



# Operating Manual

Pop-up Sprinkler

## Hydra M (W)H

PERROT





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## 1 Safety

This operating & safety manual contains fundamental advice to be heeded during installation and operation. It is therefore imperative that the fitter and relevant engineer / operator read this manual thoroughly prior to commissioning and operation.

Please follow both the general safety instructions specified in this 'safety' section and the specific safety warnings included in other sections.

### 1.1 *How instructions are marked in this manual*

Safety instructions that, if ignored, could endanger human life or limb are marked with the general "danger" symbol:



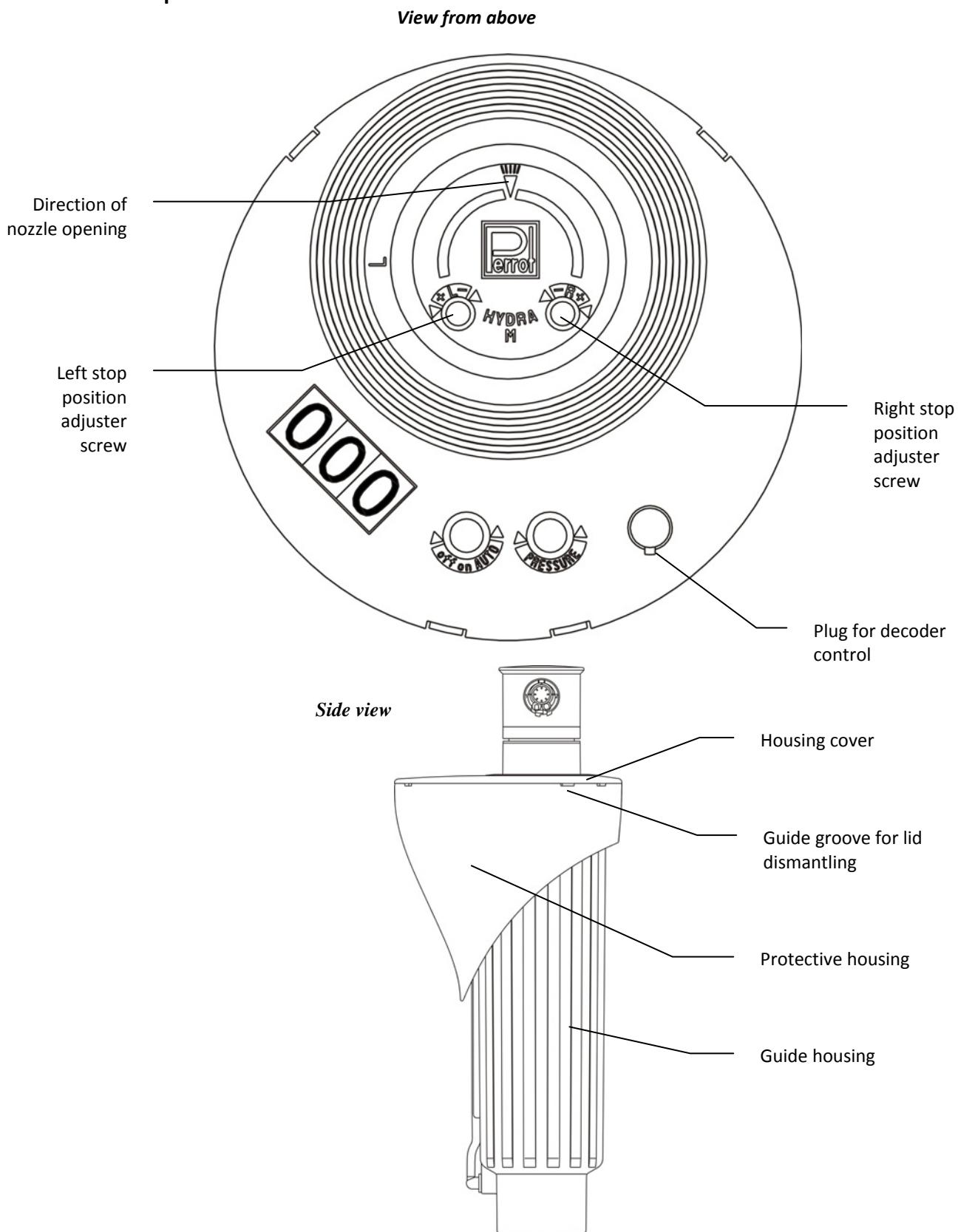
"Warning" is printed next to instructions that, if ignored, could be hazardous to the sprinkler and its operation.

**WARNING**

### 1.2 *Hazards of ignoring safety instructions*

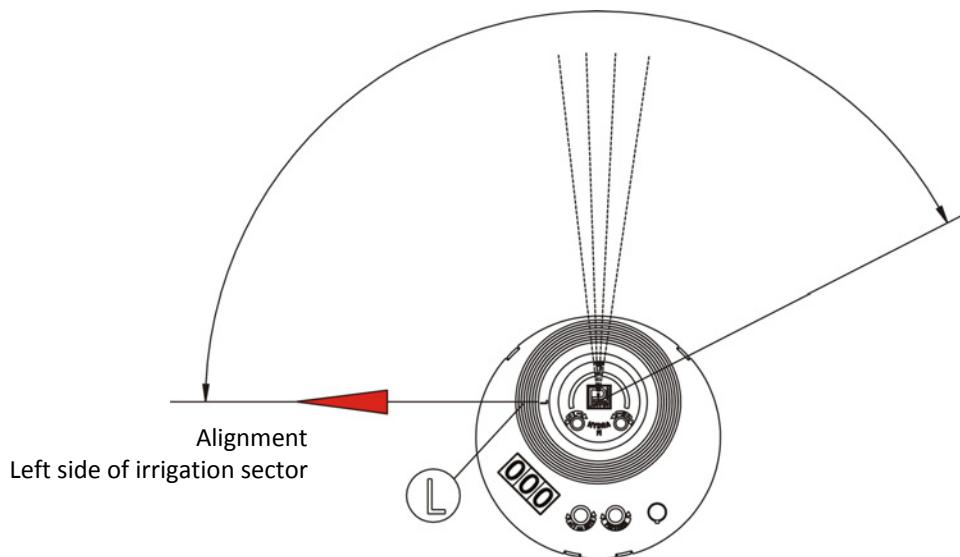
Failing to heed the safety instructions may result in danger to life and limb, harm to the environment and/or damage to the device. Failing to heed the safety instructions may lead to the loss of any right to claim compensation.

## 2 Description



### 3 Installation

- ★ Thoroughly flush the pipeline before installing the sprinkler
- ★ Seal connecting thread with Teflon tape.
- ★ Note: Part-circle sprinklers must be set up in such a way that the 'L' mark is aligned in a straight line from the left side of the irrigation sector.



### 4 Special tools

Key for coarse filter Hydra M+S	Disassembly of coarse filter		RT14930
Retainer for sprinkler head Hydra L/M/S	Changing nozzle		RT14031
Flushing equipment Hydra M	Flushing pipes		RT14934
Wrench for changing nozzles	Changing nozzles		ZB98276
Retaining ring lifter	Disassembly of valve		RT17839
Retaining ring collet	Assembly of valve		RT17844

## 5 Commissioning / Preparing for winter

### 5.1 Commissioning

- a) Slowly open water supply to the sprinkler until operating pressure is present.
- b) Once the water supply is open and the maximum operating pressure has been reached, check sprinkler and connection for leaks. Sprinkler head rises and begins to rotate.



**Do not stand facing the nozzle opening!**

### 5.2 Preparing for winter

- ☆ 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 solenoid valve in front of the sprinkler and keep it open until nothing but air comes out of the nozzle.



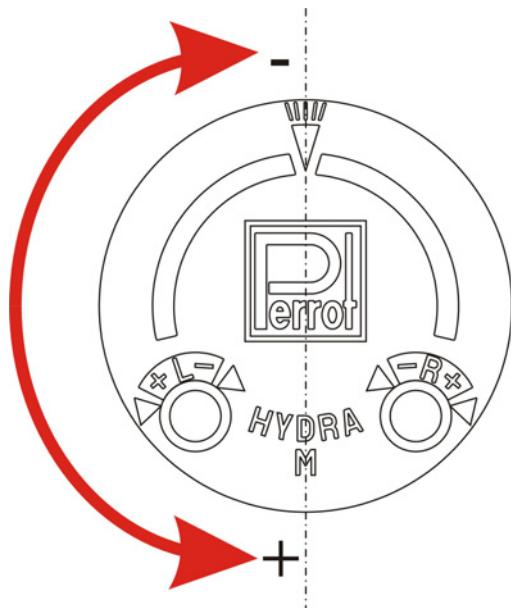
This model does **not** have a discharge valve and can therefore not be emptied the traditional way by gravity.

## 6 Setting irrigation sector (Part-circle sprinklers only)



- ★ Set the left side stop position using:

Left stop position can be adjusted by +/- 90°



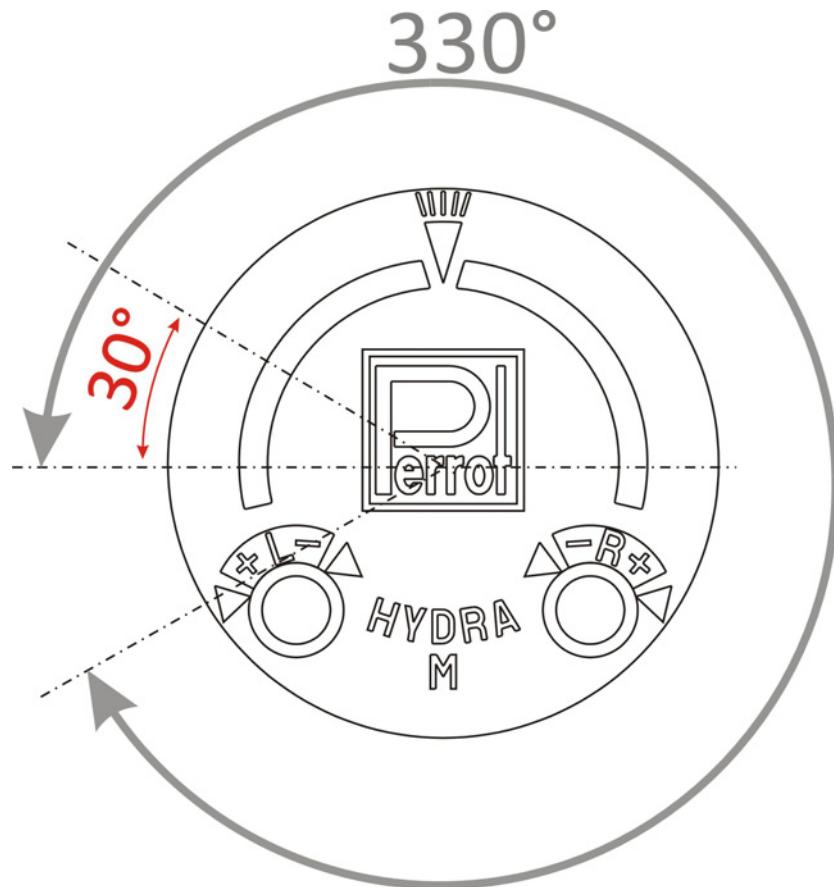
**Note:**

One complete revolution of the adjuster screw adjusts the sector stop position by 60°



★ Set right side stop position using:

Right stop position can  
be set to a watering sector of 30° to 330°.



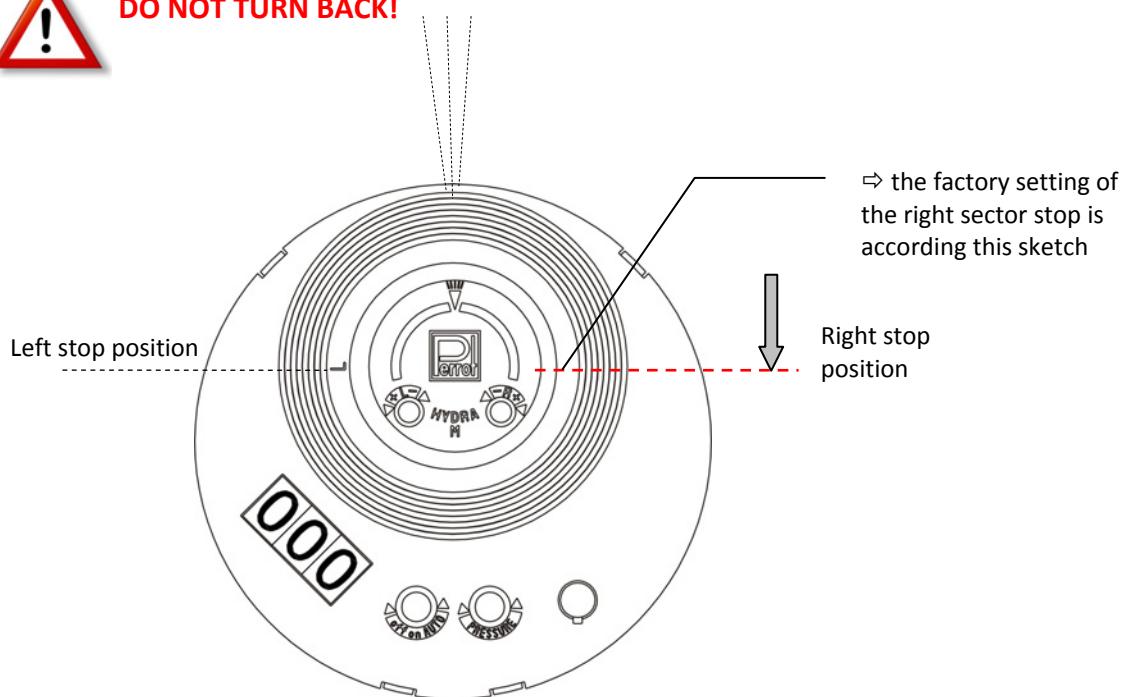
**Note:** The sprinkler has a factory setting of 180°



**Note:** In order to speed up the setting of the irrigation sector, the sprinkler head can be manually turned forward with the rotating direction.



**DO NOT TURN BACK!**

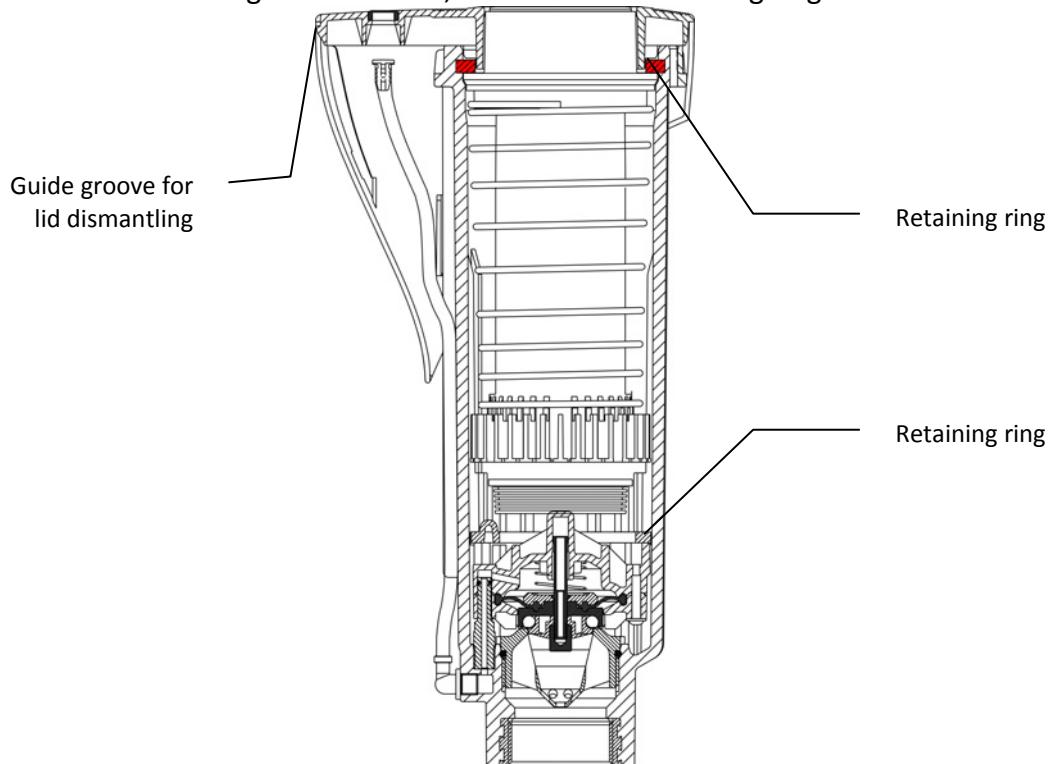


## 7 Replacing the nozzle



**Ensure sprinkler is not under pressure.**

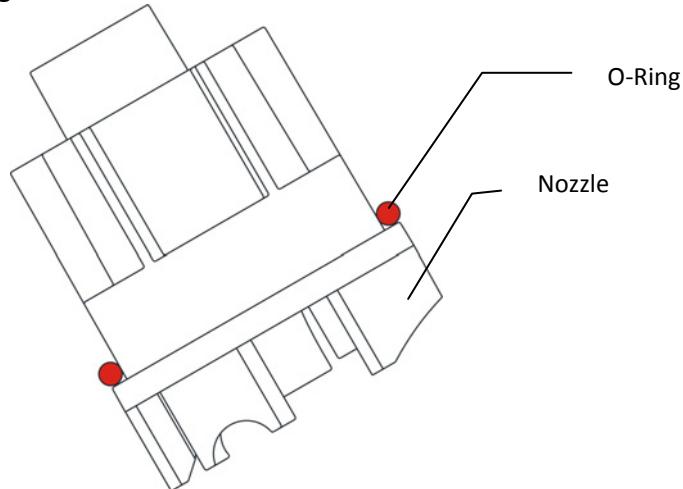
- ★ Using a big screwdriver, unclip the lid
- ★ Using a screwdriver, remove white retaining ring.



- ★ Pull sprinkler insert out of the housing
- ★ Push down the flange and secure the head with the retainer

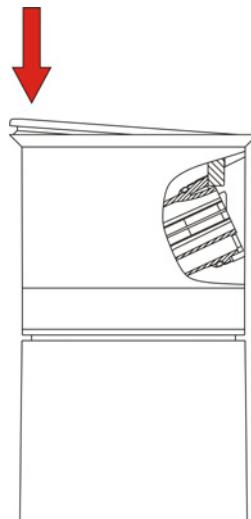


- ★ Take off sprinkler head cover by levering the cover up at the notch using a small screwdriver.
- ★ Rotate nozzle to the left using pliers and then pull out.
- ★ **Optionally** the sprinkler can be assembled with a tail nozzle. This nozzle can be refitted or/and also closed with a corresponding plug.
- ★ Put O-ring over the new nozzle



and, reversing the procedure, re-install in the sprinkler head.

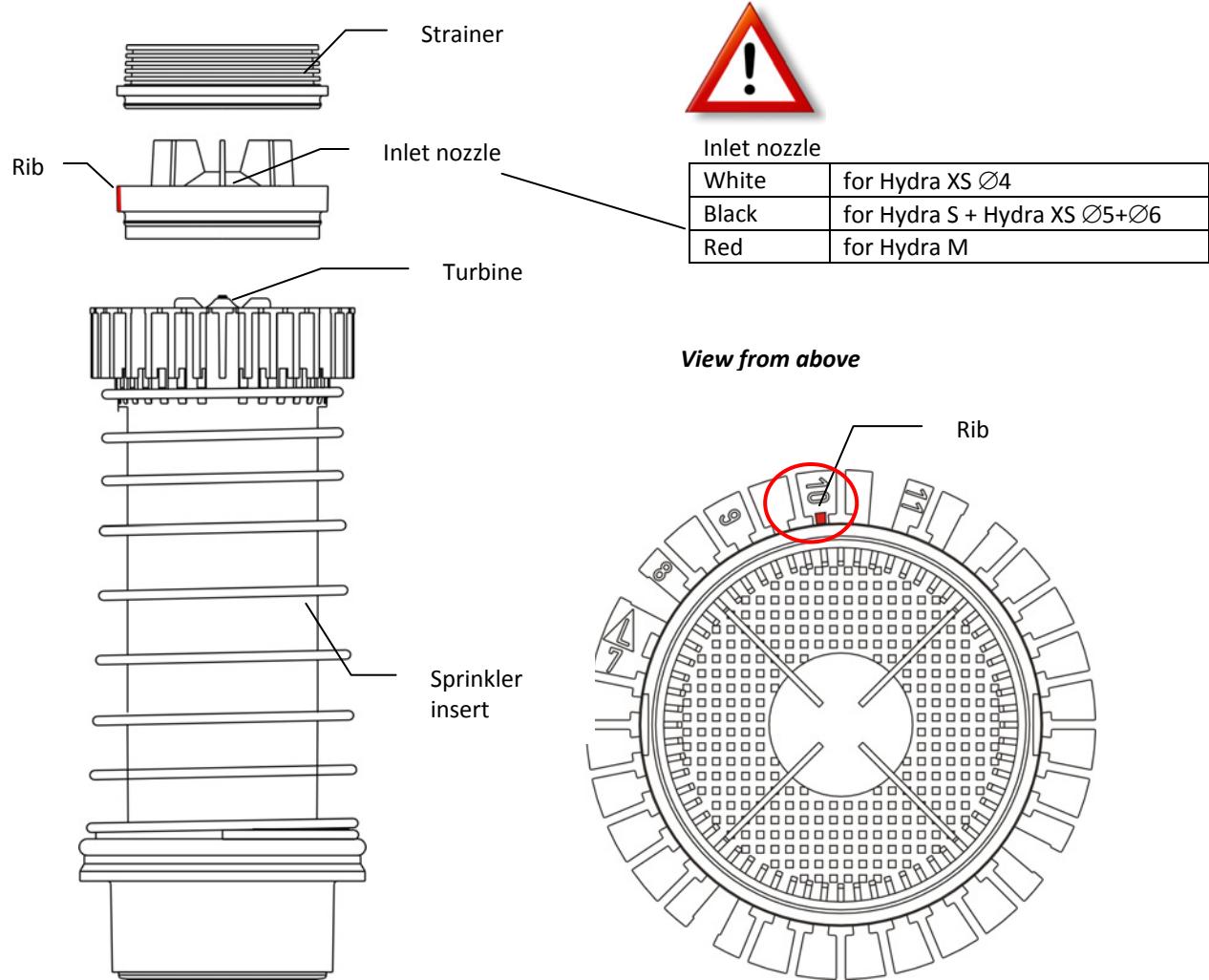
- ★ Fit cover into sprinkler head's snap-in connection by first pushing it as far as it will go against the side opposite the nozzle and then snapping it completely into place on the nozzle side.



## 7.1 Adjusting the inlet nozzle

The recommended rotational speed is maintained by correctly adjusting the inlet nozzle.  
Adjust as follows:

- ★ Take off inlet nozzle and filter together by using a screwdriver to lever up the inlet nozzle at the notch.
- ★ Snap inlet nozzle back onto the sprinkler module so that the elongated rib is pointing to the nozzle diameter being used.

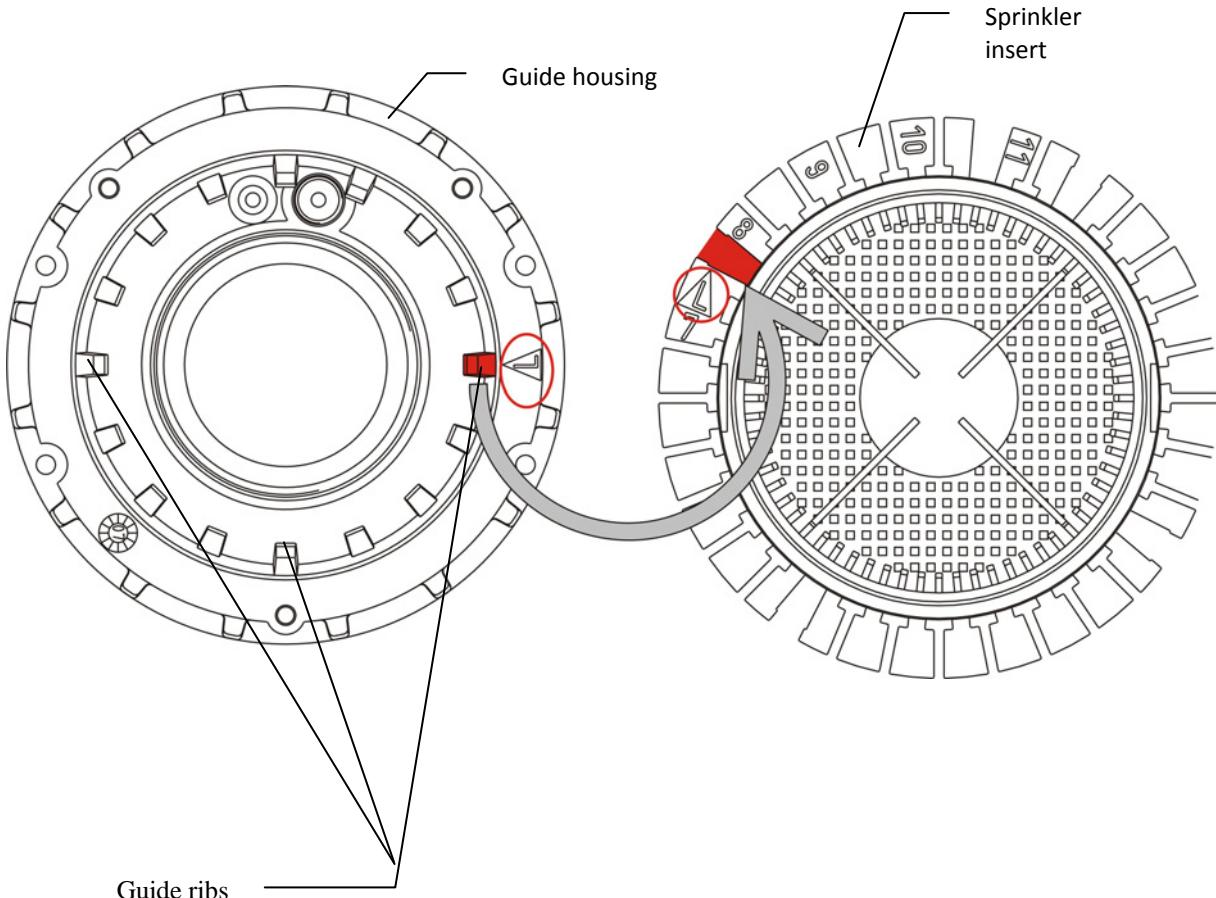


**Note:** If you want a higher rotational speed, the rib must be pointing to a smaller diameter than that of the nozzle actually being used.

## 7.2 Fitting the sprinkler insert

- ★ Fit O-ring onto flange and lightly grease for easier assembly.
- ★ Fit sprinkler module inside housing.

**WARNING** Ensure correct alignment.



- ★ Push flange down as far as it will go.

- ★ Fit retaining ring.

**WARNING** Retaining ring must be fully inserted into the slot.

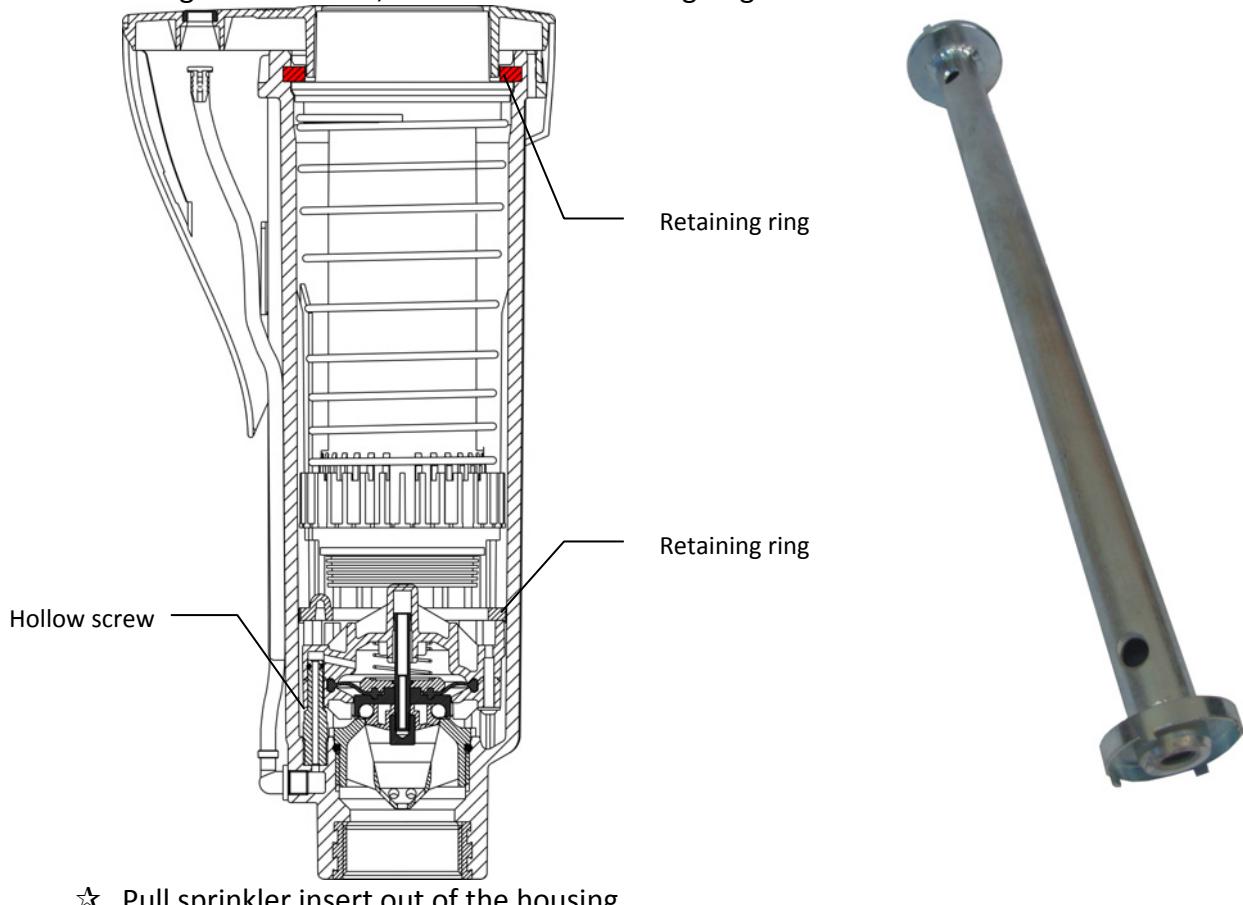
- ★ Unclip snap-fit lid from the housing.
- ★ Check sprinkler is working properly as per point's 5a-5b.

## 8 Stop valve removal / installation



**Ensure sprinkler is not under pressure.**

- ★ Using a big screwdriver, unclip the lid
- ★ Using a screwdriver, remove white retaining ring



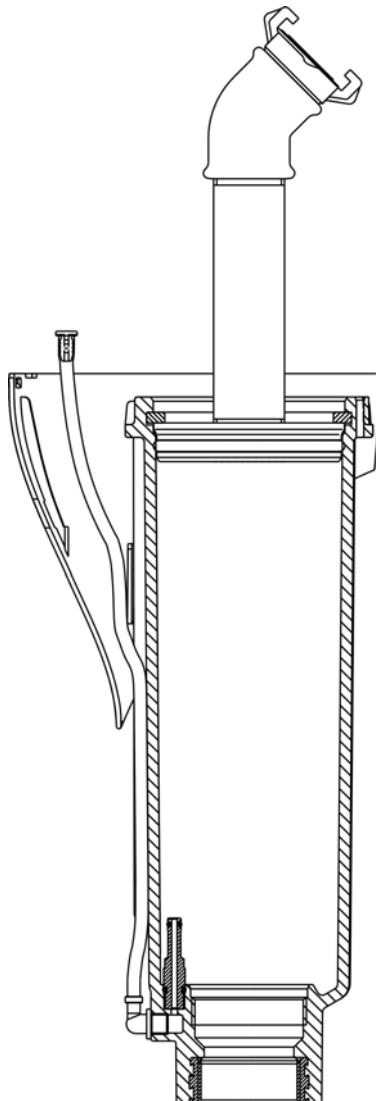
- ★ Pull sprinkler insert out of the housing

### 8.1 Taking out the stop valve

- ★ Take off retaining ring by help of retaining ring lifter (see chapter 4).
- ★ Screw valve lifter / coarse filter wrench onto valve insert's studs and manually tighten.
- ★ Pull out valve insert complete with valve lifter and unscrew. Valve insert is now held on hollow screw by O-ring only.

## 8.2 Taking out the coarse filter – only if seen to be dirty

- ★ Insert valve lifter / coarse filter wrench into the filter's slots, turn and pull out.
- ★ Insert flushing equipment and fix with retaining ring.
- ★ Flush sprinkler / pipes thoroughly



### 8.3 Fitting coarse filter

- ☆ Take off flushing equipment.
- ☆ Ensure that thread and O-ring are clean.
- ☆ Lightly smear O-ring with acid-free grease.
- ☆ Put coarse filter in place and manually tighten using coarse filter wrench.

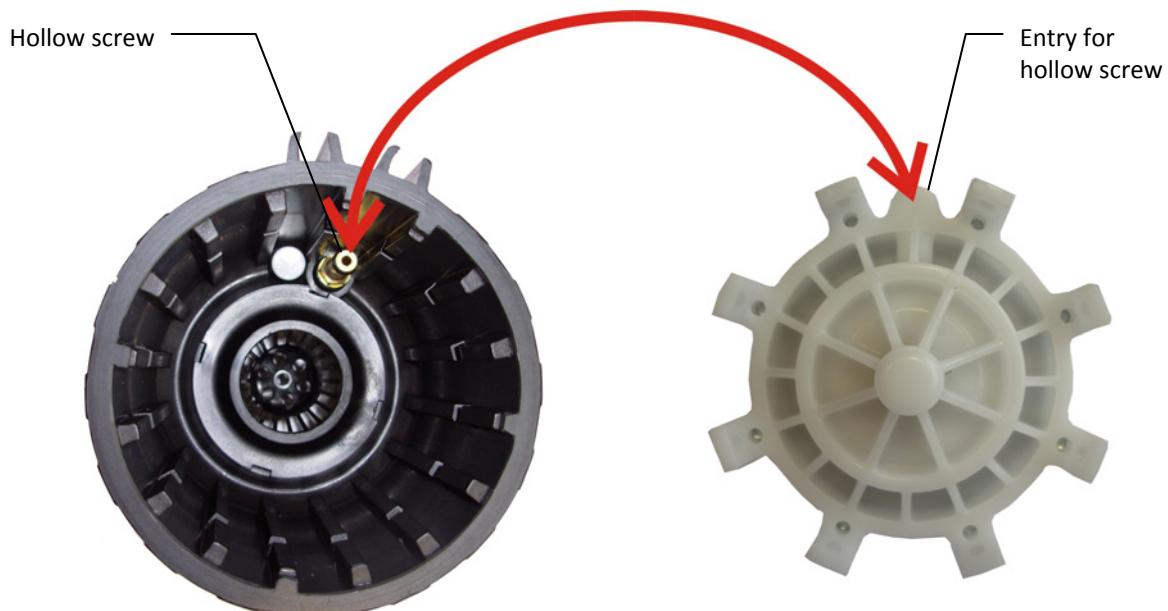
### 8.4 Fitting the stop valve



**Before fitting the stop valve, check the valve insert – especially around the seal seat – for any dirt or damage!**

- ☆ Screw cleaned or new stop valve insert onto the valve lifter again and fit into the sprinkler housing.

**WARNING** Ensure it is fitted in the correct position!



- ★ Insert retaining ring of stop valve by help of retaining ring collet (see chapter 4).

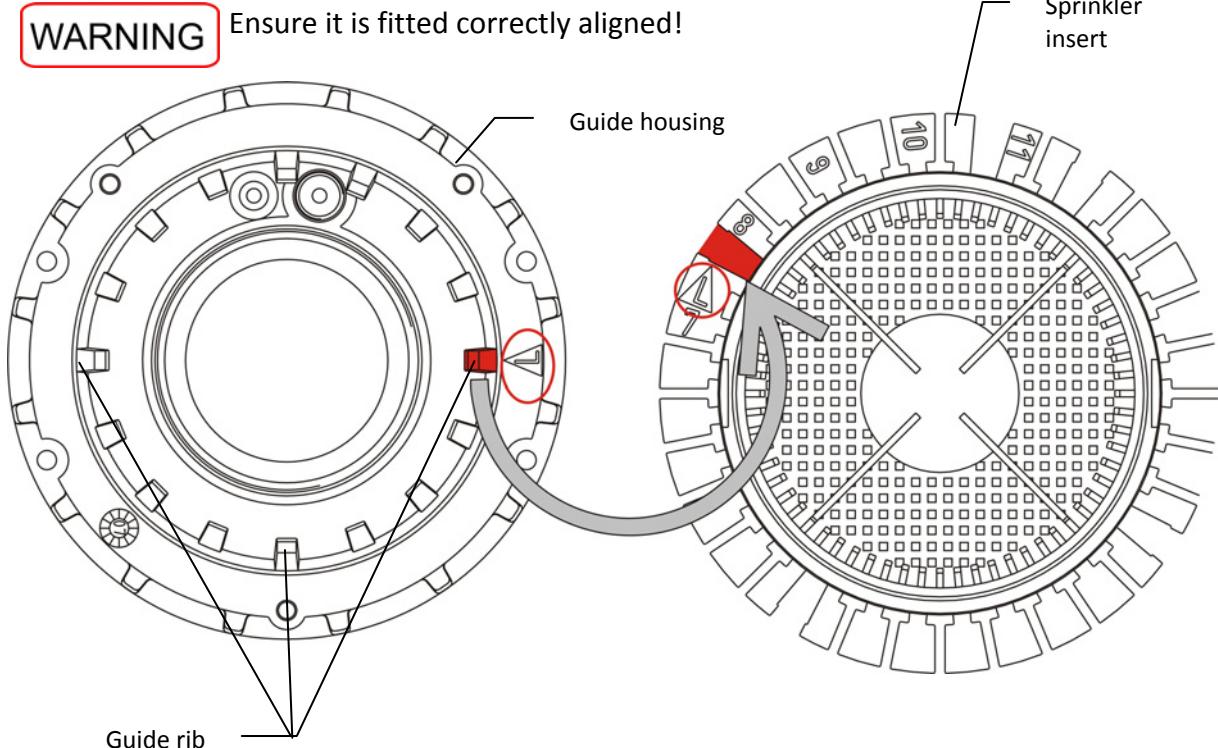
**WARNING** Retaining ring must be fully inserted into the slots!



## 8.5 Fitting the sprinkler insert

- ★ Fit O-ring onto flange and lightly grease for easier assembly.
- ★ Install sprinkler insert inside housing.

**WARNING** Ensure it is fitted correctly aligned!



- ★ Push flange down as far as it will go.

- ★ Fit retaining ring.

**WARNING** Retaining ring must be fully inserted into the slot.

- ★ Clip in snap-fit lid.

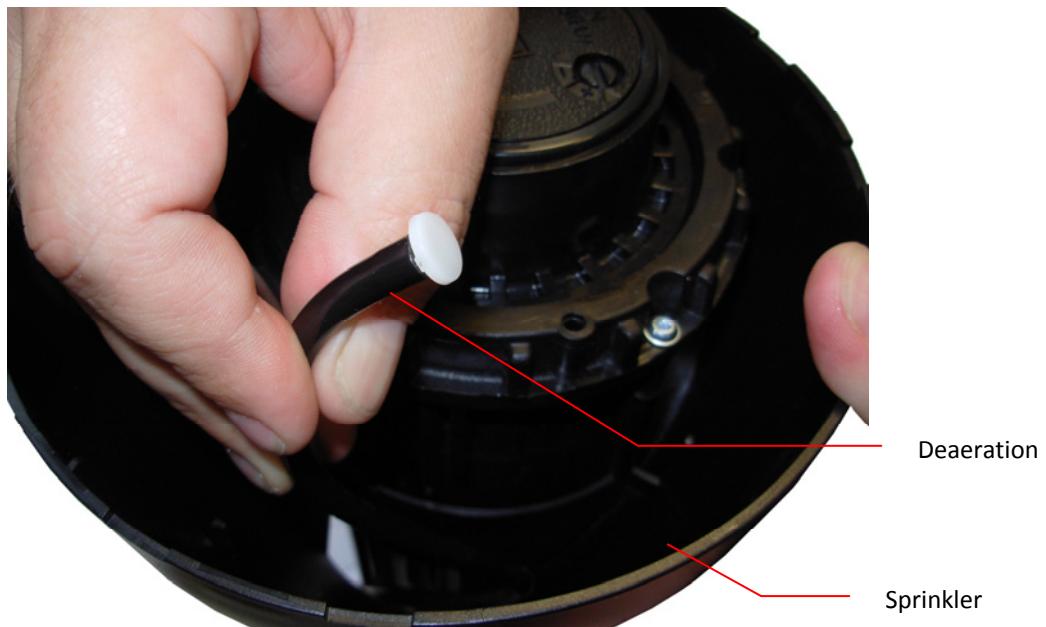
- ★ Check sprinkler is working properly as per points 5a – 5b.

## 9 Maintenance deaeration

- ★ Take out deaeration from protective casing and clear the end of the deaeration tube.
- ★ Unclip control unit from protective casing and lift up.



**Make sure air aspirates and flows back easily**





## 10 Maintenance

- ☆ Cut sprinkler housing free of any overgrowing grass. It makes sense to do this work with the cut off tool before starting up the system in spring.

## 11 Troubleshooting

### *Malfunctions*

Problem	Cause	Remedy
Stop valve fails to close completely	Bits of dirt between sealing plate and stop valve.	Clean stop valve seat and sealing plate
Rotary speed too low / too high or does not rotate at all	Inlet nozzle incorrectly set (see chapter 7)	Set inlet nozzle to correct nozzle diameter
	Turbine blocked by stones or bits of dirt	Clean turbine
	Inlet nozzle or filter have worked loose	Clip parts together again
Output pressure at sprinkler nozzle too low or casting range too short	Stones and bits of dirt are hindering an unimpeded flow-through of water	Clean stop valve and flush sprinkler
	Deaeration channel clogged	Clean deaeration channel

Subject to change without prior notice.