
Basic installation instructions for the LORO-DRAINJET siphonic drainage:
Anchor Clips

All socket connections are to be installed with anchor clips, which become partly unnecessary when using a fastening system. As a matter of principle, anchor clips must be installed

In the case of connecting pipes or mains:

- after the LORO-DRAINJET® gullies
- after branches
- before bends
- before adjustment pieces

In the case of downpipes:

- at the transition point between downpipe and mains

Fastening systems

The piping system must be fastened in accordance with the requirements (such as fixed point, pipeclips etc.).

Basic requirements for connecting and collecting pipes:

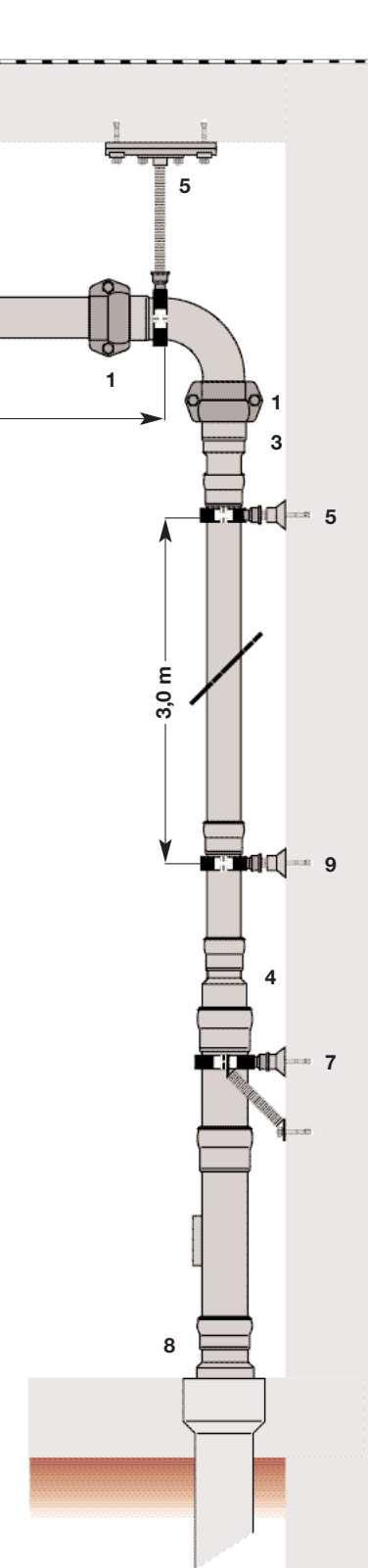
- the fixed points should be spaced 12 m apart,
- the pendulum suspensions should be spaced as follows:

DN	40	50	70	80	100	125	150	200	250	300
X	2,0 m	2,0 m	3,0 m	3,0 m	3,0 m	3,0 m	3,0 m	3,0 m	3,0 m	3,0 m

For downpipes:

- 3 m spacing
- downpipe supports with a spacing of approximately 12 m and at least once per downpipe
- fixed point at the transition between collecting pipe and downpipe Alignment of the fastening devices as regards forces As regards the alignment of the fastening forces, the LORO piping system is considered to be a rigid installation. A prerequisite is in this respect that the piping system is securely fastened at all necessary points. The dynamic forces caused by the flow inside the pipes may therefore be disregarded. Impact forces occurring in supply systems with pressurized pipes in the case of sudden load changes, to name just one example, cannot occur in LORO siphonic drainage systems, so the fastening measures can be restricted to the static loads when the pipes are completely filled. The static forces occurring in completely filled pipes can be seen from the weight table below:

DN	40	50	70	80	100	125	150	200	250	300
	kg / m									
LORO-X Steel Pipe	2,6	4,1	7,0	9,9	13,0	21,8	29,4	57,0	77,0	104,0
LORO-Compound Pipe	6,2	8,3	13,8	17,8	22,5	38,8	49,1	78,7	-	-



1 Anchor clip No. 806X, DN 40- DN 125, anchor hoops, No. 808X, DN 150 - DN 200, CV-claw, No. 9071X, DN 250 - DN 300.

2 Anchor clip with release, No. 8061X, DN 40 - DN 125

3 Adjusting piece for pressure flow, No. 19602X

4 Concentric transition pipes, No. 603X

5 Fastening system installed as fixed point

6 Fastening system installed as pendulum

7 Fastening system with downpipe support

8 Connecting piece for the connection of the LORO-X pipe with other pipe material (such as stoneware or plastic pipes)

9 Downpipe fastening

Installation instructions

- Deviations from the planning specifications based on a hydraulic calculation are to be avoided. If modifications cannot be avoided, contact the planning engineer or LORO's technical advisory service to have a re-calculation done.

- Special attention must be paid to
 - the specified piping layout,
 - the length of the individual pipe sections,
 - the heights of the collecting an individual connecting pipes,
 - the specified pipe dimensions, and the layout of the roof gullies (dimensions) in accordance with the planning.
- Please use the materials for the piping and the roof gullies as specified in the planning.
- The pipes can be laid without gradient, but the water must be able to drain off.

- See page 26 for the spacing between the upper edge of the roof gully or the raw ceiling on the one hand the collecting pipe on the other.

- For branches, the 45° type is to be used.

- The pressure drainage system must end at the backflow level (transfer into the open channel drainage) at the least.

- The mains in the ground (open channel drainage) must be connected with system-compatible connecting pieces, so that no backflow occurs.

- The flanges of the roof gullies are to be sunk into the base and fixed there. Recesses in the ceiling are to be closed.

- The gullies and pipes are to be protected against soiling and contaminants (such as packaging and insulation material, gravel, planting substrate etc.) during the time of construction. Pollutants are to be removed from the drainage pot before mounting the strainer unit.

- Further details about the installation of LORO-X steel discharge pipes and LORO compound pipes are contained in separate instructions which may be obtained from the LOROWERK.