



## Operation and maintenance plan for an installed rat blocker by Nordic Innovation

In order to prevent and avoid operational disruptions of your sewer system, please read the operation and the maintenance plan for the rat blocker by Nordic Innovation carefully .

To the right, you can read about which points are relevant to the installation and operation of your rat blocker.

• 1. Sewer lines in general
• 2. Cleaning access
• 3. Rinsing of the well
• 4. Installation/removal for inspection and cleaning
• 5. Toilet flushing, high/low
• 6. Contents of flushing
• 7. Floods/backflow
• 8. Service interval

In order to ensure that your sewer system remains reliable and without disruption, it is important to comply with the points described.

At the bottom of the operation and maintenance plan, you can find a sketch that illustrates where the rat blocker is installed in the well, and in which direction the flow runs in the well. It is extremely important to ensure that when rat blocker has been removed, the indications of the sketch are consistent with the actual installation of the rat blocker.

In the unlikely event of any problems, you are very welcome to contact the authorised sewer contractor listed below:

Name: \_\_\_\_\_

Tel: \_\_\_\_\_

Email: \_\_\_\_\_

Website: \_\_\_\_\_

Stamp \_\_\_\_\_

## 1. Sewer lines in general

In order to ensure optimum reliability when the rat blocker is installed in the sewer system, the existing sewer line leading to the installation site must be intact and without depressions and have a drop of at least 12 ‰.

For the initial installation of the rat blocker, we recommend conducting a TV inspection of the sewer line to determine if the line is undamaged and that there aren't any depressions on the section from the drain and to the installation site and that the sewer line has at least a 12 ‰ drop.

As a part of sewer line maintenance, we recommend adding extra drain extra water (2 \* 10 L) weekly, which should be poured into, for example, the toilet to reinforce the sewer line's self-cleaning effect.

In connection with travel or vacation, we also recommend adding 2 \* 10 L water to the toilet before leaving home so that the sewer line is rinsed through. This prevents the remaining waste, paper debris, etc. from drying out in the sewer line and the related risk of blockage formation.

## 2. Cleaning access

There must **always** be free access to the cleaning and inspection well in which the rat blocker is installed. Well caps must not be covered by pavement, stones, etc.

## 3. Rinsing of the well

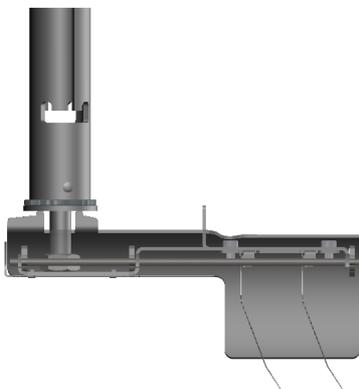
The rat blocker must be removed prior to any high-pressure rinsing of the well system and the sewer pipeline.

If a standard household garden hose is used to rinse the system, the rat blocker need not be removed.

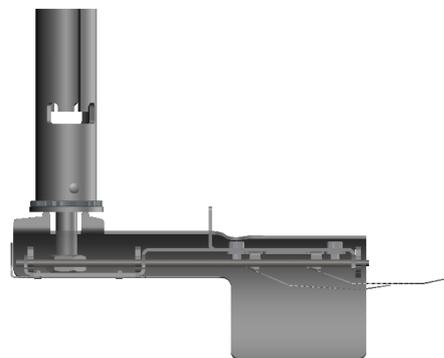
## 4. Installation/removal for inspection and cleaning

Suitable gloves must be used for when removing the rat blocker for maintenance and cleaning. There is a row of sharp-edged teeth on the edge of rat blocker's two valves. It is important to ensure that no cuts or punctures occur on account of these teeth while work on the rat blocker is carried out.

During maintenance, check that the valves are undamaged and have not become deformed. The valves must be able to be moved unencumbered from a vertical position to a horizontal position.



Valve in the vertical position



Valve in the horizontal position

## 5. Toilet flushing, high/low

In order to avoid blockages, we advise using a full toilet flush as often as possible. To prevent paper and fecal matter content from accumulating in the pipeline, it is important to supply the pipeline with enough water so that the self-cleaning effect is achievable.

It is recommended to avoid using a low-level flush in toilets.

## 6. Contents of flushing

The following descriptions are examples of materials that are not suitable for flushing down the toilet and which may cause clogging of the rat blocker that is installed in the well.

- Toilet paper rolls
- swabs
- Sanitary napkins/diapers
- Cotton wool
- Rags
- Disposable wipes made of fabric
- dishcloths

It is important to inform all users of the installation about such matters, particularly regarding the procedures for flushing toilets and how these should be handled.

## 7. Floods/backflow

The rat blocker should always be serviced and tested for functionality after the event of a flood or backflow. Clogging may occur near the rat blocker in the cases where there has been backflow into the sewage system, as the rat blocker may be blocked by contents from the outside sewage system. Test for functionality by repeatedly flushing toilets with toilet paper content, and make sure that water and paper flow unimpeded through the well and rat blocker.

## 8. Service interval

The proper interval between inspections and cleaning of the rat blocker is dependent on the installation site and the usage of the sewer line.

It will always be sewer technician's expertise that determines the proper interval between inspections of the rat blocker, but as a starting point, we recommend the following:

Upon initial installation, we recommend inspecting the rat blocker at regular intervals for the first 3 months.

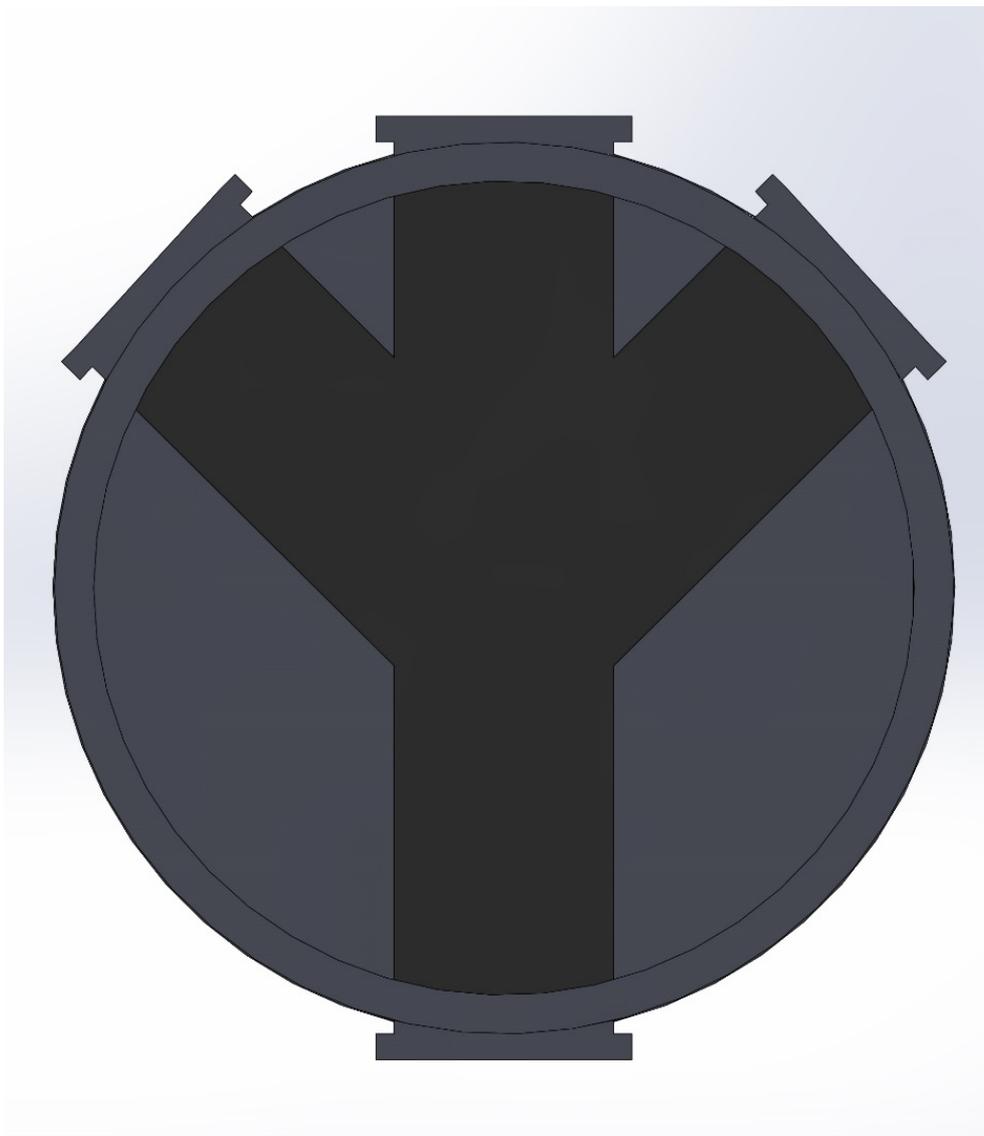
After this period, we recommend the following intervals for inspection and maintenance:

In the case of standard detached houses, there is a minimum requirement of one inspection per year

For institutions, dormitories, schools, etc. there must be inspections every three to six months.

In multi-storied buildings of more than 2 stories, we recommend an inspection every 3 months.

Diagram showing the assembly of a rat blocker



Fill in using an 'x' where the rat blocker is located



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