

OPERATION AND MAINTENANCE PLAN FOR RAT BLOCKER

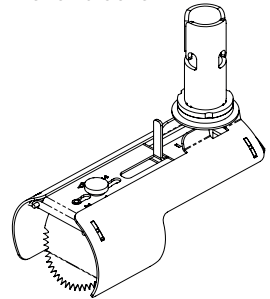


The rat blockers from Nordisk Innovation are made of acid-resistant stainless steel AISI 316, and most are WRc-approved by WRc Group and VA-approved by ETA-Danmark.

To prevent and avoid operational disruptions to the sewer system, please read the operation and maintenance plan for the rat blocker from Nordisk Innovation carefully.

Here are the points relevant for installation and operation of the rat blocker:

1. Pipes in general
2. Cleaning access
3. Flushing of manhole
4. Installation/removal for inspection and cleaning
5. Toilet flush high/low
6. Contents in flush
7. Cloudburst/backflow
8. Inspection intervals



To ensure that the sewer system remains operational and free from disturbances, it is important to follow the points described.

It must be ensured that a rat blocker that has been removed is reinstalled in exactly the same position and with the same flow direction as during the original installation. Deviations are not allowed.

If problems occur unexpectedly, you are very welcome to contact the undersigned authorised drainage technician:

Auth. drainage technician: _____

Phone: _____

E-mail: _____

Web: _____



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1. Pipes in General

To ensure optimal operational reliability when the rat blocker is installed in the sewer system, the existing pipeline leading to the installation site must be intact, without sags, and have a minimum slope of 12 ‰ and a maximum slope of 25 ‰.

It is recommended, in connection with the first installation of the rat blocker, to carry out a TV inspection of the sewer pipe to confirm that the pipe is free of damage, that there are no sags along the stretch from the drain to the installation site, and that the pipe has the correct slope.

As maintenance of the pipeline, it is recommended to add extra water to the drain weekly (2x10 L), e.g., via the toilet, to support the pipeline's self-cleaning effect. Before longer absences, e.g., holidays, it is also recommended to pour 2x10 L of water into the toilet to flush the sewer line through. This prevents feces, paper residues, etc., from drying out in the pipe and thus reduces the risk of clogging.

2. Cleaning Access

There must always be free access to the cleaning and inspection chamber in which the rat blocker is installed. The manhole cover must not be covered by pavement or other materials.

3. Flushing of Manhole

When high-pressure flushing the manhole system in connection with pipe cleaning, the rat blocker must be removed while flushing takes place.

If flushing is performed with a regular water hose, the rat blocker may remain in the installation manhole during the flushing.

4. Installation/Removal for Inspection and Cleaning

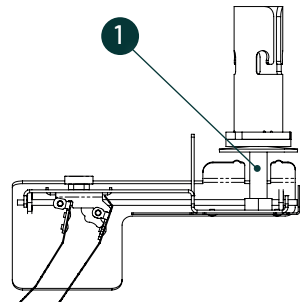
When the rat blocker is removed for inspection and cleaning, suitable protective gloves must be used. Along the edge of the rat blocker's two gates are a series of teeth that are sharp and pointed. It is important to ensure that you do not cut or stab yourself on these during handling.

During inspection, check that the gates are not damaged or deformed. The gates must move freely from the vertical position to the horizontal position. During each inspection, check that the suspension plate on which the two gates are mounted is properly fastened. It is recommended to retighten the thumb screw/Allen screw during each inspection.

Lubrication of Rat Blocker

When you receive a rat blocker from Nordisk Innovation, the threaded part (1) is already lubricated with assembly paste. To prevent damage and ensure smooth operation of the thread, we recommend that you lubricate the threaded piece (1) with assembly paste during service and maintenance of the rat blocker.

We recommend the following products for lubrication: CRC Lubricant Ceramic Paste or UNICAN ASW-1400



5. Toilet Flush High/Low

To minimise the risk of blockages, it is recommended to use the full flush on the toilet as often as possible. Flushing with plenty of water ensures that paper and waste are effectively transported through the pipeline, supporting the sewer's natural self-cleaning function. Insufficient flushing may cause paper and faeces to accumulate in the pipes. It is recommended to avoid using the short flush on toilets.

6. Contents in Flush

To avoid blockages and ensure proper function of the rat blocker, the following items must not be flushed down the toilet:

- Toilet paper rolls
- Cotton swabs
- Sanitary pads/diapers
- Cotton wool
- Fabric tissues
- Dishcloths, cleaning rags, etc.
- Gloves (nitrile, vinyl, latex, leather, fabric, etc.)

It is important to inform all users of the installation about proper toilet flushing and how it should be managed.

7. Cloudburst/Backflow

In case of cloudbursts with subsequent backflow in the sewer pipes, the rat blocker must be checked for proper function. During backflow, waste may collect around the rat blocker, which can lead to blockage.

Flush several times with toilet paper and water to ensure that both paper and water pass freely through the manhole and rat blocker.

8. Inspection Interval

The interval for inspection and cleaning of the rat blocker depends on the installation site and the load on the pipeline.

The sewer technician's expertise will always determine the interval for rat blocker inspection, but as a general guideline we recommend the following:

- During the first installation, check the rat blocker regularly during the first 3 months.

Afterwards, follow these inspection intervals:

- Standard single-family house: Minimum 1 inspection per year
- Institutions, dormitories, schools, etc.: Inspection every 3-6 months
- Multi-story buildings (more than two floors): Inspection every 3 months

We always recommend following our recommended maintenance plan and using authorised professionals – it pays off in both operation and durability.

We are happy to answer any questions or provide assistance. Please scan the QR code for contact information:



nordiskinnovation.com/distributors

