

## Mounting Instruction

### Manhole Holder in conjunction with OFR Radar Sensor and NFM



Document Revision 00 / 26.02.2024

Original Instruction Manual: German / Rev. 00 / 16.02.2024

**When installing the manhole holder, always observe/use the corresponding sensor/device instructions for the sensors and transmitters.**

These brief instructions are intended exclusively for **qualified specialist personnel** with appropriate training and require that all current **safety and accident prevention regulations** are observed and that adequate **protective equipment** is worn.

## Pre-Assembly and Installation of the Manhole Holder

### 1 General Information

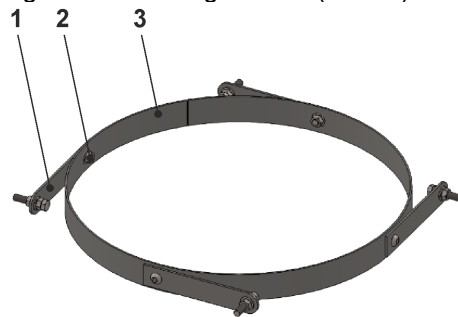
The manhole holder is designed for manholes with DN600.  
A dirt trap in the sewer cannot be used in combination with the manhole holder.

The following description is given in conjunction with the NIVUS OFR radar sensor and a NivuFlow Mobile NFM 550 transmitter.

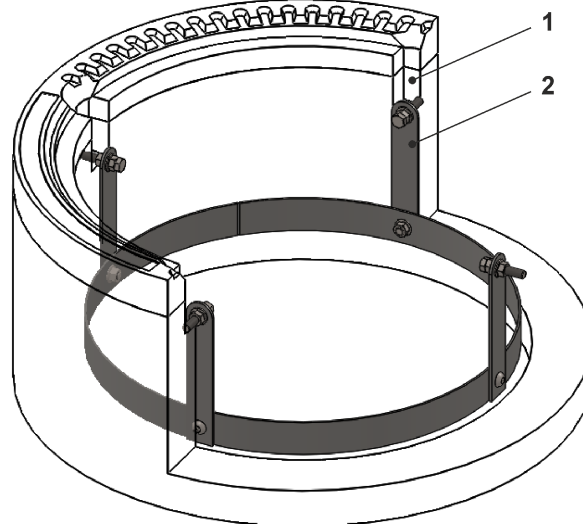
### 2 Installation

➡ Procedure (positions in the following illustrations):

1. Fold up the four suspension plates (Pos. 1) on the outside of the retaining ring (Pos. 3) of the manhole holder (90°) and fix them in vertical position by tightening the connecting screws (Pos. 2).

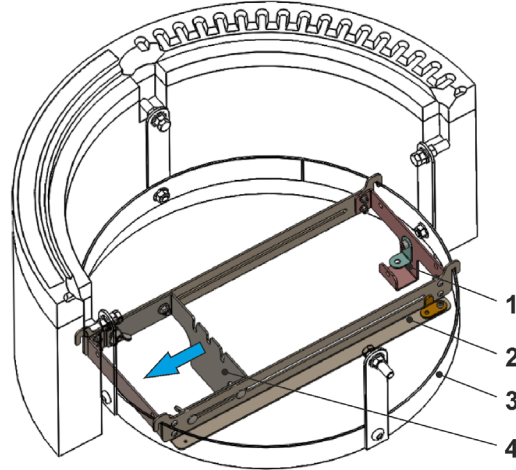


2. Insert the retaining ring into the manhole and hook the suspension plates (Pos. 2) into the (existing) recesses (Pos. 1) on the manhole.



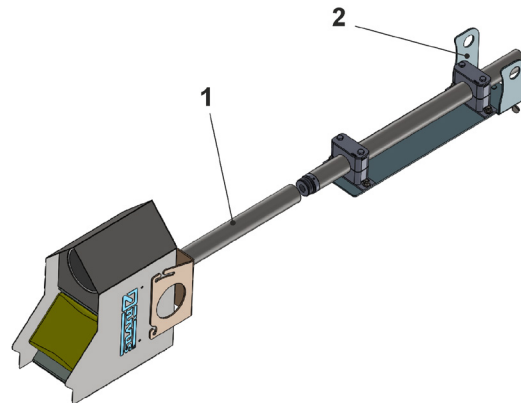
3. Slide the guide plate (Pos. 4) on the inner frame (Pos. 2) towards the hook (Pos. 1) until there is sufficient space for the subsequent work steps 6 or 9 to insert the mounted pipe holder (incl. OFR radar sensor).

Hook the inner frame into the retaining ring (Pos. 3), taking into account the "sensor viewing direction" (blue arrow).

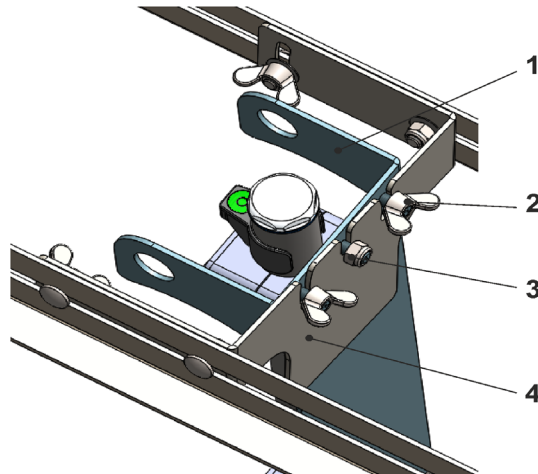


4. In the next steps, the total length of the mounting pipes (measured without radar sensor enclosure) is decisive.  
Continue with **step 5** up to a total length of **max. 3 m**.  
- For a total length of **more than 3 m up to max. 6 m**, continue in **work step 7**.

5. *Pipe length max. 3 m:*  
Screw the mounting pipe (Pos. 1) on the sensor enclosure together with the pipe on the pipe holder (Pos. 2) of the radar enclosure and tighten by hand.

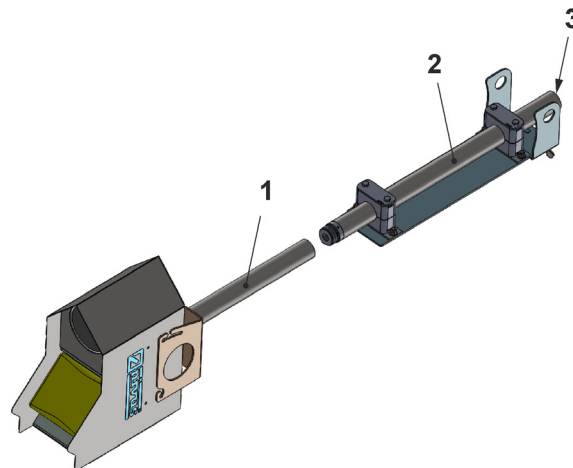


6. Hang the mounted pipe holder (Pos. 1) (incl. OFR radar sensor) into the recesses of the guide plate (Pos. 4) in the inner frame using the threaded pins for the wing nuts (Pos. 2) or for the M8 self-locking nut (Pos. 3), taking into account the "sensor viewing direction".  
Then proceed with **working step 14**.

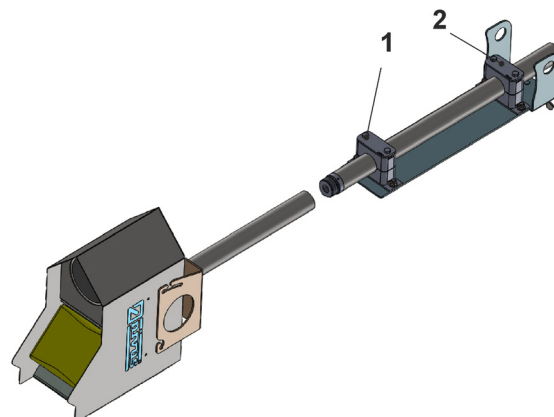


7. *Pipe length more than 3 m up to max. 6 m:*  
*For easier handling of the long overall pipe, the (extension) pipes are screwed together in steps.*  
 Remove the dummy plug (Pos. 3) and clip-on spirit level (not shown) from the pipe on the pipe holder and put aside for later use.

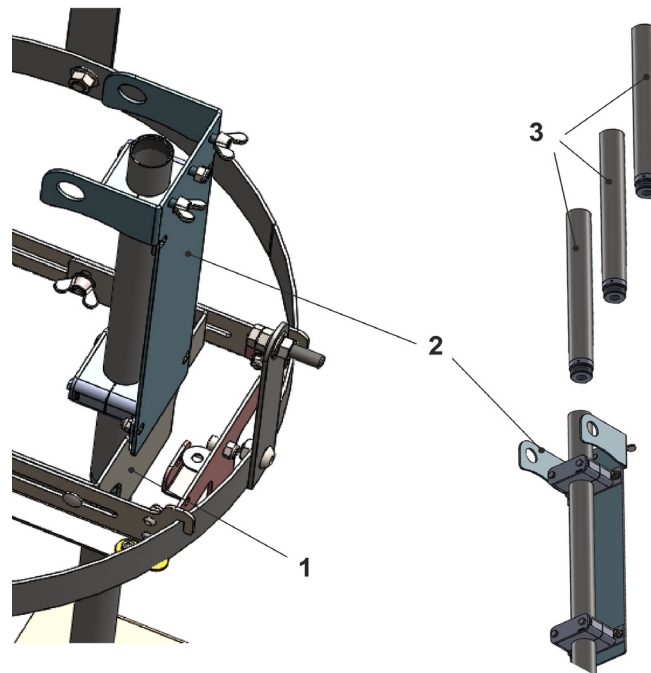
Screw the mounting pipe (Pos. 1) on the sensor enclosure together with the pipe on the pipe holder (Pos. 2) of the radar enclosure and tighten by hand.



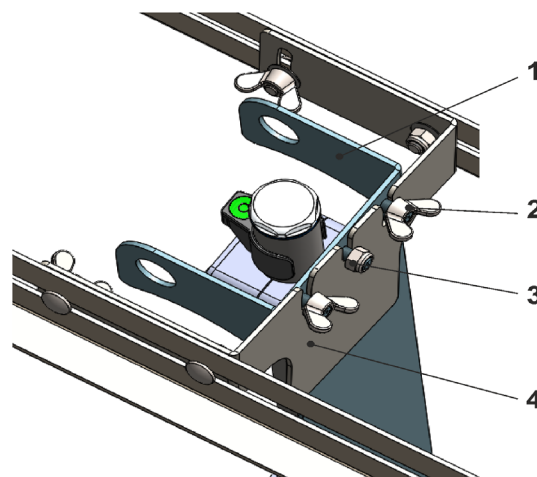
8. Loosen the fastening screws on the lower pipe guide clamp (Pos. 1) so that the pipe can be pushed through in the next step.  
 The fastening screws on the upper pipe guide clamp (Pos. 2) remain tightened for securing.



9. Place the pre-assembled tube holder (Pos. 2) (incl. OFR radar sensor) on the guide plate (Pos. 1) in the inner frame and screw in the first extension pipe (Pos. 3) from above and tighten by hand.



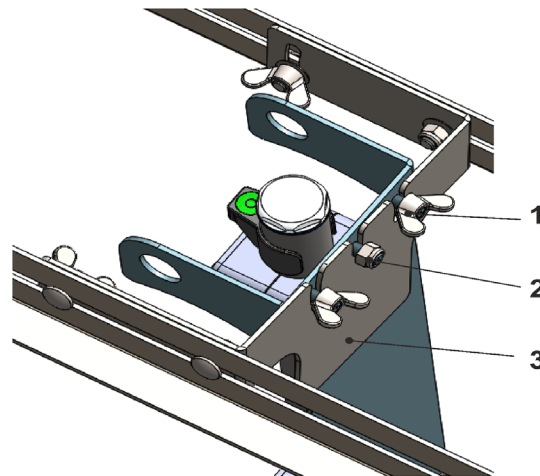
10. Hold the pre-assembled pipe holder (incl. OFR radar sensor) and loosen the fastening screws on the upper pipe guide clamp. Push the pipe downwards in the pipe guide clamps in the pipe holder. Tighten the fastening screws on the upper pipe guide clamp again (for securing). If necessary, attach further extension pipes in the same way.
11. When the required pipe length has been reached, tighten all fastening screws on the upper/lower pipe guide clamp.
12. Reattach the dummy plug and the clip-on spirit level to the top of the pipe.
13. Hang the mounted pipe holder (Pos. 1) (incl. OFR radar sensor) into the recesses of the guide plate (Pos. 4) in the inner frame using the threaded pins for the wing nuts (Pos. 2) or for the M8 self-locking nut (Pos. 3), taking into account the "sensor viewing direction". Then proceed with **working step 14**.



14. Tighten the wing nuts (Pos. 1) on the pipe holder (incl. OFR radar sensor) on the guide plate (Pos. 3).

*Info:*

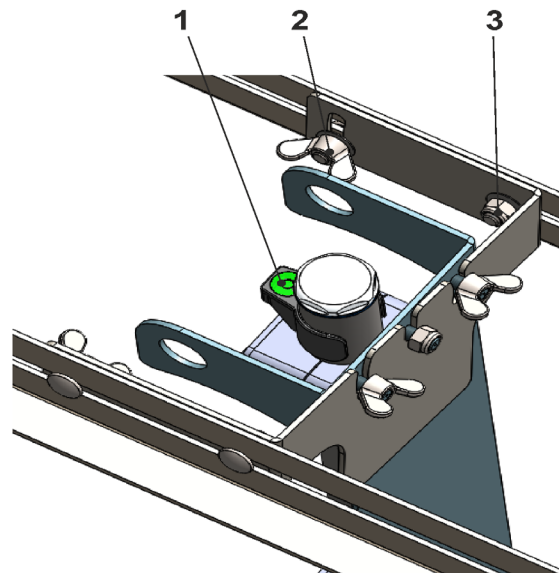
*The self-locking nut M8 (Pos. 2) is set to a fixed distance, so do not twist it!*



15. Push the inner frame with pipe holder and OFR radar sensor as far as possible to the front end ("sensor viewing direction").
16. Using the clip-on spirit level (Pos. 1), align the entire pipe holder (incl. OFR radar sensor) vertically on the pipe and tighten the two wing nuts (Pos. 2) on the inner frame.

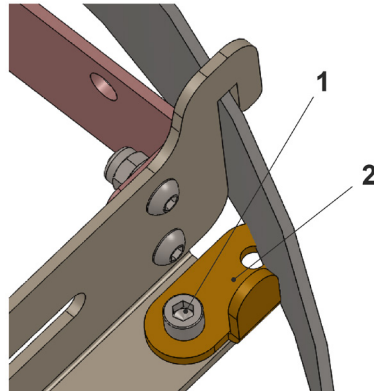
*Info:*

*The self-locking nuts M8 (Pos. 3) are set to a fixed distance, so do not twist them!*

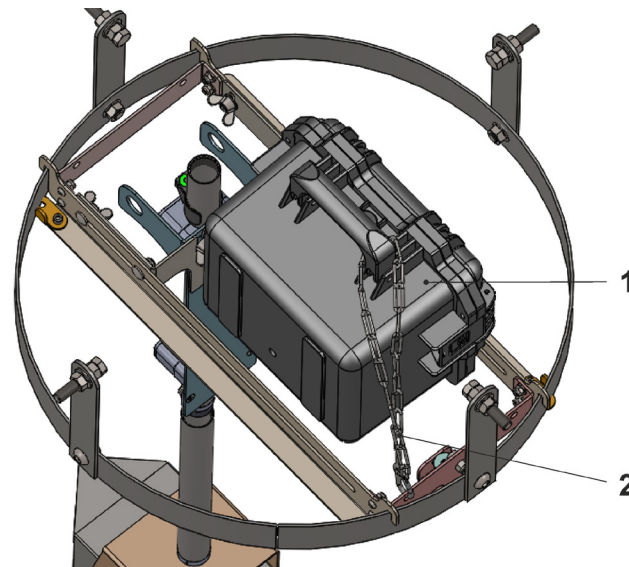




17. Fix the inner frame in the manhole by twisting the two holders (Pos. 2) and tightening the M6 cylinder head screws (Pos. 1).



18. Secure the NivuFlow Mobile transmitter (Pos. 1) to the inner frame with a chain (Pos. 2) (holes provided).



19. Hang the NivuFlow Mobile transmitter by the handle on the hook (Pos. 1) in the inner frame.

