



# Maintenance and Operating Instructions

## Pop-up impact sprinkler

Type: Triton-M H, WH, WDH

PERROT





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## 1. General

We presume that you are experienced in the field of irrigation. We have therefore kept these instructions brief and included only the information that it is imperative for you to have to use this product.

Any warranty claims can be accepted only if the sprinkler is used in accordance with these operating instructions and if any defect emerges within the warranty period.

We reserve the right to make changes in line with technological advances, including without prior notice.

## 2. Safety

These operating instructions contain some fundamental instructions that must be followed when installing, operating, servicing and maintaining the sprinkler. It is therefore imperative that these instructions are read by the fitter and the relevant specialised staff / operators prior to installation and commissioning.

Attention must be paid not just to the general safety information set out in this 'Safety' section, but also to the special safety instructions included in the other sections.

### 2.1. *Use of symbols in these operating instructions*

Where failure to follow safety, information can place individuals at risk, such information is specifically marked in these operating

instructions with the general danger symbol



In the case of safety information, where failure to follow it can damage the sprinkler and/or impair its function, you will see the word:

**WARNING**

### 2.2 *Proper use*

The sprinkler is used for the even distribution of water onto lawns, green spaces and sports fields laid with natural or artificial grass. The water should be pre-cleaned and free of any coarse or fibrous contamination. The water and ambient temperatures must be below the limits specified in the technical data.

### **2.3 Clearly improper use**

- ☆ Operation of the pop-up sprinkler by unauthorised personnel (if the control unit is freely accessible).
- ☆ Operation of the sprinkler with the sector to be watered wrongly set, e.g. as the result of vandalism. This can result in the jet of water being directed to the side away from the grassed area.

### **2.4 Safety information**



Read the operating instructions, especially the safety information, before starting any work on or with the sprinkler.

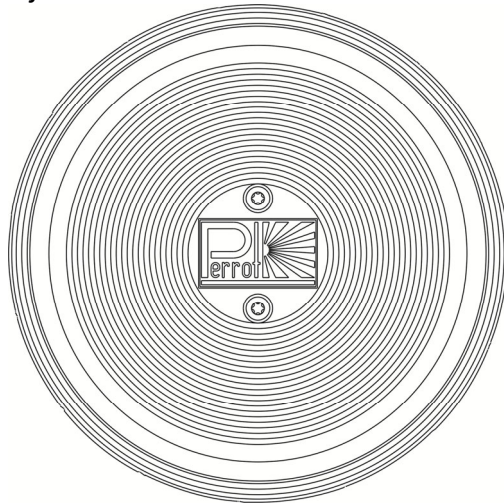
The specific safety instructions appear at the start of each section.

### **2.5 Dangers of failing to observe safety instructions**

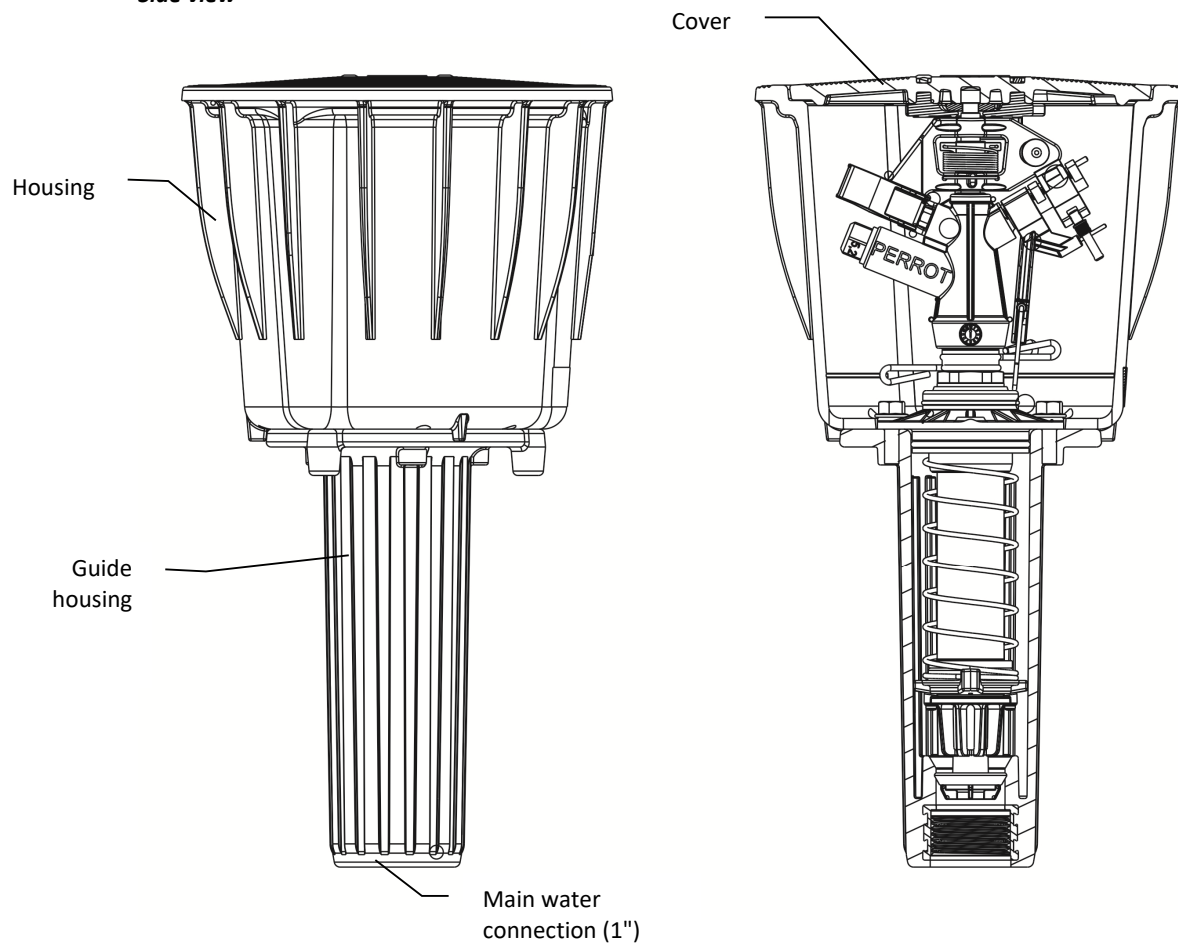
Failure to observe safety instructions can result both in people being placed at risk and in damage to the environment and machine. Failure to observe safety instructions can lead to the loss of any rights to claim compensation.

### 3. Description

#### 3.1 Views Triton-M View from above



*Side view*



### 3.2 Special tools

|                     |                                             |                                                                                     |         |
|---------------------|---------------------------------------------|-------------------------------------------------------------------------------------|---------|
| Assembly key        | Disassembly of sprinkler head and pipe axle |  | RT16764 |
| Flushing equipment  | Flushing pipes                              |  | RT87096 |
| SW 7 socket wrench  | Nozzle removing                             |  | ZB98077 |
| SW 14 socket wrench | Changing main nozzle                        |  | ZB98114 |
| SW 10 socket wrench | Changing sprinkler insert                   |  | RT15745 |

## 4. Technical data

Recommended operating pressure 5 to 6 bars

Permitted operating pressure 3 to 7 bars

### **WARNING**

The pressure at the sprinkler may not exceed 10 bars

Connection thread: G1" FT

Liquids: Water

Liquid temperature: 40°C max.

Ambient temperature: 60°C max.

For further data see separate data sheet.

## 5. Assembly, set-up and installation

### 5.1 Hazard warnings



If any impurities get into the sprinkler, it is possible that the sprinkler could be destroyed and that fitters could be injured. Therefore, flush out the line thoroughly before connecting the water supply.



Any unexpected emergence of a jet of water can lead to serious injury. Therefore, make sure that the installation has been fully completed before turning on the water supply.

### 5.2 Installation instructions

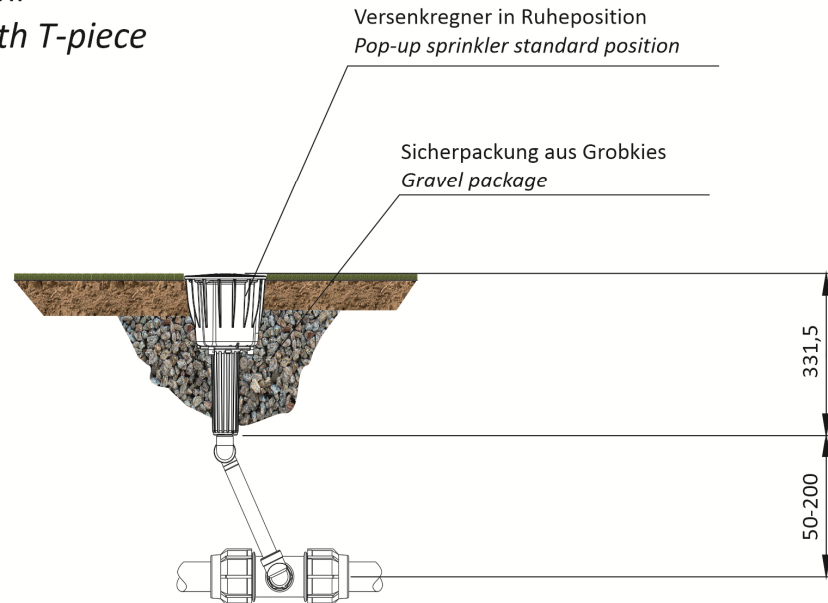
- ☆ The thread connection on the pop-up sprinkler is 1" FT.
- ☆ For the thread seal use hemp and sealing compound, e.g. Fermit Spezial or teflon tape.
- ☆ The pop-up sprinkler should be fitted in accordance with the 'Perrot Triton-M pop-up sprinkler installation diagram' (see next page). In order to avoid any load pressure on the main line, you should definitely use a flexible connection.
- ☆ Providing a drainage pit as shown in the installation diagram, is strongly recommended.
- ☆ For screwing in the connection joint the housing or housing edge of the pop-up sprinkler can be firmly held or clamped.

### 5.3 Triton-M pop-up sprinkler installation diagram

#### Schema A

Seitlich am Rohr

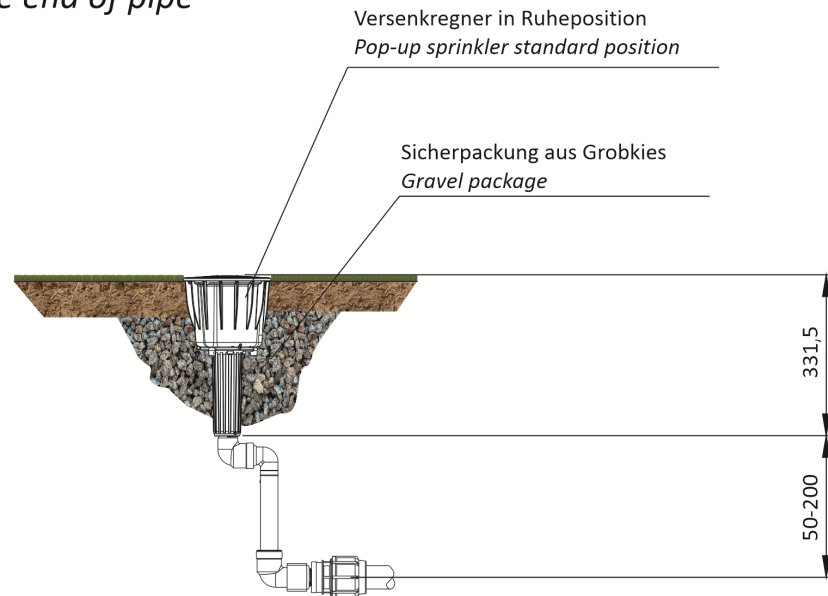
*Installation with T-piece*



#### Schema B

Am Leitungsende

*Sprinkler at the end of pipe*





## 6. Commissioning and operation

### 6.1 Potential danger



When it starts up, the pop-up sprinkler rises up out of the housing and builds up full pressure within about 5 seconds. The **jet of water emitted** can cause injury. For this reason, the following guidance must be followed when commissioning and operating the sprinkler:

- When **the sprinkler is being operated in automatic mode, there must be nobody present in the area.**
- Operating personnel **must not stand in the direction of the sprinkler's jet.**



If the sprinkler is not installed flush with the ground, people may be injured by a fall as a result of stumbling or tripping. Therefore check prior to commissioning and regularly during ongoing use whether the sprinkler cover shuts flush with the surrounding ground.

### 6.2 Commissioning

- a) Slowly open supply of water to the sprinkler until operating pressure is built up.
- b) Once the water supply has been opened and max. operating pressure has been reached, check sprinkler and connection for leaks.
- c) Check that sprinkler is working properly. Sprinkler head rises and starts to rotate.



**Do not stand in front of the nozzle opening!**

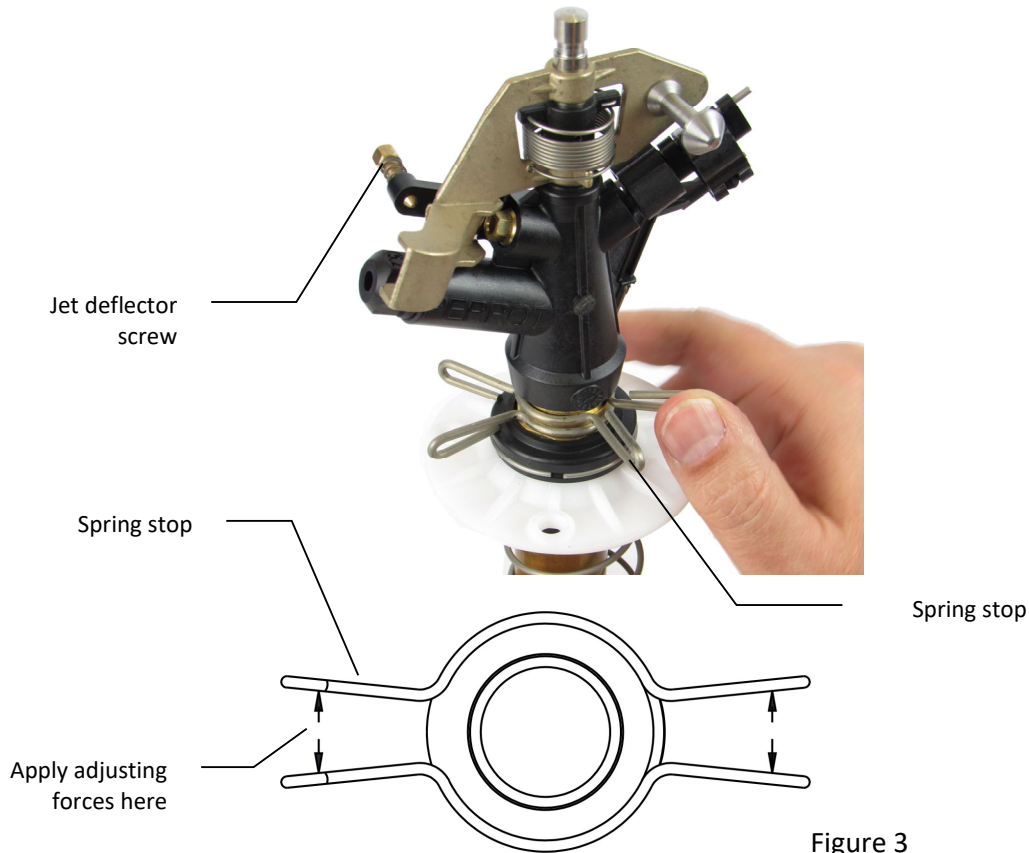
### 6.3 Setting the sector

With this pop-up sprinkler the sector setting is infinitely variable. You can adjust the area to be watered by pulling or pressing on the relevant end of the top or bottom spring stop.

#### Setting the sector angle

**WARNING**

Infinitely variable setting is possible by pulling or pressing on the relevant end of the top or bottom spring stop.

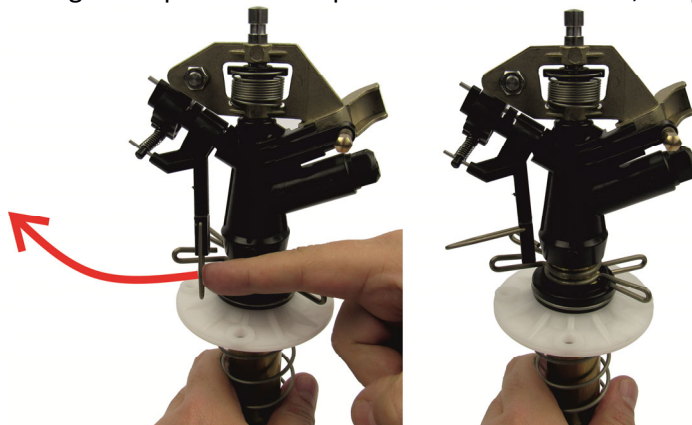


#### 6.4 Jet deflector screw

The jet deflector screw is for adjustment of the near irrigation around the sprinkler. If you screw in further the screw in the water jet, the „rainfall“ consistency around the sprinkler increases, the casting range decreases. If you unscrew the interruption screw the irrigation around the sprinkler decreases and the casting range increases.

#### 6.5 Switch sprinklers from partial circle to full circle

To change the sprinkler from partial circle to full circle, simply fold the spring up.



## 7. Decommissioning and preparing for winter

For decommissioning please turn off the water supply and electricity supply of the pump.

Before the onset of any winter frosts, the sprinkler needs to be emptied. To do this, a powerful compressor needs to be attached to the pipeline network. Then open the valve on the sprinkler and keep it open until nothing but air comes out of the nozzle.



**The blow out pressure should not exceed 5 bars.**



This model does **not** have a discharge valve and can therefore not be emptied the traditional way by gravity.

Springtime commissioning see chapter 6.2.

## 8. Maintenance and repair work



An unexpected jet of water can cause serious injury. Prior to any maintenance or repair work therefore ensure that the water supply is securely turned off.

### 8.1 Maintenance

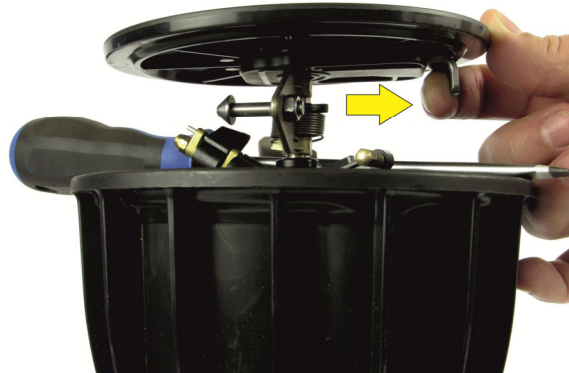
- ☆ Clean out the inside of the sprinkler housing using an industrial vacuum cleaner or similar (as necessary).
- ☆ Cut sprinkler housing free of any overgrowing grass. It makes sense to carry out these jobs prior to spring commissioning.
- ☆ Regularly check that the sprinkler is flush with the surface, especially in the case of natural grass.

### 8.2 Changing the nozzles

Please use the socket wrench for changing the nozzle.  
Use SW7 for the driving nozzle and SW14 for the main nozzle.

### 8.3 Removing/install the sprinkler insert

Sprinkler insert can be removed from the housing for maintenance and repair work.



- ☆ Lift the cover and secure the insert, with a screw driver against snapping back. Then clip off the cover.



- ☆ Unscrew the 4 flange screws SW10 (tightening torque: 4Nm+0,25Nm)



- ☆ Pull sprinkler module out of the housing.

**WARNING**

*The sprinkler insert is fitted in reverse order.*

## 9. Troubleshooting

### 9.1 Sprinkler malfunctions

| Malfunction                                                                         | Cause                                                                                      | Remedy                            |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------|
| Sprinkler is not rotating or only very slowly.<br>Sprinkler is not rotating at all. | Sealing disc worn out                                                                      | Change sealing disc               |
|                                                                                     | Driving nozzle clogged                                                                     | Unscrew driving nozzle and clean  |
|                                                                                     | Minimum pressure of 3 bars not reached                                                     | Increase pressure                 |
| Sprinkler has poor jet                                                              | Nozzle is blocked                                                                          | Unscrew nozzle, remove and clean. |
| Sector angle gets bigger during operation.                                          | Spring stop is loose.<br>Spring force has slackened.<br>Spring stop has been overextended. | Fit new spring stop.              |
| Output pressure at sprinkler nozzle too low or casting range too short              | Stones and bits of dirt are hindering an unimpeded passage of water                        | Clean and flush sprinkler         |

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