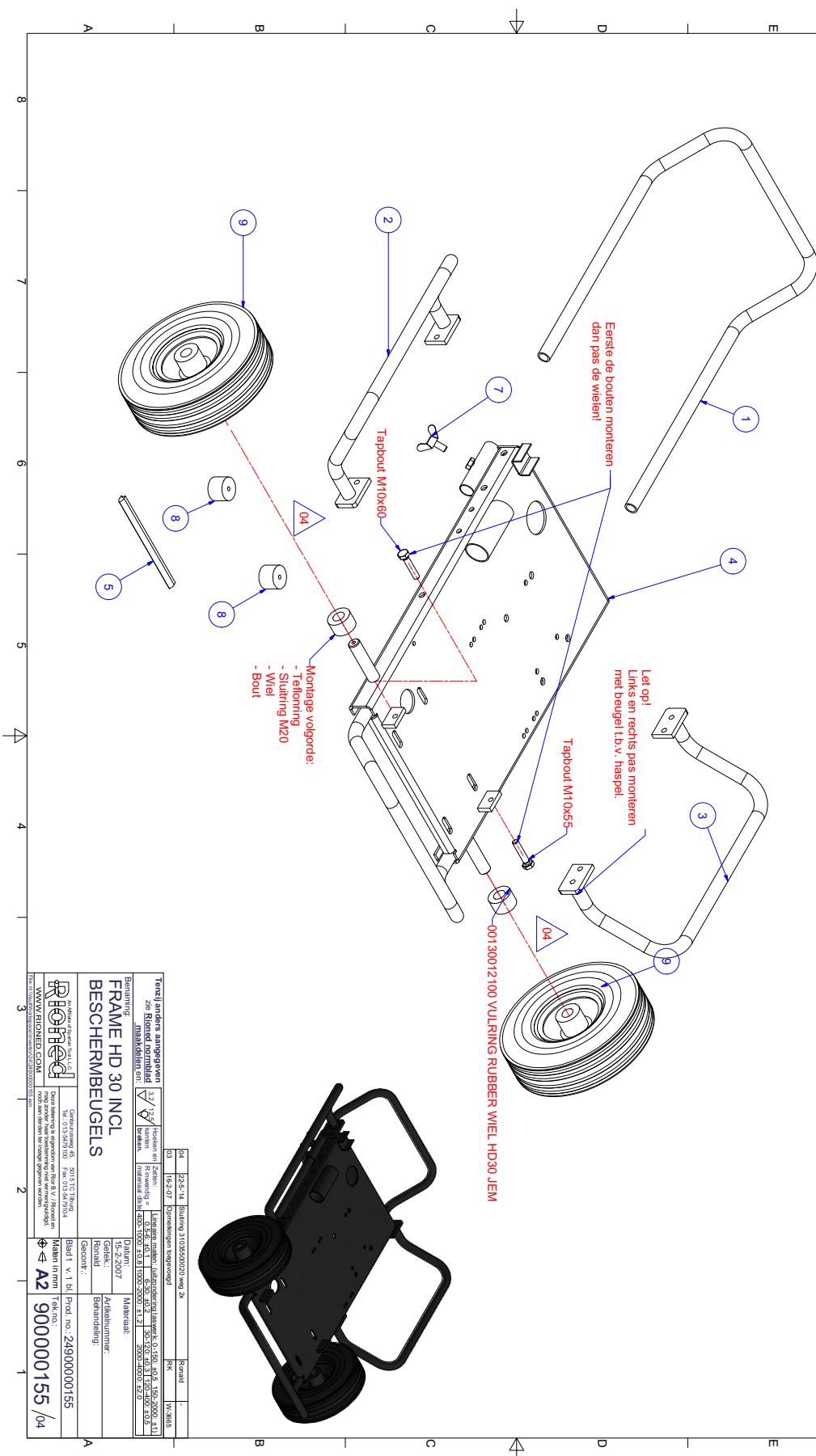


### 10.3 900000147 Accessories 130 bar 30 lpm



## **10.4 900000155 Frame with protective brackets**

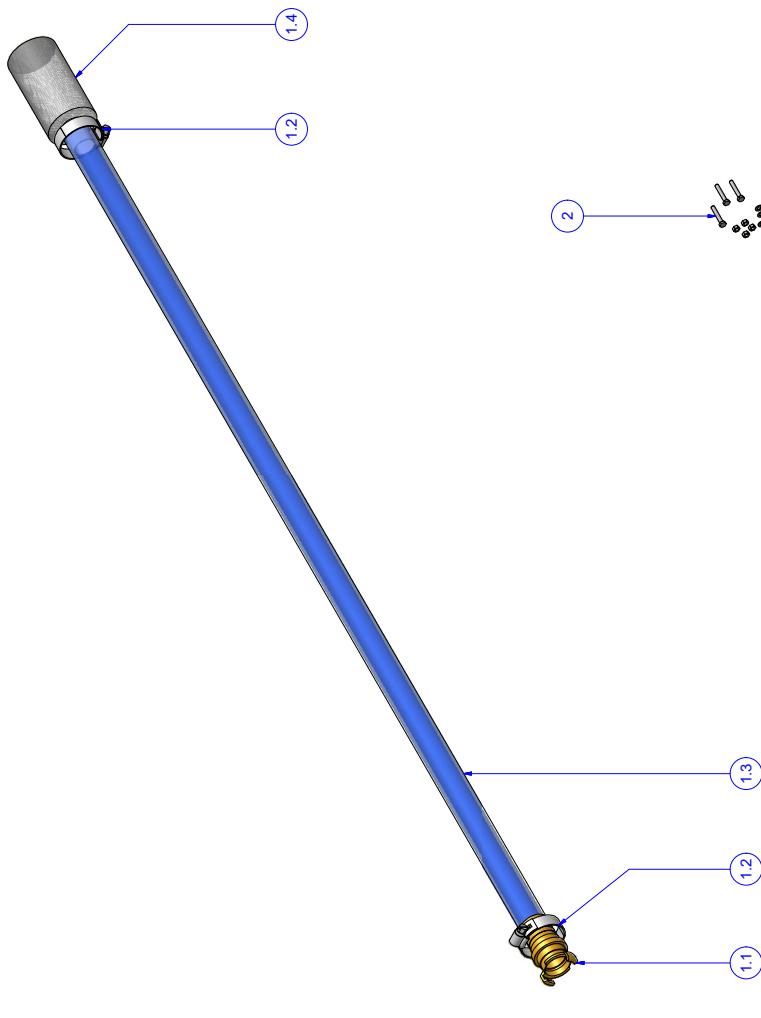
POS	QTY	ARTIKELNR.:	OMSCHRIJVING	description	Beschreibung	description
1	1	28130004001	SCHUHFBEUGEL HD 30 VERZINKT	slide clamp high pressure 30 zinc plated	Bügel Hd30	mache anse hd 30
2	1	28130004004	BESCHERMBEUGEL RECHTS	protection clamp right high pressure 30	protection Bügel rech Hochdruck 30	protection laterale droite hp 30
3	1	28130004004	BESCHERMBEUGEL LINKS	protection clamp left high pressure 30	protection Bügel links Hochdruck 30	protection gauche hp 30
4	1	28130011000	frame HD 30 model 97	frame high pressure 30 model 97	frame Hochdruck 30 modell 97	chassis hd30
5	1	30480500124	raamhoop	tank strip black (200 mm)	Kantenschild (200 mm)	bande de caue noir (200 mm)
7	1	32217010020	vliegschroef m 10 x 20 din 316	wing screw DIN 316 M10 x 20	Flügelschraube m10 x 20 DIN 316	vis de papillon m 10 x 20 DIN 316
8	2	33570042808	trillingsdempfer 40 x 28 x M8 c	shock absorber 40 x 28 x M8 c	Schwingungsdämpfer 40x28-1Xm-8-C	amortisseur d'oscillation 40 x 28 - 1 x m 8 - c
9	2	35050640250	wiel + band massief 250x76x20	wheel and tire massive 250x76x20	Rad und Reifen Massiv 250x76x20	roue et pneu massive 250x76x20



**10.5 900000405 Accessories 100 bar 40 lpm**

## **EXPLODED VIEWS**

POS	QTY	ARTIKELNR.:	ONSCHRIFT
1	1	24100000081	aanzuigslang hd30
1.1	1	40300501000	glk-slangkoppling niet verstelbare slang
1.2	2	430006030050	wormslangklem 38-50 mm
1.3	1	42515452606	zuigerslang 32 x 35 met staten spirale
1.4	1	54200700505	aanzuigslang 70 x 130 x 1
2	2	32000000025	stelsel bevestigingsmaterialen



	en	de	fr
Suction hose HD30		Ansaugschlauch HD30	tuyau d'aspiration HD30
ghk hose coupling with adjustable hose ocket 1 1/4 inch wormhole clip 38 mm		Gk Schlauchkopplung Versetzbart 1 1/4" Schlauchmemme 38 - 50 mm	ghk tuyau raccord avec ajustable tuyau ocket 1 1/4" collier de tuyau 38-50mm,
combination hose 32 x 38 with steel spiral (1500 mm)		Wasserablassschlauch X3 X 39 (1500 mm)	tuyau d'asp. (pression + spirale acier / 30 x 39 (1500 mm))
Joint Korb 70 x 30 x 1		Ansaugkorb 70 x 30 x 1	venturi contelle 70 x 30 x 1
provisional estimate connection materials			provisional estimation connection materialux

Tenzij anders aangegeven  
zie Rioned normblad

Benaming:	maakdelen en:	<input checked="" type="checkbox"/> V	<input checked="" type="checkbox"/> A	breken.	matervel dikte 400-1000: ±0,8	1000-2000: ±1,2	2000-4000: ±2,0
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**toebehoren HD 30 100 bar 40**  
motornieting  
Draaien,  
25-9-2006  
Invataadai.

Anteilnummer: Behandlungsnummer: Getek.: Ronald

Gecontr.:

 An Affiliate of Spartan Tool LLC  
Corporationsweg 45,  
50155 Tönisvorst  
Tel. 013-5479100  
Fax 013-5479104  
**Blad 1 v. 1 bl** Prod. no.: 24900000405

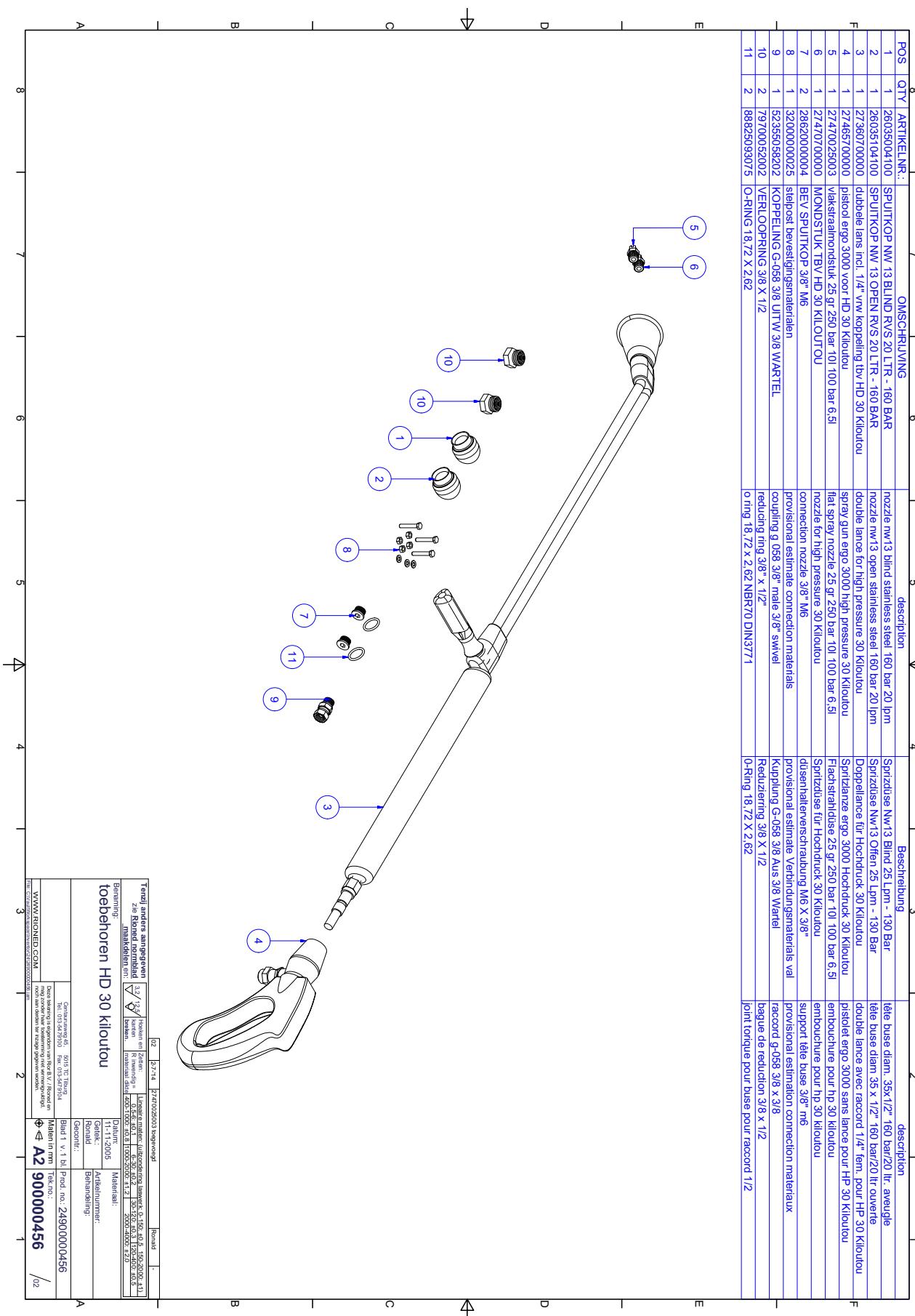
Ditse tekening is eigendom van Rör B.V. / Römid en mag zonder hier toestemming niet vermenigvuldigd.  
**A2**

[WWW.RIONED.COM](http://WWW.RIONED.COM) nach dem Herzaufgehen werden.  
Foto C:\Vual\Wirtschaft\Inventur\A64900000405.htm

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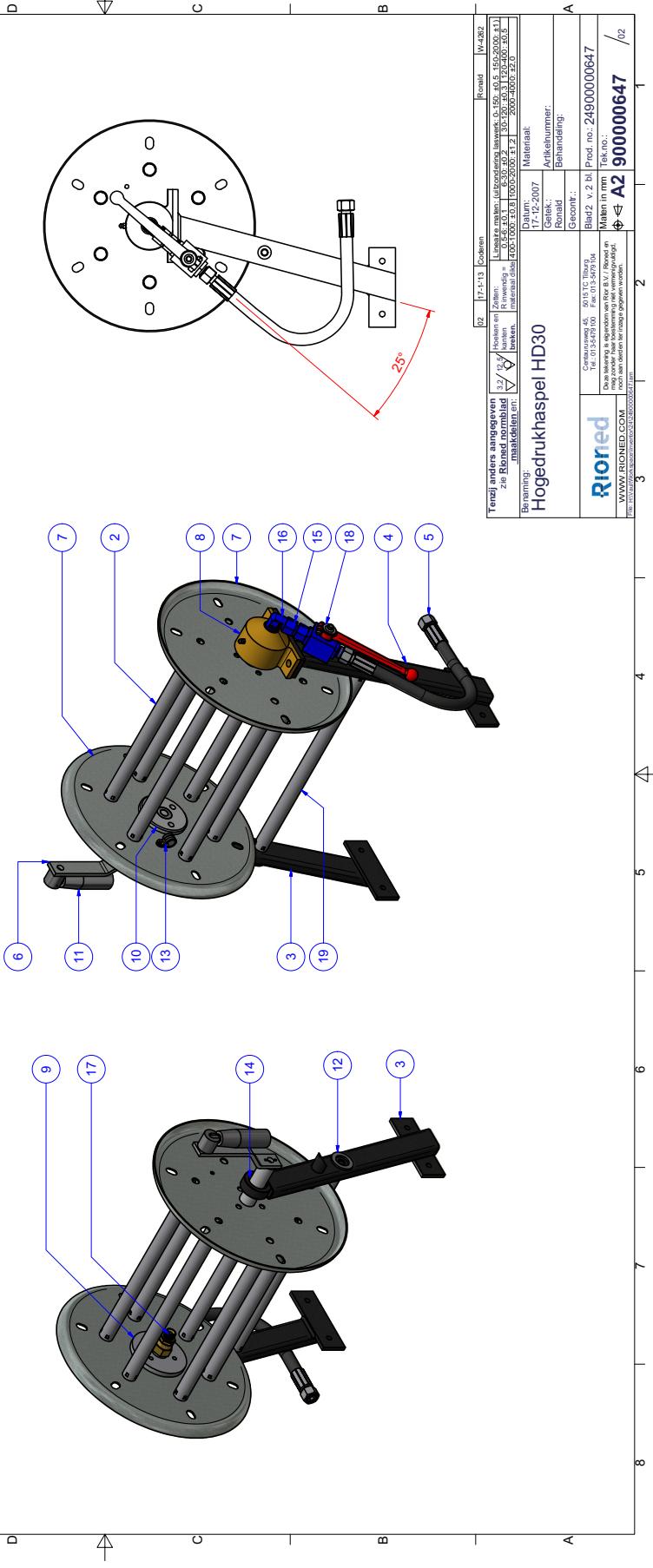
## 10.6 900000456 Accessories 120 bar 22 lpm



**10.7** 900000647 High pressure reel NW10 - 40 m

## **EXPLODED VIEWS**

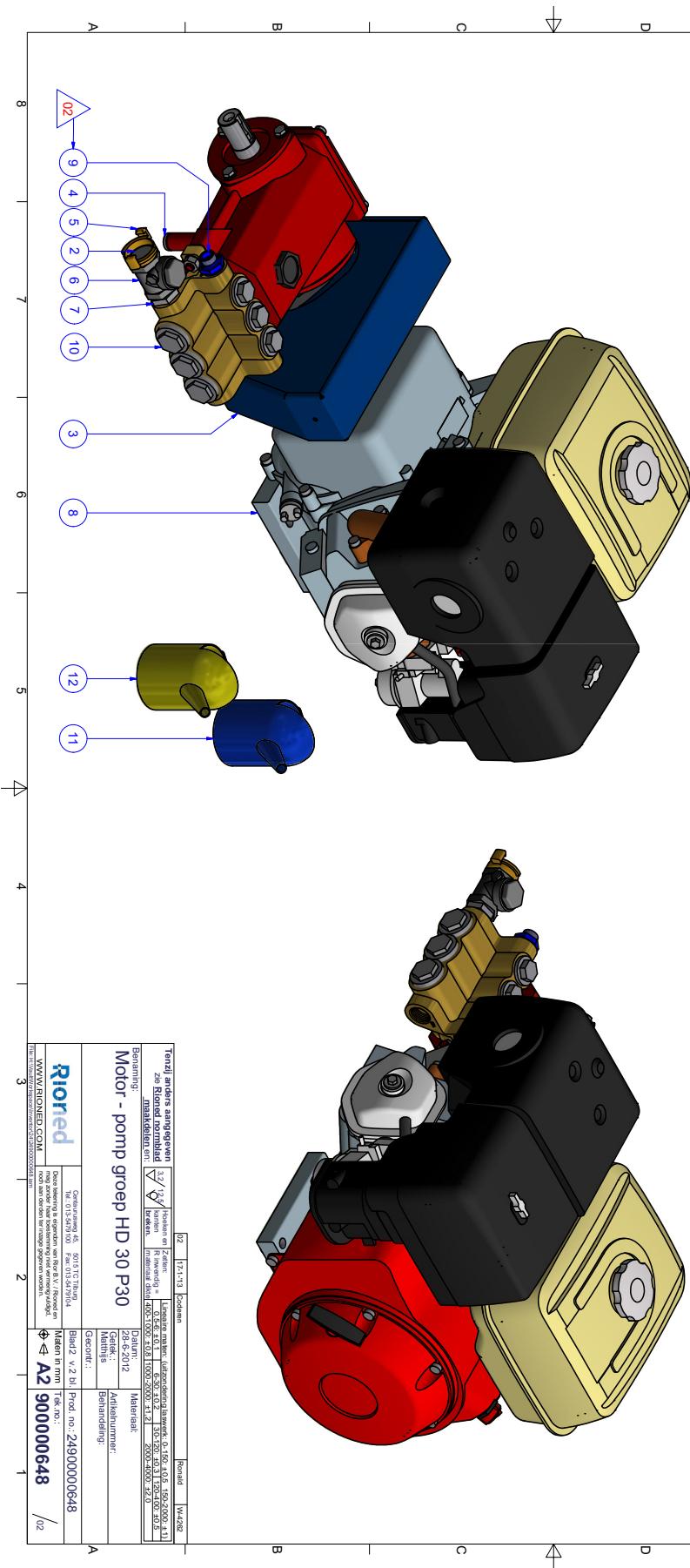
POS	QTY	ARTIKELNR.:	OMSCHRIJVING	description	Beschreibung		1
					5	6	
F	1	250/004/0202	hd rubber slang W/P/B 225/660 BAR NW10-40 mtr 3/8" uitw x 3/8" wortelstiel	high pressure rubber hose nw10-40 mtr 3/8" male x 3/8" swivel	Hochdruckschlauch NW 10 - 40M. 3/8" Ag X 3/8"	tuyau hp/nw 10-40m. 3/8"m x 3/8"	
	2	28/13000/7010	haspel standspijp 330 mm HD 30 v.z.nkt	hose reel distance pipe 330 mm high pressure 30 zinc plated nkt	Haspelrechenrohr 335 mm. Hd 30 Versenk	tube pour enrouleur l=330mm hp 30	
	3	28/13001/7000	steun opbouw haspel links HD 30 v.z.	support set up hose reel left high pressure 30 zinc plated	Haspelstütze Hd 30-Links	support gauche pour hp 30	
	4	28/13022/7000	steun opbouw haspel rechts HD 30 v.z.	support set up hose reel right high pressure 30 zinc plated	Schlauch H/8" 2st 385 han 330 mm 12L in. Recht x 12L in. Recht	support de enrouleur Rd 30 droite	
	5	28/10033/0012	Slang 3/8" 2st 385 bar 330 mm 12L inw recht x 12L inw recht	Hose 3/8" 2st 385 bar 330 mm 12L in. straight x 12L in. straight	Tuyau 3/8" 2st 385 bar 330 mm 12L in. droit x 12L in. droit	Tuyau 3/8" 2st 385 bar 330 mm 12L in. droit x 12L in. droit	
	6	29/10100/1000	haspelslingen VZ	hose reel slinger zinc plated	Haspelschleuder	manivelle d'enrouleur	
E	7	29/10122/2000	doorloophaspelschijf rond 320 x 2 x 1/2" zonder tule	feod through hose reel plate round 320 x 2 x 1/2" without socket	Durchflutihaspelscheibe lund 320 x 2 x 1/2" ohne Tüll	rondelle de blocage en 10	
	8	29/1013/0300	haspeldoornvellerager 1/2" 150 bar kpl	hose reel lead-through bearing 1/2" 150 bar complete	Haspel-Drehgelenk 1/2" 150 Bar/Rändelkopf komplett	Rsgu Biegel 18 mm. Karo 150...	
	9	29/10430/3000	haspeloondonventiel 1/2" x 1/2" VZ	hose reel grommet 1/2" x 1/2" zinc plated	Haspel durchflutüll 1/2" x 1/2" versenkt	nylon bague 12 x 25 x 35	
	10	29/10525/6000	haspeldraadlafast 25 x 50 mm	hose reel drive spindle tap ø 25 x stc 50 zinc plated	Haspel Achszap- Fen	acquériment ajustable droit DIN 2353 12L - G1/2 BSPT body only	
	11	30/1009/0008	slinghandgreep M8 inklapbaar RVS met zwarte kunststof handvat.	handle hand grip M8 collapsible RVS met zwarte kunststof handvat.	Kurbelgriff Klappbar M8	acquériment de renouleur m8 repliable	
	12	310355000/10	sluitring DIN 125a M10	plain washer without chamfer DIN 125a M10	Flache Unterlegscheibe l nach M 10-Din 125A	rondelle de blocage en 10	
E	13	430555000/18	rsgu callier 18 mm	rsgu callier 18 mm	Rsgu Biegel 18 mm. Karo 150...	vanne à bille 2-way DIN 2353 12L	
	14	45/0112/2535	nylon tegenbus 12 x 25 x 35	Nylon Lagerbüchse 12 X 25 X 35	nylon bague 12 x 25 x 35	bare enrouleur l=37mm	
	15	57/001/2018	Rechte kantelkoppling DIN 2353 12L - M18	straight adjastable coupling DIN 2353 12L - M18	gdraide einstellbare Kupplung DIN 2353 12L - M18	HD Kugelbahn DIN 2353 12L - G1/2 BSPT body only	
	16	51/10121/03	Haakse inschrijfkoppling DIN 2353 - 12L - G1/2 BSPT body only	swing coupling DIN 2353 12L - G1/2 BSPT body only	Einschraubkupplung DIN 2353 12L - G1/2 BSPT body only	HD Kugelbahn DIN 2353 12L - G1/2 BSPT body only	
	17	5233624/3203	koppelring 9 243 x 38" uitw 1/2" varsel	coupling 9 243 x 38" male 1/2" swivel	Radizierkupplung 3/8" 1/2" ig	vane à bille 2-way DIN 2353 12L	
	18	5370001/2018	hd blokkoppekrana 2 weg DIN 10 12L	HP ball valve 2-way DIN 2353 12L	HD Kugelbahn DIN 2353 12L	HD Kugelbahn Distanz Rohr 375 mm	
E	19	7965/000/8016	haspelaftstandslijp 375 mm	hose reel distance pipe 375 mm	Schlauch Haspel Distanz Rohr 375 mm		



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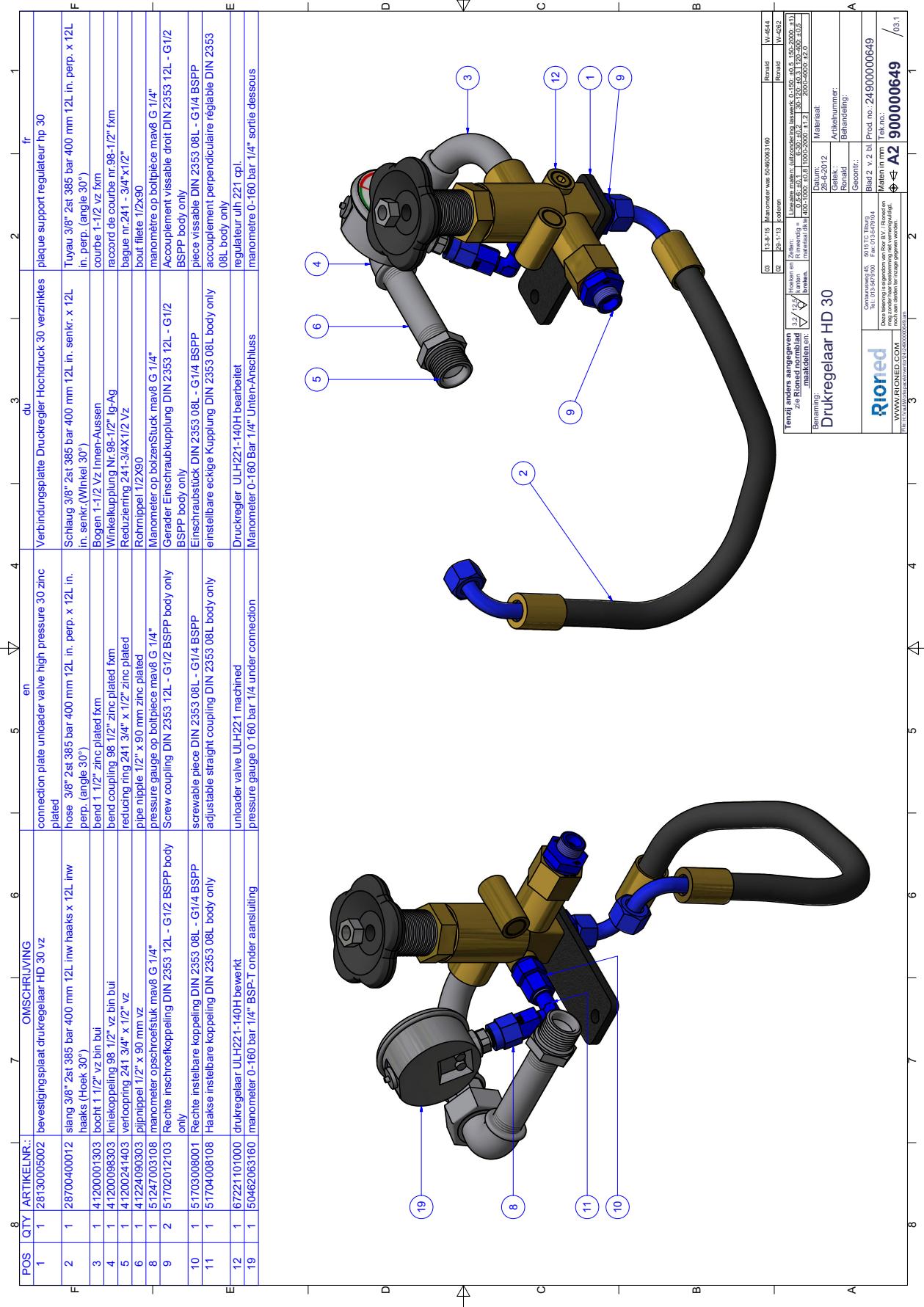
## **10.8 900000648 Motor/pump group P30**

POS	QTY	ARTIKELNR.:	OMSCHRIJVING	en	fr
1	1	0534000648	kit aandrijving HD30/P30/90SPZ4	kit drive HD30/P30/90SPZ4	kit entraînement HD30/P30
1.1	1	30346100687	v snaarschijf 90 spz 4 t11610 □TB grote conusziede	v belt xpz 687mc	courroie xpz 687mc
1.2	1	34365234090	geelk.veg	v belt pulley 90 spz 4 t11610	poulie 90 spz 4 t11610
1.3	1	34365234140	v snaarschijf 140 spz 4 t12012 - T2 kleine conusziede	v belt pulley 140 spz 4 t12012	poulie 140 spz 4 t12012
1.4	1	34368161025	geelk.veg	v belt pulley 140 spz 4 t12012	poulie 140 spz 4 t12012
1.5	1	34365201228	klembus 1610 25 mm	clamping bush 1610 25 mm	cone 1610-25 mm
1.6	1	28015004000	Filterzaal HD 15	filter strainer high pressure 15	élement de filtre
1.7	1	28130012050	beschermkap HD 30 Honda P21 P30	protection cover high pressure 30 Honda P21 P30	capot de protection hp 30 Honda P21 P30
1.8	1	28130014000	ophangsus x20x5	filling up bush ø20 x 5	entrouse de pompe 20 x 5
1.9	1	40360510004	gk aansluitstift 3/4" uitw	gk connector 3/4" male	GK Anschlussstück 3/4" Ag
2.0	1	40595502404	tenugslagdikte 3/4"	kick-back valve 3/4 inch	Rückschlagventil 3/4"
2.1	1	41200280404	dubbele nippel 280 3/4" VZ	double nipple 280 3/4" zinc plated	Doppelansatz 280-3/4
2.2	1	44006633750	motor Honda GX 340 1X4 benzine	motor Honda GX 340 1X4 benz	Moteur Honda GX 340 1X fuel
2.3	1	51702012103	Rechte inschraakkoppling DIN 2353 12L - G1/2	Screw coupling DIN 2353 12L - G1/2 BSPP	Accouplement visstaille droit DIN 2353 12L - G1/2 BSPP
2.4	1	66030411000	BSP body only	body only	body only
2.5	1	71020200090	pomp P30/43-130	Pumpe P30/43-130	Pompe P30/43-130
2.6	1	7102001030	Pompoile PROTEUS GL 5 80W/90 (0.7 L)	pump oil mobilube high pressure 80w/90 (0.7 L)	huile de pompe mobilube hd 80w/90 (0.7 L)
2.7	1	7102001030	Motorolie TALOS TD-FE 10W-30	engine oil TALOS TD-FE 10W-30	huile moteur TALOS TD-FE 10W-30



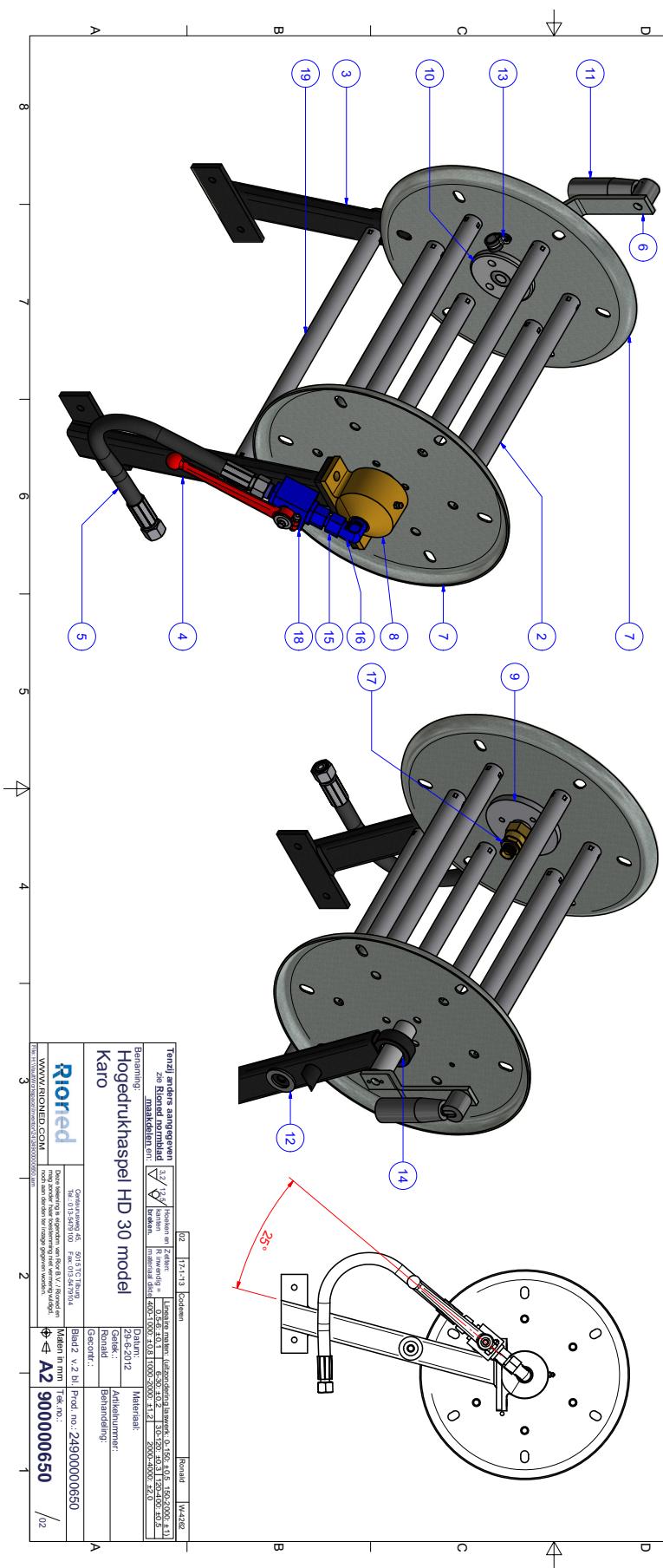
## EXPLODED VIEWS

### 10.9 900000649 Pressure regulator 160 bar



## **10.10 900000650 High pressure reel NW8 - 40 m**

POS QTY	ARTIKELNR.:	C/M SCHRIJVING	du	en	fr
1	1	25006040102 ulw x 3/8" warel	hoi rubber slang WP/BP 225680 BAR NW8 40 mtr 1/4"	high pressure rubber hose nw8 40 mtr 1/4" male x 3/8" swivel	tuyau hp en caoutchouc nw8-40m 1/4ext. x 3/8 waretel
2	6	28330007010 haspelstaandslijp 330 mm HD 30 v.zink	Haspelstreckenrohr 335 mm. Hd 30 Versenk	hose reel distance pipe 330 mm high pressure 30 zinc plated ink.	tube pour enrouleur l=330mm hp 30
3	1	281300277000 steun oppbouw haspel links HD 30 v.zink	Haspelstütze Hd 30 Links	support set up hose reel left high pressure 30 zinc plated	support de rouleau hp 30
4	1	281300277000 steun oppbouw haspel rechts HD 30 v.zink	Haspelstütze Hd 30 Rechts	support set up hose reel right high pressure 30 zinc plated	support de rouleau hp 30 droite
5	1	2800330012 Slang 3/8" 2st 365 bar 330 mm 12L inh recht	Schlauch 3/8" 2st 365 bar 330 mm 12L in. Recht x 12L	Hose 3/8" 2st 365 bar 330 mm 12L in. straight x 12L in. straight	Tuyau 3/8" 2st 365 bar 330 mm 12L in. droit x 12L in.
6	1	2910101000 haspelstijger vz	Haspelstielreiter	hose reel slinger zinc plated	manivelle d'enrouleur
7	2	29101322000 deonvormigspelslif rond 320 x 2 x 1/2" zonder tule	Durchflutungshaspelscheibe rund 320 x 2 x 1/2" ohne Tüll	feed through hose reel plate round 320 x 2 x 1/2" without socket	flasque d'enroulement 320 x 2 x 1/2" sans ske
8	1	29103150300 haspelboorverlager 1/2" 150 bar kop	Haspel-Drehkopf 1/2" 150 bar/Rundkopfkomplett	hose reel breakthrough bearing 1/2" 150 bar complete	patin de demarreur 1/2" bronze/round komplet
9	1	2910313000 haspelboorverlager 1/2" X 1/2" vz	Haspel-führhülle 1/2" X 1/2" versenk.	hose reel grommet 1/2" x 1/2" zinc plated	tulle de traverse enrouleur hp 1/2" x 1/2"
10	1	29105028500 haspelarmflascher Ø 25, stc 50 vz	Haspel-Armfahrt Achszap-Fen	hose reel drive sprocket tap ø 25 x stc 50 zinc plated	axe de démarrement d'enrouleur dia 25 x stc 50
11	1	30010090008 slingberghandgreep M8 inklapbaar RVS met zwarte	Kunzelgriff Klappbar M8	handle hand grip M8 collapsible	pougeee d'enrouleur m8 repliable
12	1	45012112255 kunststof handvat	Kunststoffhandgriff		
13	1	45012112255 nylon agerous 12 x 25 x 35	Nylon Lagerbüchse 12 x 25 x 35	nylon bearing bushing 12 x 25 x 35	nylon bague 12 x 25 x 35
14	1	45012112255 nylon agerous 12 x 25 x 35	Nylon Lagerbüchse 12 x 25 x 35	nylon bearing bushing 12 x 25 x 35	nylon bague 12 x 25 x 35
15	1	51710012018 Rechte wortelkoppeiling DIN 2353 12L - M18	gerade einstellbare Kupplung DIN 2353 12L - M18	straight adjustable coupling DIN 2353 12L - M18	accouplement ajustable droit DIN 2353 12L - M18
16	1	517101012103 Haakse inschroefkoppeeling DIN 2353 12L - G1/2 BSPT body only	Einschraubkupplung DIN 2353 12L - G1/2 BSPT body only	screw coupling DIN 2353 12L - G1/2 BSPT body only	accouplement visserie DIN 2353 12L - G1/2 BSPT body only
17	1	53100012018 hd blokkogelkraan 2 weg DN10 12L	HD Kugelhahn DIN 2353 12L	HP ball valve 2-way DIN 2353 12L	vanne à bille 2-way DIN 2353 12L
18	1	79650008016 haspelstaandslijp 375 mm	Schlauch Haspel Distanz. Rohr 375 mm	hose reel distance pipe 375 mm	barre enrouleur l=375mm



Hogedrukhaspel HD 30 model  
Karo

<b>Tenzij anders aangegeven zie <u>Riloned normblad</u></b>	<b>3.2.12.5</b>	<b>Hoecken en kammen breken.</b>	<b>Zetlen: R inwendig met voorzichtig materiaal da-</b>
<b>Benaming:</b> <u>maakdelen en:</u>	<input checked="" type="checkbox"/>		

02 17-1-'13

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n barre entrée

G1/2 BSPT body only  
accoupler body only  
vanne à b

x 35  
N 2353 12L - M18  
accoupler  
nylon bag

5 x stc 50 zinc plated

<b>1/2" 150 bar complete</b>	<b>palier d'entraînement</b>
<b>stainless plated</b>	<b>tulle de tirage</b>

Ind 320 V 2 V 1/2" without socket      droit  
manivelle

high pressure 30 zinc plated	support stand
12L in. straight x 12L in. straight	Tuyau 3/8"

high pressure 30 zinc plated nkt tube pour

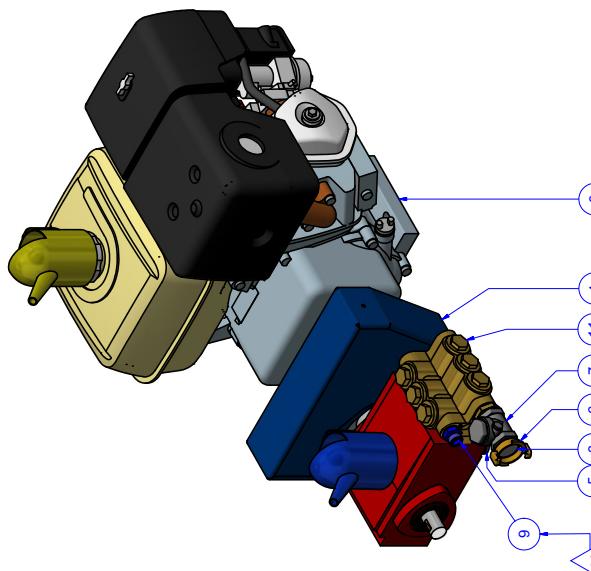
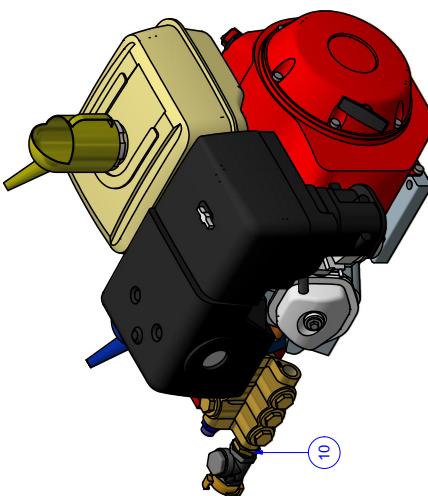
en  
J  
40 mtr 1/4" male x 3/8" swivel tuyau hp e

## EXPLODED VIEWS

### 10.11 900000651 Motor/pump group P21 protective cap blue excl. dirt trap

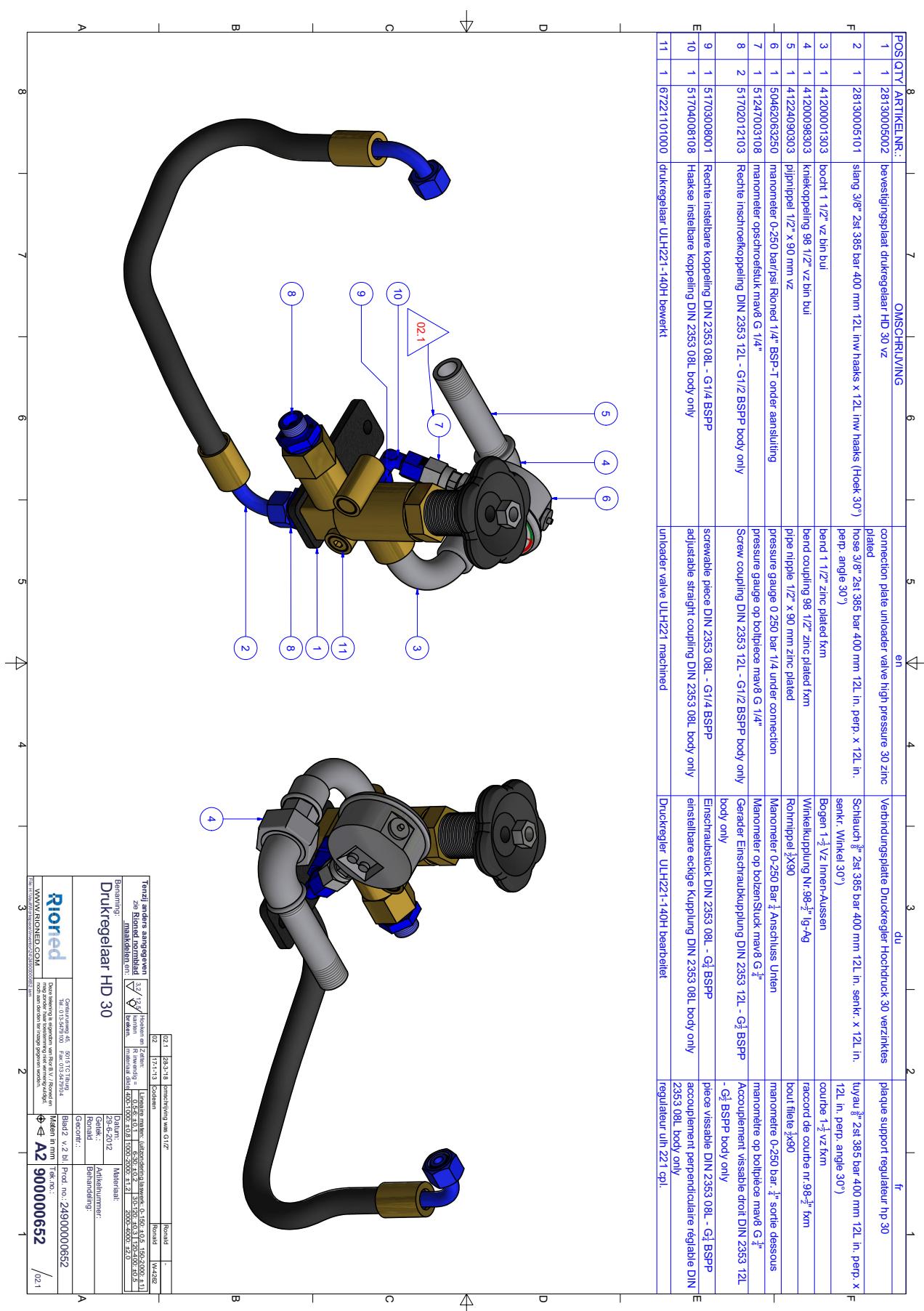
62

POS	QTY	ARTIKELNR.:	OMSCHRIJVING	description	1	2	3	4	5	6	7	8	9
1	1	00130011101	vulring P21	spacer disc P21									
2	1	05340000951	kit aandrijving HD30 P21	Distanzscheibe P21	rondelle de distance P21								
F	2.1	1	34130011100	v aandrijving HD30 P21	Kit Laufwerk HD30 P21	kit entraînement HD30 P21							
	2.2	3	34364100612	v naarschijf 112 spz3 dia 22	Kellinerschleife 112 spz3 hole dia 22	pouille 112 spz3 dia 22							
	2.3	1	34365233090	v naarschijf 90 spz 3 tl1610	Kellinerschleife 90 Spz 3 - Tl1610	courroie x12 6x12 honda 6x620 1nd 50 sp							
	2.4	1	34368161025	klembuis 1610 25 mm	Klembuhsse 1610-25mm	courroie 90 spz 3 - tl1610							
	3	1	28015004000	filterriet HD 15	Filterriet Hochdruck 15	cone 1610-25mm.							
	4	1	28130012500	beschermkap HD 30 Honda P21 P30	Kellinenabdeckung HD30	élément de filtre							
	5	4	28130014000	ophoogbus ø20X5	Auftriebhöchse rund 20x5	capot de protection hp 30 Honda P21 P30							
	6	1	40360510004	dk aansluitstuk 3/4" uit/w	Gk Anschlussstück 3/4" Ag	entrée de pompe 20 x 5							
	7	1	40595502404	terugslagdruk 3/4"	Rückschlagventil 3/4"	entroue de pompe 20 x 5							
	8	1	440006633750	motor Honda GX 340 x benzine	Motor Honda GX 340 x Benz	raccord d'accouplement / 3/4"							
E	9	1	51702012102	Rechte inschroefkoppeling DIN 2353 12L - G3/8 BSPP	Screw coupling DIN 2353 12L - G3/8 BSPP	souape de retenue 3/4"							
			body only	body only	Gerader Einschraubkopplung DIN 2353 12L - G3/8 BSPP	moteur GX 340 x fuel							
	10	1	52275501304	hd verloopnippel 1/2" bsp bui x 3/4" npt bui	high pressure reduction nipple 1/2" bsp male x 3/4" npt male	haut de pompe mobilebe hd 80w/90							
	11	1	66021414000	pomp P21/23-130	Pump P21/23-130	huile moteur TALOS TDPE 10W-30							
	39	0.7	710202000090	Pompje PROTEUS GL 5 80W/90	Pump oil mobilebe high pressure 80w/90	huile moteur TALOS TDPE 10W-30							
	38	0.5	710202001030	Motorolie TALOS TDPE 10W-30	engine oil TALOS TDPE 10W-30	huile moteur TALOS TDPE 10W-30							



Tenzil anders aangegeven zie Ronde nominaal maakdelen en:	17,1-13	Couren	Rond	W-492
	17,1-13	Naam en toepassing van de ronde maten in de tekening tekenen.	maten die tekening tekenen.	0,6-300,11
	17,1-13	Naam en toepassing van de ronde maten in de tekening tekenen.	maten die tekening tekenen.	0,6-300,11
	17,1-13	Naam en toepassing van de ronde maten in de tekening tekenen.	maten die tekening tekenen.	0,6-300,11
	17,1-13	Naam en toepassing van de ronde maten in de tekening tekenen.	maten die tekening tekenen.	0,6-300,11
Benaming: Motorpompgroep HD 30				
Geblok.: Ronald				
Gecert.: A				
Rioned	02	Centraalvoering 45, 9015 TC Tmca 9 Driehoekige vorm met vierkante opening naar buiten gericht om de vorm van de tekening te vereenvoudigen. Model niet te gebruiken om de vorm van de tekening te vereenvoudigen.	Blaad 2 v. 2 bl.	Maten in mm Fak no.: <b>A2 900000651 /02</b>
WWW.RIONED.COM	3			

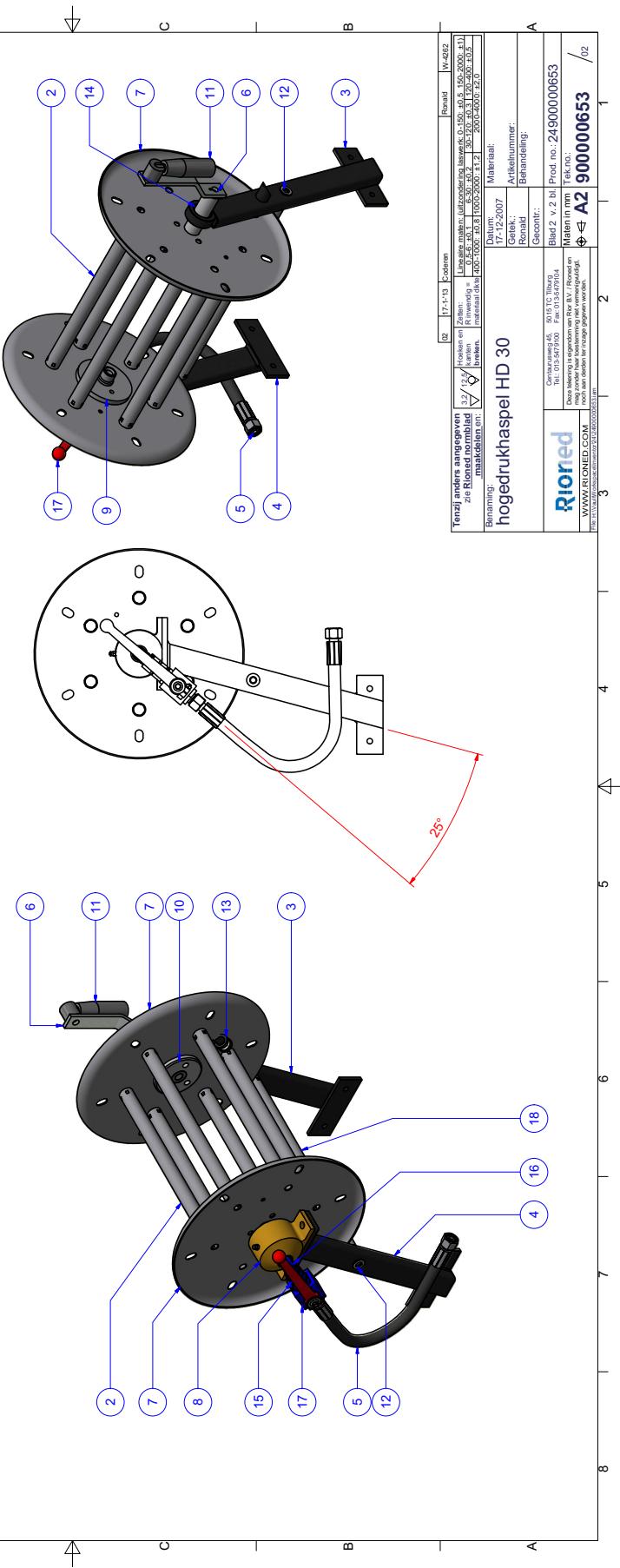
## 10.12 900000652 Pressure regulator 250 bar



**10.13** 900000653 High pressure reel NW10 - 30 m

## **EXPLODED VIEWS**

POS QTY	ARTIKELNR.:	OMSCHRIJVING			Beschreibung	description	description
		6	5	4			
1	25010030302	hd rubberstang NW10 30 mtr 3/8" uitw x 1/2" wortel	high pressure rubber hose nw10 30 mtr 3/8" male x 1/2" swivel	Hochdruckschlauch nw10 30 mtr 3/8" männlich x 1/2" swivel	hp caoutchouc tuyau nw10 30 mtr 3/8" masculin x 1/2" swivel	hp caoutchouc tuyau nw10 30 mtr 3/8" masculin x 1/2" swivel	hp caoutchouc tuyau nw10 30 mtr 3/8" masculin x 1/2" swivel
F	2	28130007010 Haspelafstandsdipl 330 mm HD 30 vzw nkt	hose reel distance pipe 330 mm high pressure 30 zinc plated nkt	Haspelstreckerhahn 335 mm. Hd 30 Versenk	tube pour enrouleur l=330mm hp 30	tube pour enrouleur l=330mm hp 30	tube pour enrouleur l=330mm hp 30
3	1	28130017000 steun opbouw haspel links HD 30 vzw	support set up hose reel left high pressure 30 zinc plated	Haspelinste Hd 30-Links	support gauche pour hp 30	support gauche pour hp 30	support gauche pour hp 30
4	1	2870030012 Stang 3/8" 2st 385 bar 350 mm 12l. lnw recht	support set up hose reel right high pressure 30 zinc plated	Haspelinste Hd30-Rechts	support droit pour hp 30	support droit pour hp 30	support droit pour hp 30
5	1	2870030012 Stang 3/8" 2st 385 bar 350 mm 12l. lnw recht x 12l. lnw recht	Hose 3/8" 2st 385 bar 350 mm 12l. in straight x 12l. in straight	Schlauch 3/8" 2st 385 bar 350 mm 12l. in. Recht x 12l. in. Recht	Tuyau 3/8" 2st 385 bar 350 mm 12l. in. droit x 12l. in. droit	Tuyau 3/8" 2st 385 bar 350 mm 12l. in. droit x 12l. in. droit	Tuyau 3/8" 2st 385 bar 350 mm 12l. in. droit x 12l. in. droit
6	1	29101001000 Haspelslingerl. vz	hose reel slinger zinc plated	Haspelanhängescheibe rund 320 x 2 x 1/2" ohne Tül	manivelle d'enrouleur	manivelle d'enrouleur	manivelle d'enrouleur
7	2	29101322000 doornoorhaaspelschijf rond 320 x 2 x 1/2" zonder tule	feed through hose reel plate round 320 x 2 x 1/2" without socket	Durchlaufturboscheibe rund 320 x 2 x 1/2" ohne Tül	axe d'enroulement sans axe	axe d'enroulement sans axe	axe d'enroulement sans axe
8	1	291031050300 Haspeldoornvoetdraai 1/2" 150 bar kpl	hose reel lead-through bearing 1/2" 150 bar complete	Haspel-Drehgelenk 1/2" 150 Bar/Ronend/Komplett	palier d'enrouleur 1/2" bronze/ronde/noe complet	palier d'enrouleur 1/2" bronze/ronde/noe complet	palier d'enrouleur 1/2" bronze/ronde/noe complet
9	1	29105025000 Haspeldraadlijfastpat Ø 25 x 8 stic 50 vzw	hose reel drive spindle cap Ø 25 x 8 stic 50 zinc plated	Haspel Antrieb Achszap- Fan	axe de traversée enrouleur 1/2" x 1/2" versenk	axe de traversée enrouleur 1/2" x 1/2" versenk	axe de traversée enrouleur 1/2" x 1/2" versenk
10	1	30010090008 slingerhangreep MB inklapbaar RV/S met zwarte kunststof handvat	handle hand grip M8 collapsible	Kurzgriff Klappbar M8	poignée d'enrouleur m8 repliable	poignée d'enrouleur m8 repliable	poignée d'enrouleur m8 repliable
E	12	2	310355000010 sluitring DIN 125a M10	Flache Unterlegscheibe nach M. 10-Din 125A	rondeille de blocage m 10	rondeille de blocage m 10	rondeille de blocage m 10
	13	1	43055600018 rsgu clamp 18 mm	rsgu callier 18 mm	Regu Biegel 18 mm. Karo 150,-.	Regu Biegel 18 mm. Karo 150,-.	Regu Biegel 18 mm. Karo 150,-.
	14	1	5101122535 nylon lagerbus 12 x 25 x 35	Nylon Lagerbuchse 12 X 25 X 35	nylon bague 12 x 25 x 35	nylon bague 12 x 25 x 35	nylon bague 12 x 25 x 35
	15	1	51700001218 Rechte wortelkopeling DIN 2353 12L - M18	gerade einstellbare Kupplung DIN 2353 12L - M18	gerade einstellbare Kupplung DIN 2353 12L - M18	gerade einstellbare Kupplung DIN 2353 12L - M18	gerade einstellbare Kupplung DIN 2353 12L - M18
	16	1	51701012103 Hakke inschroefkopeling DIN 2353 12L - G1/2 BSPT body only	Einschraubkopplung DIN 2353 12L - G1/2 BSPT body only	Einschraubkopplung DIN 2353 12L - G1/2 BSPT body only	Einschraubkopplung DIN 2353 12L - G1/2 BSPT body only	Einschraubkopplung DIN 2353 12L - G1/2 BSPT body only
	17	1	531000012018 hd biokogekraan 2 wed DN10 12L	HP ball valve 2-way DIN 2353 12L	HD Kugelhahn DIN 2353 12L	HD Kugelhahn DIN 2353 12L	HD Kugelhahn DIN 2353 12L
	18	1	796500000161 Haspelafstandsdipl 375 mm	hose reel distance pipe 375 mm	Schlauch Haspel Distanz Rohr 375 mm	Schlauch Haspel Distanz Rohr 375 mm	Schlauch Haspel Distanz Rohr 375 mm

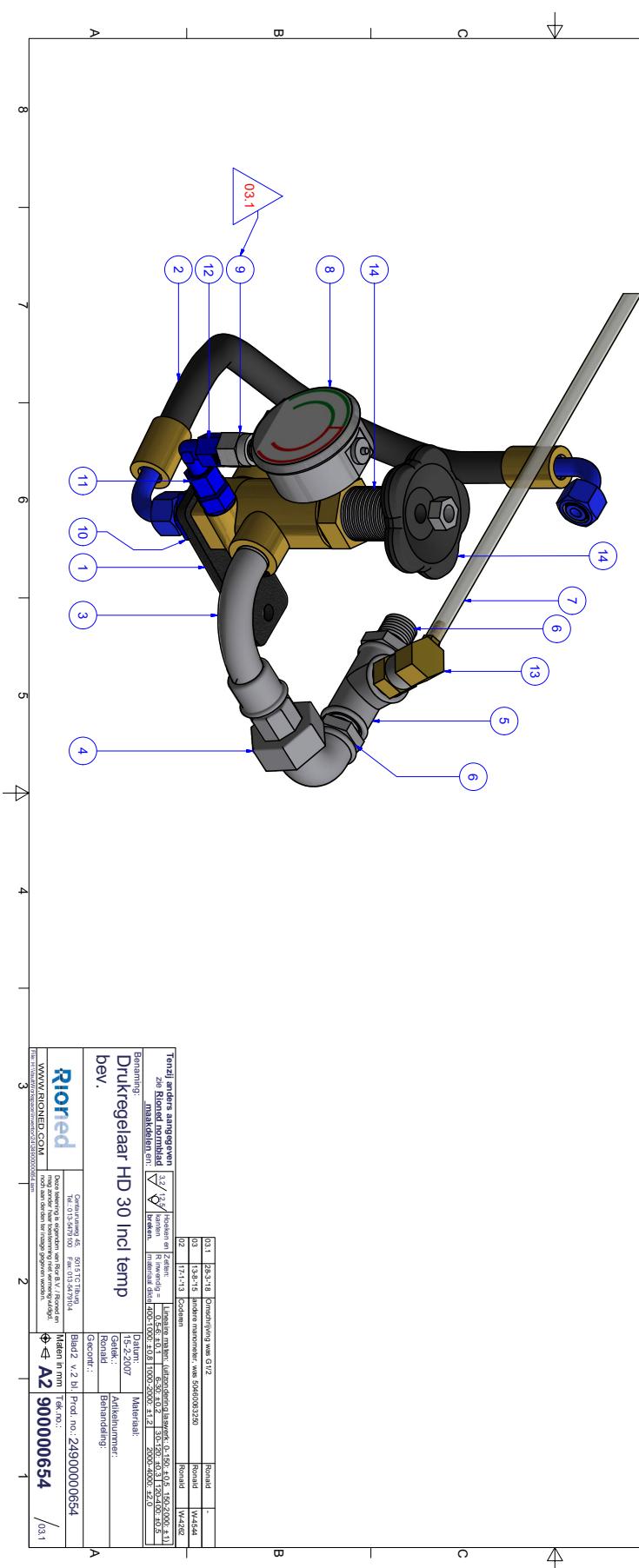


Tenzif anders angegeben		Ronald	W-4282
Zie hofst. nombordlaat Bemming: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Lanen mitan (afzonding) lanwurk 15-10-05 - 150-05-11 R-wereld = 0-6-50-50 timmerwurk 15-10-05-15 timmerwurk 15-10-05-15	
		Materieel: Datum: Gebruik: Gecont:	
		17-12-2007 Ronald Arbeidnummer: Blad 2 v. 2 bl.	
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For more information about the study, please contact Dr. Michael J. Hwang at (319) 356-4000 or via email at [mhwang@uiowa.edu](mailto:mhwang@uiowa.edu).

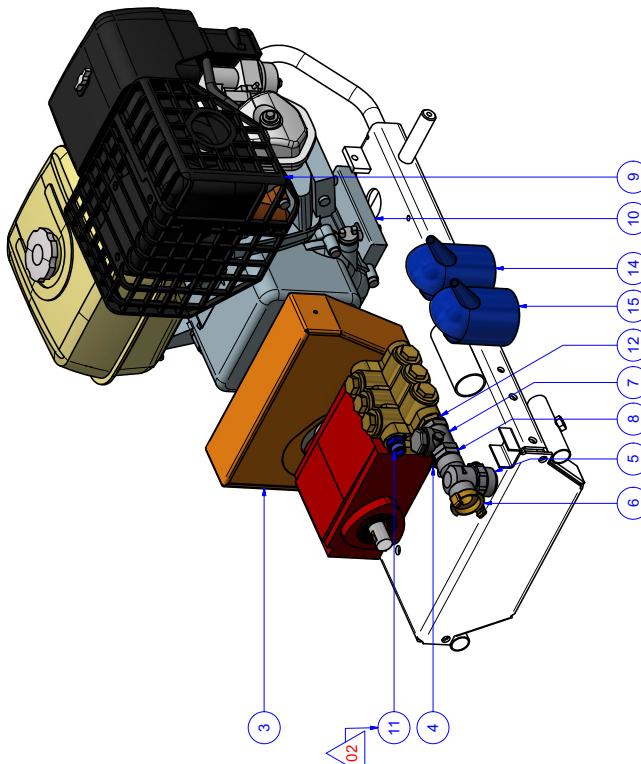
**10.14 900000654 Pressure regulator 250 bar incl. temp. protection**

POS QTY	ARTIKELNR.:	OMSCHRIJVING	description	Beschreibung	description
1	1	28130005002 bevestigingsplaat drukregelaar HD 30 vz	connection plate unbader valve high pressure 30 zinc plated	Verbindungsplatte Druckregler Hochdruck	plaqué support régulateur hp 30
F	2	28130005101 slang 3/8" 2st 395 bar 400 mm 12L inh Haaks x 12L inh Haaks (Hoek 30°)	hose 3/8" 2st 395 bar 400 mm 12L in, perp x 12L in, perp (angle 30°)	Schlauch 3/8" 2st 395 bar 400 mm 12L in, perp x 12L in, perp (angle 30°)	tuyau 3/8" 2st 395 bar 400 mm 12L in, perp x 12L in, perp (angle 30°)
3	1	4120001303 bocht 1-1/2" verz bin buit	bend 1-1/2" verz bin buit	senkr x 12L in, senkr (Winkel 30°)	tuyau 1-1/2" verz bin buit
4	1	41200088303 kniekopeling 98 1/2" verz bin buit	kniekopeling 98 1/2" verz bin buit	bogen 1-1/2" verz bin buit	coude 1-1/2" vz bin
5	1	4120013033 t-stuk 130 1/2" verz 3 x bin	t-stuk 130 1/2" verz 3 x bin	Winkelkupplung nr 98-1/2" ig-Ag	accordé de coupte nr 98-1/2" ixm
6	2	4120280303 dubbele nipple 280 1/2" vz	dubbele nipple 280 1/2" vz	T-Stück Nr. 130 1/2"- 3 x f	pièce "T" nr. 130- 1/2"- 3 x f
7	6	41205169006 HELDERE PVC SLANG NW 6 (LG=400MM)	clear pvc hose nw6	Doppelnippel 280/1/2"	Doublé record a vis 280-1/2"
8	1	50462063250 manometer 0-250 bar/pist Rioned 1/4" BSP-T onder aansluiting	pressure gauge 0-250 bar 1/4" under connection	Pvc Schlauch NW6	tuyau pvc nw6
9	1	51247003108 manometer opschroefstuk manv G 1/4"	pressure gauge op boltpiece manv G 1/4"	Manometer 0-250 Bar 1/4" Unten	manomètre 0-250 bar 1/4" sortie dessous
10	2	51702012103 Rechte inschroefkoppeling DIN 2353 12L - G 1/2" BSPP body only	Screw coupling DIN 2353 12L - G1/2 BSPP body only	Manometer op bozzenStück manv G 1/4"	manomètre op boul'piece manv G 1/4"
11	1	51703008001 Rechte instelbare koppeeling DIN 2353 08L - G1/4 BSPP	screwable piece DIN 2353 08L - G1/4 BSPP	Gerader Einschraubkopplung DIN 2353 12L - G 1/2 BSPP body only	Accouplement vissable droit DIN 2353 12L - G 1/2 BSPP body only
12	1	517040081108 Haakse instelbare koppeeling DIN 2353 08L body only	adjustable straight coupling DIN 2353 08L body only	Einschraubstück DIN 2353 08L - G 1/4 BSPP	piece visable DIN 2353 08L - G 1/4 BSPP
13	1	63488003065 temperatuurreguleringssleip 63 °C/145 °F VT3 incl tube	temperature security valve 63 °C/145 °F VT3 incl socket	BSPP	BSPP
14	1	6722101000 drukregelaar ULH221-140H bewerkt	unibader valve ULH221 machined	einstellbare eckige Kupplung DIN 2353 08L body only	accouplement perpendiculaire réglable DIN 2353 08L body only
				einheitlicher Ventil mit Sicherungsventil 63 °C/145 °F VT3 inkl Tüll	Températurensicherungsventil 63 °C/145 °F soupape de sécurité de température 63 °C/145 °F
				Drukreguler ULH221-140H bearbeitet	régulateur ulh 221 cpl.



## 10.15 900000655 Protective cap yellow incl. dirt trap

POS	QTY	ARTIKELNR.:	OMSCHRIJVING	Beschreibung		description
				4	5	
1	1	00130011101	vulring P21	Distanzscheibe P21		distanzscheibe P21
2	1	05240000651	kit aerodriiving HD30 P21	Kit drive HD30 P21		kit entraînement HD30 P21
F	2.1	1	v naarschijf 112 spz3 gat dia 22 □ T7 symmetrische naaf	Keliremenschijf 112 spz3 hole dia 22		pouille 112 spz3 dia 22
	2.2	3	v naar xoz 612	Keliremen xoz 612		courroie xoz 612 honda 6x620 hd 50 sp
	2.3	1	v naarschijf 90 spz 3 ll1610 □ T8 grote conuslijfje gelijk vlg	Keliremenschijf 90 Spz 3 - TI1610		courroie 90 spz 3 - TI1610
	2.4	1	klembus 1610 25 mm	Klemmbuchse 1610-25mm		cone 1610-25-mm.
	3	1	beschermkap HD 30 Honda P21 P30 GEEL RAL 1028	protection cover high pressure 30 Honda P21 P30		capot de protection hp 30 Honda P21 P30
	4	4	ophoogbus ø20 x 5	Auftriebshölse rund 20 x 5		étrier de pompe 20 x 5
	5	1	vulvanger 3/4" tap	Wasserfilter 3/4" tap		tamis 3/4" tap
	6	1	gk connector 3/4" male	GK Anschlussstück 3/4" Ag		raccord d'accouplement/m - 3/4"
	7	1	terugslagklep 3/4"	Rückschlagventil 3/4"		souape de retenue 3/4"
	8	1	double nipple 280 3/4" zinc plated	Doppelempfe 280-3/4		double raccord a vis 280-3/4
	9	1	heat shield GX 340 06185 ZF6 w400	heat shield GX 340 06185 ZF6 w400		bouclier thermique px340 06185-zf6-w400
	10	1	motor Honda GX 340 X=4 benzine	Motor Honda GX 340 IX Benzин		moteur de Honda GX 340 IX fuel
E	11	1	Rechte inschroefkoppeling DIN 2353 '2L - G3/8' BSPP body only	Gerader Einschraubkoppling DIN 2353 '2L - G3/8'		Accouplement lissable droit DIN 2353 '2L - G3/8' BSPP body only
	12	1	hd verloopnippel 1 1/2" x 3/4"	Hochdruck Reduzier nippel 1 1/2" x 3/4"		double red hp 1 1/2x3/4
	13	1	pomp P21/23-130	Pump P21/23-130		pompe p21/23-130
	14	1	POMP-OLIE GX 80 W/90 (0.5 L)	Pumpröd GX 80 W/90 (0.5 L)		huile de pompe moteur huile 80w/90 (0.5 L)
	15	1	Motorolie TALOS TDFFE 10W-30 (0.5 L)	Motoröl TALOS TDFFE 10W-30 (0.5 L)		huile de moteur TALOS TDFFE 10W-30 (0.5 L)



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zie Rund normblad	[ ]	Längeneinheiten: Längeneinheiten: 0-150, 150-300, 300-450, 450-600, 600-750, 750-900, 900-1050, 1050-1200, 1200-1350, 1350-1500, 1500-1650, 1650-1800, 1800-1950, 1950-2100, 2100-2250, 2250-2400, 2400-2550, 2550-2700, 2700-2850, 2850-3000, 3000-3150, 3150-3300, 3300-3450, 3450-3600, 3600-3750, 3750-3900, 3900-4050, 4050-4200, 4200-4350, 4350-4500, 4500-4650, 4650-4800, 4800-4950, 4950-5100, 5100-5250, 5250-5400, 5400-5550, 5550-5700, 5700-5850, 5850-6000, 6000-6150, 6150-6300, 6300-6450, 6450-6600, 6600-6750, 6750-6900, 6900-7050, 7050-7200, 7200-7350, 7350-7500, 7500-7650, 7650-7800, 7800-7950, 7950-8100, 8100-8250, 8250-8400, 8400-8550, 8550-8700, 8700-8850, 8850-9000, 9000-9150, 9150-9300, 9300-9450, 9450-9600, 9600-9750, 9750-9900, 9900-10050, 10050-10200, 10200-10350, 10350-10500, 10500-10650, 10650-10800, 10800-10950, 10950-11100, 11100-11250, 11250-11400, 11400-11550, 11550-11700, 11700-11850, 11850-12000, 12000-12150, 12150-12300, 12300-12450, 12450-12600, 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