



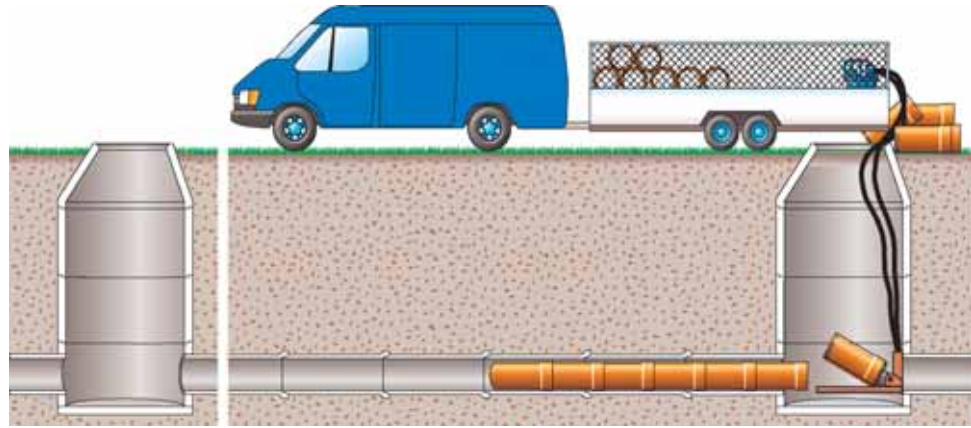
Nordic Renovation Group

■ MaxiLine® relining with discrete pipes



MaxiLine® relining with discrete pipes

Quick installation, long-lasting result



In MaxiLine relining, a new plastic pipe is pushed inside the existing sewer in pieces. The lining is performed through manholes by inserting the pipe inside the existing sewer in 500 mm pieces. The method is fast and it does not need any preliminary excavation work. With the help of a hydraulic installation tool, up to several hundred pipes can be installed in the pipeline at one time.

■ Range

MaxiLine relining is excellent for renovating gravity sewers with a diameter of 150-500 mm. The inside diameter of the line is smaller than that of the original, but the flow properties of the MaxiLine pipe are considerably better compared to the existing, deteriorated concrete sewer. The MaxiLine method is also excellent for densely populated areas. The relining is performed through manholes, causing practically no traffic hold-ups or disruption. The method is fast and it does not need any preliminary excavation work. This is a highly competitive method in cases where the section to be renovated is short.

■ Benefits of MaxiLine:

- **Dimensionally accurate injection moulding guarantees a result free from leaks**
- **Modern high quality PP-material**
- **Traction-resistant spigot joints with seals**
- **Easy no-dig installation**
- **The sewer can be used during the relining**
- **The relined and grouted line has a high load capacity**
- **The pipe selection covers the most common pipe sizes**
- **No excavation or unnecessary traffic hold-ups or disruptions**



Hard-wearing, loadresistant pipe material

■ MaxiLine pipe

Made of injection-moulded polypropylene, the pipes are highly resistant to mechanical load, impact and chemicals. The manufacturing method also guarantees high dimensional accuracy. The reliability of the spigot joints is guaranteed by the close-fitting, traction-resistant rubbering seals. The ring stiffness category of the pipes is SN8.

■ Superior pipe material

The impact-resistant polypropylene is also an excellent material for working in low temperatures. In addition, the material is resistant to high water temperatures and low installation temperatures, abrasion and attack from chemicals and the loose solids in the sewer.

■ A tight pipe system

The high dimensional accuracy and the rubber seal in the MaxiLine pipes guarantee extremely close-fit and reliable joints. The joint structure allows 4°/m misalignment.

■ High ring stiffness

Due to the injection-moulding technique and the polypropylene material, it is possible to produce MaxiLine pipes with ring stiffness up to 40 kN/m².

■ Long-lasting and functional results

Following MaxiLine renovation, the pipes are connected to renovation manholes, which are inserted inside the existing manhole. When necessary, the pipe is anchored in place by grouting foam concrete in the annular space between the existing pipe and the inserted pipe.

■ Pipe sizes

Sewer to be relined	MaxiLine pipe (d _e /d _i)
150 mm	110/103 mm
225 mm	200/178 mm
300 mm	250/231 mm
400 mm	355/319 mm
500 mm	450/404 mm



Renovation of the chambers secures the tightness of the whole line

When renovating pipelines it is usually needed to renew also the manholes connected to the line.

The manholes are also the biggest source of leakage. Installing a new plastic chamber or manhole into the existing manhole will seal the chambers and improve the flow characteristics.

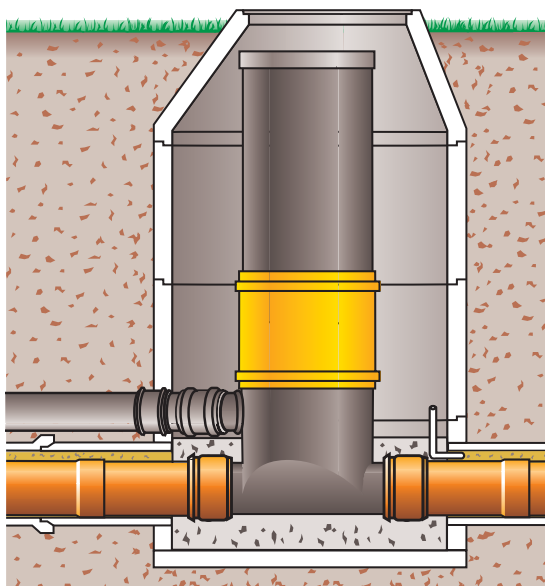
■ Standard and tailor made chambers

The versatile product range includes a wide range of standard and tailor made chamber solutions and different manhole covers and accessories.

Chambers are assembled on the worksite to fit the old manhole and renovated line. When building the chambers only high quality materials and components are used. It is not needed to dig up or scrap the old manhole.

■ High quality

The material used for renovation chambers are of high quality. The components are designed and fabricated specially for tailor made manholes. Welding of the joints will guarantee the tightness of the chambers. Normal sewer services, like cleaning and CCTV can easily be done by access through the riser pipe.



■ NRG Nordic Renovation Group Ltd

P.O.Box 95 (Murrontie 3)
FI-30101 Forssa, FINLAND
Tel. +358 (0) 3 4127 444
Fax +358 (0) 3 4127 445
www.nrgroup.fi