

**Fundamental rules for installing the LORO siphonic drain system:**

**Anchor clips:**

**Anchor clips must be applied to all socket joints. When suitable pipe fastening systems are used, some of them can be omitted. Essentially, the anchor clips are to be arranged:**

**at connecting and collecting pipes:**

- after LORO-DRAINJET® drains
- after branches
- before bends
- before compensating pieces

The use of suitable pipe fastening systems is essential for this version.

**On downpipes:**

- at the transition between collecting pipe and downpipe

**Fastening systems:**

The pipe system must be fastened in accordance with the applicable requirements (e.g. fixed point, pipe clips etc.). The rule is that

**at connecting and collecting pipes:**

- The distance between **fixed points** should be 12 m.
- The distance from **suspension points** should be:

DN	40	50	70	80	100	125	150	200
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

For fastening LORO-XML pipes (socket-less pipe), DN 250 and DN 300, please ask for the installation instructions for LORO-XML steel discharge pipes DN 250/300.

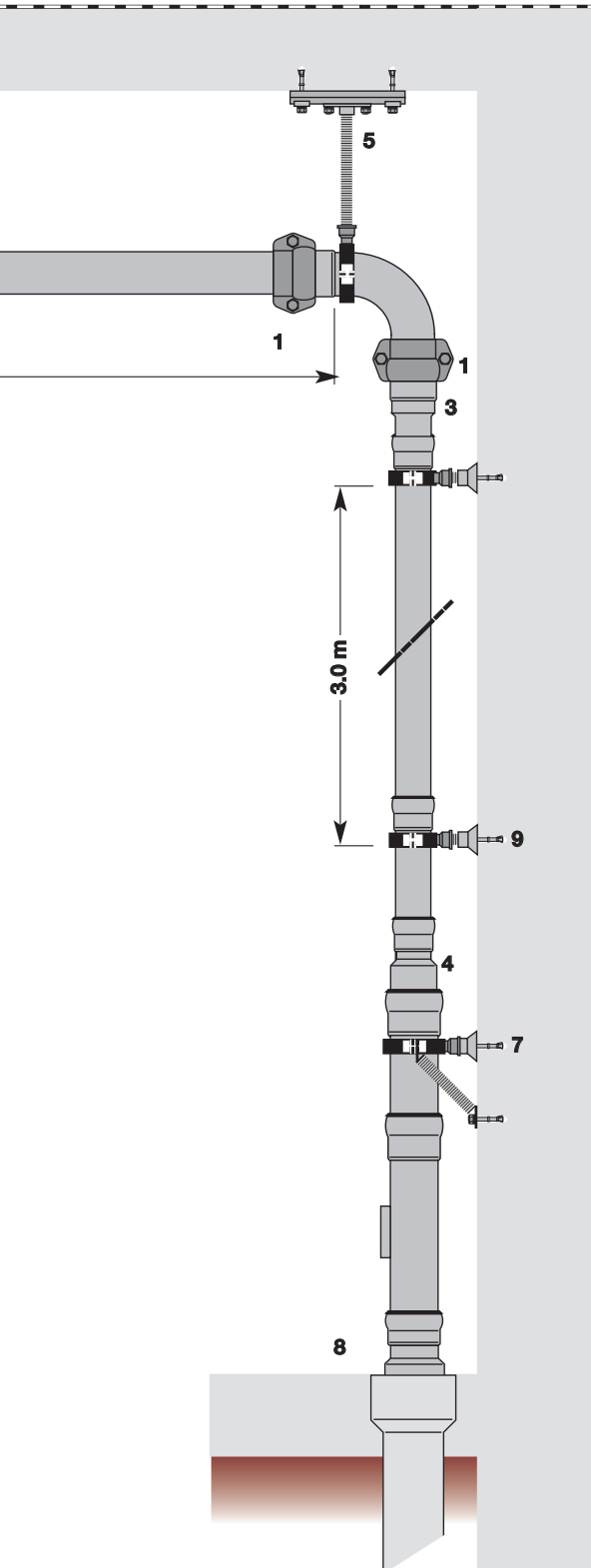
**On downpipes:**

- 3 m spacing.
- Downpipe supports are placed approximately every 12 m, with at least one per downpipe.
- Fixed point at the transition between collecting pipe and downpipe.

**Fastening arrangement for appropriate forces**

In order to achieve appropriate fastening forces, the LORO siphonic drain system is designed in such a way that it should be considered rigid. This means that the pipe system must be fastened at all the necessary points. Dynamic forces arising from the flow can therefore be neglected. Impact forces – such as can occur in pressurised supply systems, e.g. when flow is switched – cannot occur in the LORO siphonic drain system, and it is only necessary to design for the purely static loading when the system is full. The static forces that occur can be found in the weight table for filled pipes:

DN	40	50	70	80	100	125	150	200	250	300
	kg / m									
LORO-X steel discharge 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 hoop, no. 808X, DN 150 - DN 200, CV claw, no. 9071X, DN 250 - DN 300
- 2 Anchor clip with notch, no. 8061X, DN 40 - DN 125
- 3 Compensating pieces for pressure flow, no. 19602X
- 4 Transition pipes, concentric, no. 603X
- 5 Fixed point fastening
- 6 Suspension points
- 7 Downpipe support
- 8 Connecting piece for transition from LORO-X pipe to another type of pipe (e.g. stoneware or plastic pipe)
- 9 Downpipe fastening

- The materials specified in the plans for pipes and roof drains must be used.
- The lines can be laid without a fall, but must be able to drain fully.
- Clearance dimensions upper edge of roof drain pot or bare slab to collecting pipe, see page 113.
- The 45° version of branches should be used.
- The pressure drainage system must end the latest at the backflow level (transition into the gravity line).
- The connection to the underground pipes (gravity line) of other materials must be made with connecting pieces appropriate for the system and must be backflow-safe.
- The flanges of the roof drains should be fastened set back into the surface as far as possible. Any slab cut-outs must be closed.
- During the building period, the drains and the pipe system must be protected against contamination (packaging and insulation residues, gravel, green roof substrate etc.). Before the strainer unit is fitted, contamination must be removed from the drain pot.
- Details on installing LORO-X steel discharge pipes and LORO compound pipes: see the special installation instructions – please ask the LOROWERK factory for them.

### Mounting instructions

- Variations from planning documents that are based on a hydraulic calculation are to be avoided. If changes are unavoidable, the planner or the engineering consultation service from LORO should be asked for a computational verification.
- It is particularly necessary to consider:
  - the specified pipe routes
  - the lengths of the individual sections
  - the heights of the collecting and single connection lines
  - the specified pipe dimensions
  - the arrangement of the roof drains (dimensions) according to the plans.