

Installation instructions

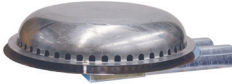

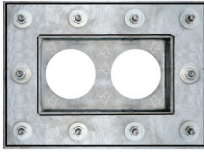

LORO-ATTIKASTAR® siphonic drains with clamping flange, for pressure flow, Series 93

for bituminous or plastic roof sealing sheets, according to EN 1253, steel, hot-dip galvanised

LORO-ATTIKASTAR® siphonic drains consist of the drain body and the stainless steel suction cover.

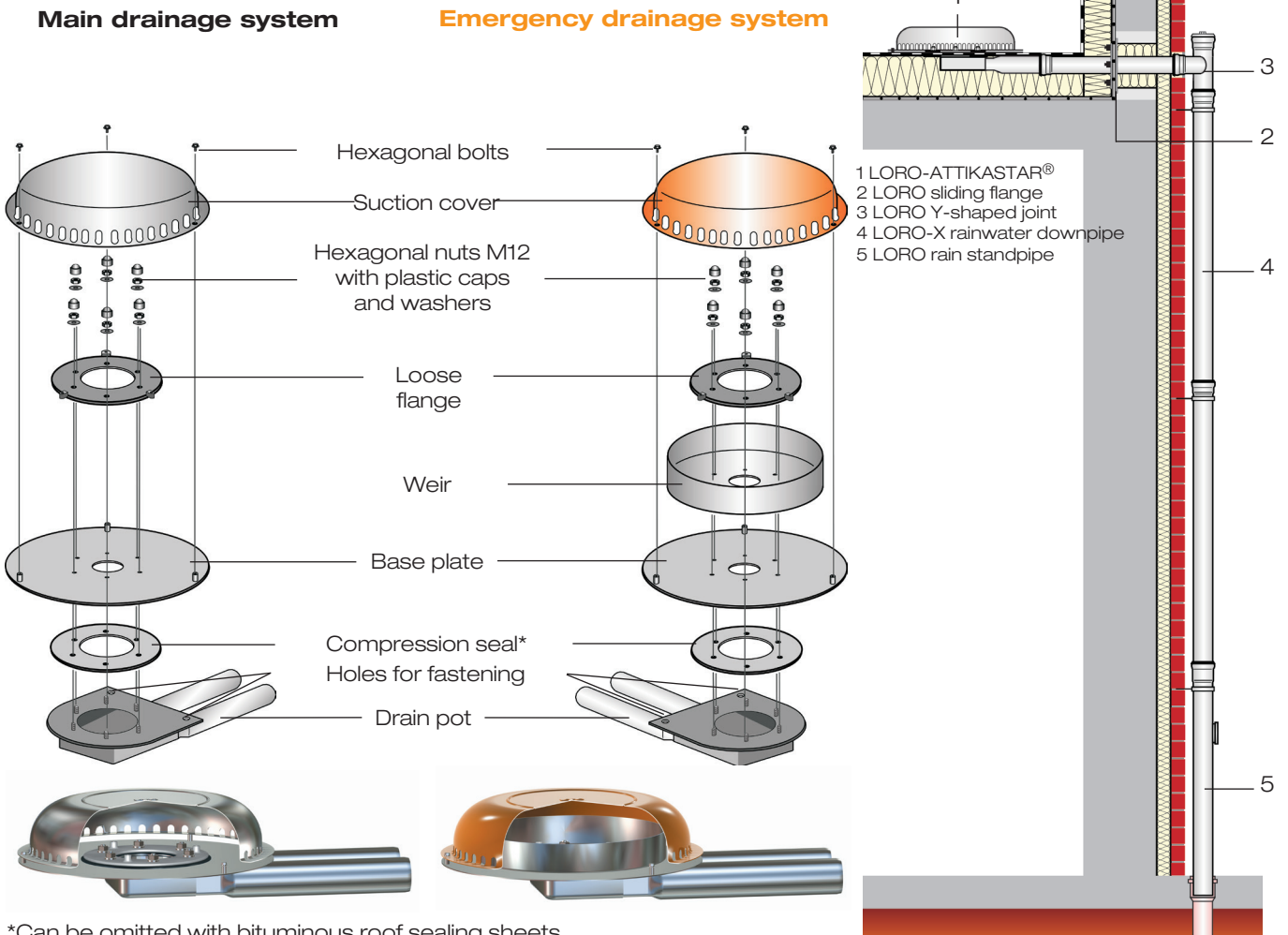
LORO-ATTIKASTAR® scupper rainwater drainage

System overview

| | Pressure flow | | LORO sliding flange | Y-shaped joint |
|---|--|--|--|---|
| | Main drain | Emergency drain | for bonding the bituminous or plastic vapour barrier | for combining the double pipe into the downpipe |
| with clamping flange for bituminous and plastic sealing sheets DN 70 |  13779.CC0X Data sheet: LX 803 |  13766.CC0X Data sheet: LX 766 |  13228.070X |  13517.DCCX |

Please download data sheets from www.loro-X.com.

Construction diagram



*Can be omitted with bituminous roof sealing sheets.

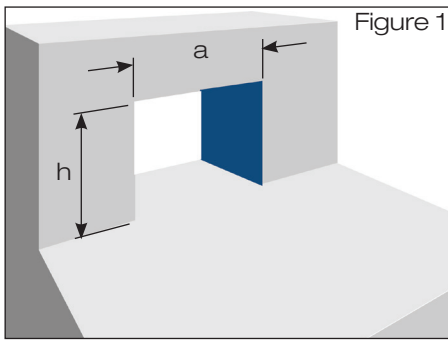


Figure 1

1.) Specifying the parapet opening, specifying the fitting height, bonding the LORO sliding flange in the vapour barrier

- 1.1 Make the parapet opening according to Table 1 (Figure 1). Make the hole as far as the bare slab so that the roof space can be drained during the construction phase. According to flat roof regulations, the lateral distance from the outer edge of the drain flange to the upstand of the building must be at least 300 mm.

| Table 1 | DN 70 |
|----------|-------|
| a | 300 |
| h | w*+40 |

*w = thickness of the thermal insulation in mm

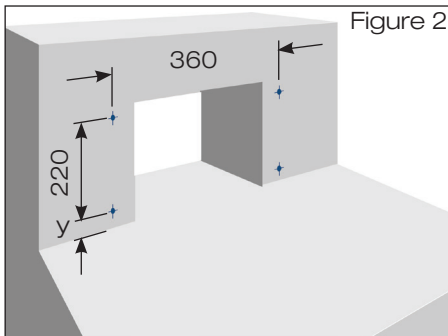


Figure 2

- 1.2 Drill 10 mm diameter holes for sliding flange (fig. 2).

Note: the dimensions given in Table 2 must be maintained!

| Table 2 | DN 70 |
|----------|-----------------------|
| y | 28 mm + (w* - 180 mm) |

*w = thickness of the thermal insulation in mm

Note: the thickness of the thermal insulation must be at least 180 mm, otherwise the use of the double-pipe sliding flange is not possible!

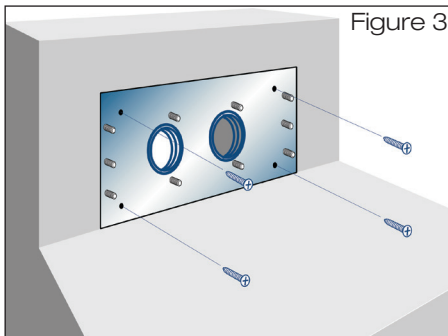


Figure 3

- 1.3 Fasten the sliding flange by means of a screwdriver (fig. 3).

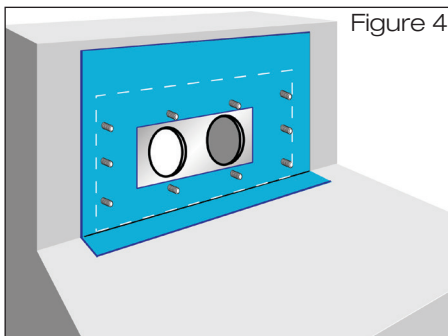


Figure 4

- 1.4 Use a hole punch to make 10 mm diameter holes in the connecting sleeve for the threaded bolts to pass through. The loose flange can be used as a template.

Spread out the bituminous/EPDM compound or plastic connecting sleeve manufactured on-site and attach it to the substrate. Do not allow creases to form (fig. 4).

Note: the connecting sleeve must not be damaged.

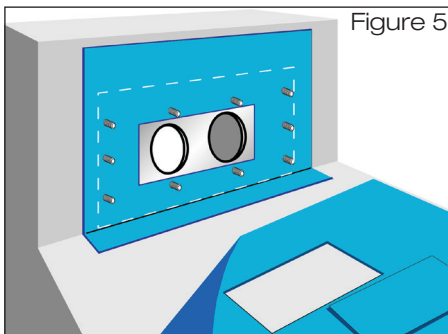


Figure 5

- 1.5 Unroll the **bituminous** or **plastic** vapour barrier sheet. Make a rectangular cut in the vapour barrier sheet in the region of the sliding flange - 270 x 130 mm (fig. 5). The loose flange can be used as a template. Roll back the vapour barrier sheet.

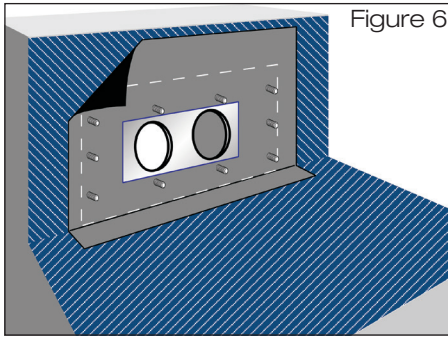


Figure 6

- 1.6 A bitumen primer must be applied to the floor slab and wall when bituminous vapour barrier sheets are used (Fig. 6). High-polymer vapour barrier sheets must be attached to the substrate in accordance with the foil manufacturer's laying specifications.

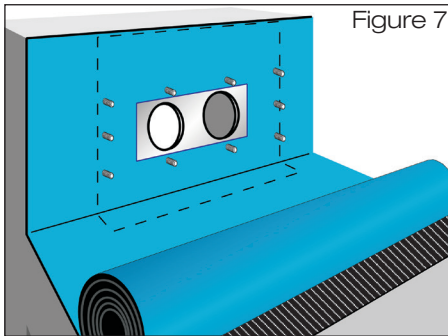


Figure 7

- 1.7 **Bituminous vapour barrier sheet:**
Liquefy the upper side of the connecting sleeve by heating it (welding procedure). Unroll the vapour barrier sheet accurately over the sliding flange with connecting sleeve in the hot liquid bitumen (Fig. 7), then evenly press or roll in.
Plastic vapour barrier sheet:
Clean the contact surfaces and make the connection between the connecting sleeve and the vapour barrier sheet using solvent welding or hot gas welding. Seam overlap at least 50 mm. Observe the laying specifications of the roof sealing sheet manufacturer.

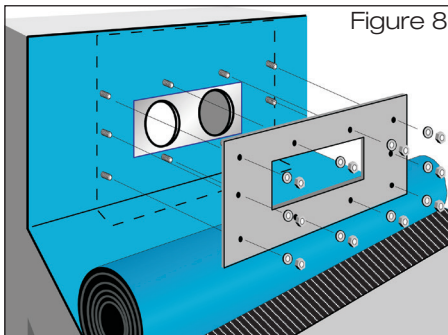


Figure 8

- 1.8 Clamp the vapour barrier sheet with loose flange and the screws provided (Fig. 8). Tighten the enclosed screws using an AF 13 open-ended or ring spanner, working criss-cross. Insert the sealing element into the socket of the sliding flange.

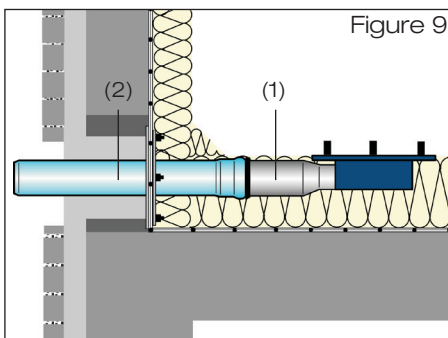


Figure 9

2.) Fitting the scupper drain when using bituminous roof sealing sheets

- 2.1 Adjust the length of the discharge pipe (1) of the drain on site. Apply LORO-X lubricant to the gaskets of the sliding flange and the pipe ends (2) of the LORO-X pipe. Cut out the thermal insulation panel in the area of the drain basin. According to the flat roof regulations, the fixed flange of the roof drain should be flush-mounted into the substrate. Insert the LORO-X pipes into the gaskets of the sliding flange. Insert the sealing element into the pipe socket and coat with LORO-X lubricant. Apply LORO-X lubricant to the discharge pipes of the drain. Insert the discharge pipes into the sealing elements of the LORO-X pipe. Fasten both the drain and the thermal insulation panel (Fig. 9). Close up any holes that have been made in the thermal insulation using suitable materials. Apply adequate quantities of thermal insulation to the discharge pipes in the area of the wall. Lay thermal insulation panels.

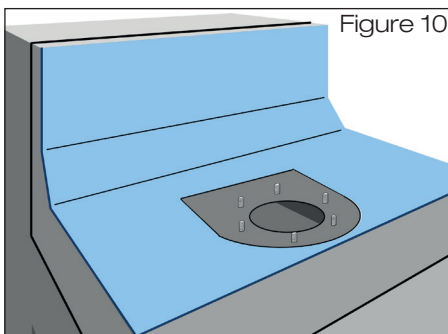


Figure 10

- 2.2 Unroll the first layer of the **roof sealing sheet** over the scupper drain, and make a cut-out in the region of the fixed flange (Fig. 10).

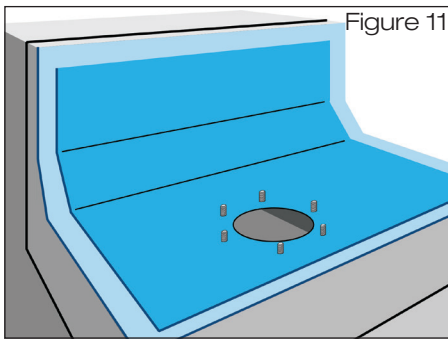


Figure 11

2.3 Cut the **connecting sheet** of the existing roof sealing sheet, with a size of 700 mm x 1000 mm length on site (Fig. 11). Use a hole punch to make 14 mm diameter holes in the connecting sheet for the threaded bolts to pass through. The loose flange can be used as a template. Join the connecting sheet by welding to the first layer of the roof sealing sheet that has already been laid.

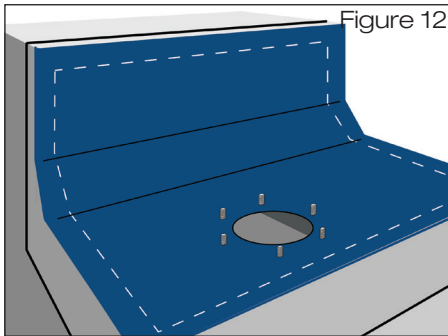


Figure 12

2.4 Unroll the second layer of the **roof sealing sheet** over the drain. Use a hole punch to make 14 mm diameter holes in the roof sealing sheet for the threaded bolts to pass through. The loose flange can be used as a template (Fig. 12). Roll back the second layer of the roof sealing sheet, weld the connecting sheet and the second layer of the roof sealing sheet in accordance with the laying instructions from the manufacturer of the roof sealing sheet.

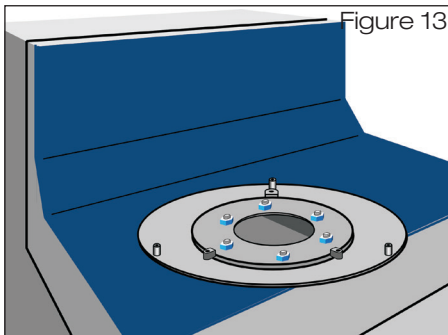


Figure 13

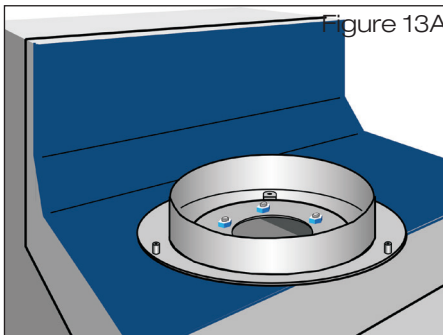


Figure 13A

2.5 Place the base plate on the roof sealing sheet. Clamp the roof sealing sheet with the base plate, loose flange and the screws provided (Fig. 13). In case of emergency drain, place weir on base plate (Fig. 13A). Tighten the enclosed screws using an AF 19 open-ended or ring spanner, working criss-cross. Tightening torque: 20 Nm. **According to the sealing regulations (flat roof regulations, edition October 2008), the nuts of the flange connections must be tightened 3 times.**

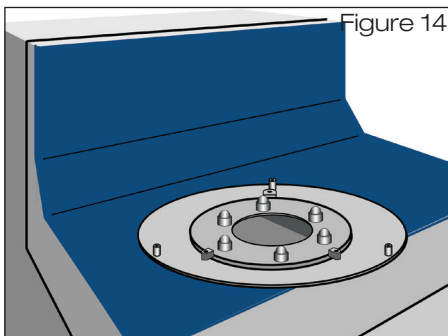


Figure 14

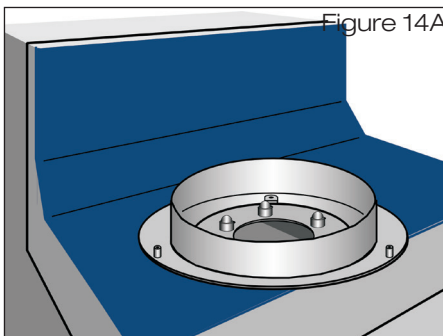


Figure 14A

2.6 Place the plastic hexagonal M 12/ 19 AF caps provided onto the threaded bolts (Fig. 14 or 14A).

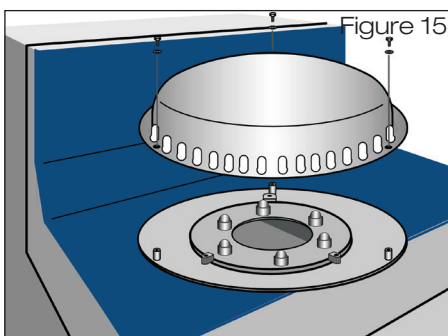


Figure 15

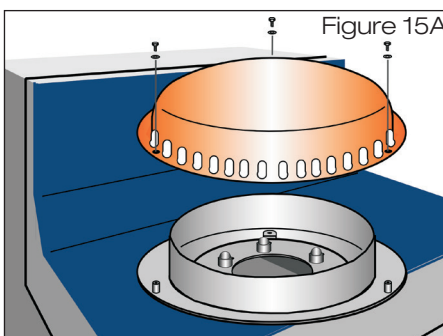


Figure 15A

2.7 Screw the suction cover to the base plate using the fixing screws and washers provided (Fig. 15 or 15A). Tighten the enclosed screws using an AF 10 open-ended or ring spanner.

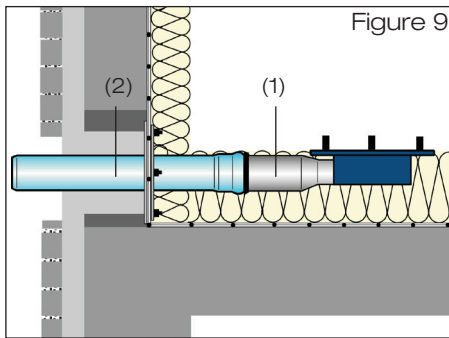


Figure 9

3.) Fitting the scupper drain with clamping flange when using plastic roof sealing sheets

- 3.1 Adjust the length of the discharge pipe (1) of the drain on site. Apply LORO-X lubricant to the gaskets of the sliding flange and the pipe ends (2) of the LORO-X pipe. Cut out the thermal insulation panel in the area of the drain basin. According to the flat roof regulations, the fixed flange of the roof drain should be flush-mounted into the substrate. Insert the LORO-X pipes into the gaskets of the sliding flange. Insert the sealing element into the pipe socket and coat with LORO-X lubricant. Apply LORO-X lubricant to the discharge pipes of the drain. Insert the discharge pipes into the sealing elements of the LORO-X pipe. Fasten both the drain and the thermal insulation panel (Fig. 9). Close up any holes that have been made in the thermal insulation using suitable materials. Apply adequate quantities of thermal insulation to the discharge pipes in the area of the wall. Lay thermal insulation panels.

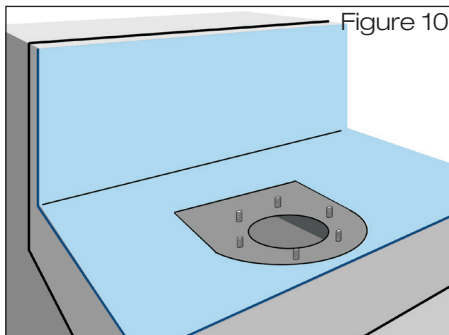


Figure 10

- 3.2 Unroll the **roof sealing sheet** over the scupper drain, and make a cut-out in the region of the fixed flange (Fig. 10).

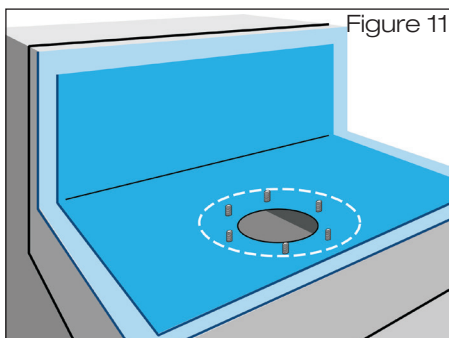


Figure 11

- 3.3 Cut the **connecting sheet** of the existing plastic roof sealing sheet, with a size of 700 mm x 1000 mm to length on site (Fig. 11). Use a hole punch to make 14 mm diameter holes in the connecting sheet for the threaded bolts to pass through. The loose flange can be used as a template. Insert the enclosed compression seal (drawn dotted) **under** the connecting sheet on the fixed flange, and spread the perforated connecting sheet over the drain with fixed flange. Join the connecting sheet by welding with the layer of roof sealing sheet that has already been laid in accordance with the **processing instructions from the manufacturer of the roof sealing sheet**. If a second compression seal is needed under the base plate, this can be made by the customer from the same material as the roof sealing sheet. The loose flange can be used as a template here again. A second compression seal, item no. 21810.100X, can alternatively be requested from the LOROWERK factory.

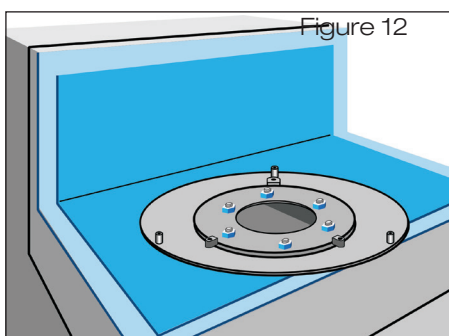


Figure 12

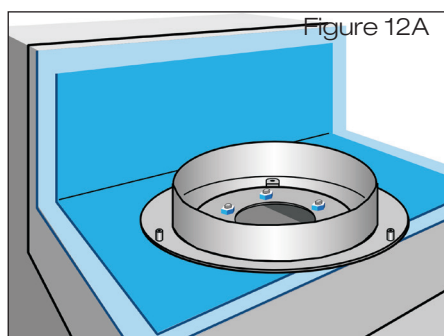


Figure 12A

- 3.4 Place the base plate on the roof sealing sheet. Clamp the roof sealing sheet with the base plate, loose flange and the screws provided (Fig. 12). In case of emergency drain, place weir on base plate (Fig. 12A). Tighten the enclosed screws using an AF 19 open-ended or ring spanner, working criss-cross. Tightening torque: 30 Nm. **According to the sealing regulations (flat roof regulations, edition October 2008), the nuts of the flange connections must be tightened 3 times.**

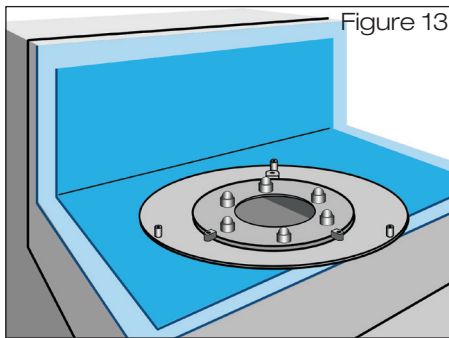


Figure 13

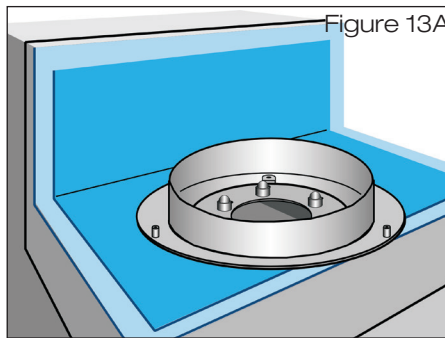


Figure 13A

3.5 Place the plastic hexagonal M 12/ 19 AF caps provided onto the threaded bolts (Fig. 13 or 13A).

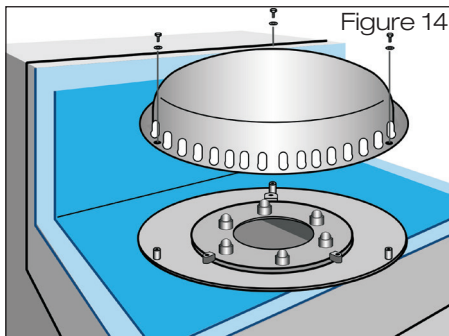


Figure 14

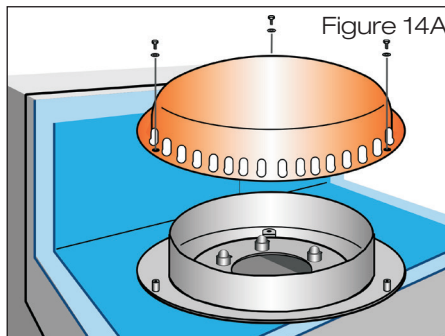


Figure 14A

3.6 Screw the suction cover to the base plate using the fixing screws and washers provided (Fig. 14 or 14A). Tighten the enclosed screws using an AF 10 open-ended or ring spanner.

Important!

Necessary system components for item number **13779.CC0X**: Attikastar siphonic drain, sliding flange (for bonding the vapour barrier), pipe with a socket, Attikastar Y-shaped joint, rainwater downpipe with a socket, rain standpipe with cleaning opening, sealing element, pipe clips with spike, lubricant - see data sheet **LX 803**.

Important!

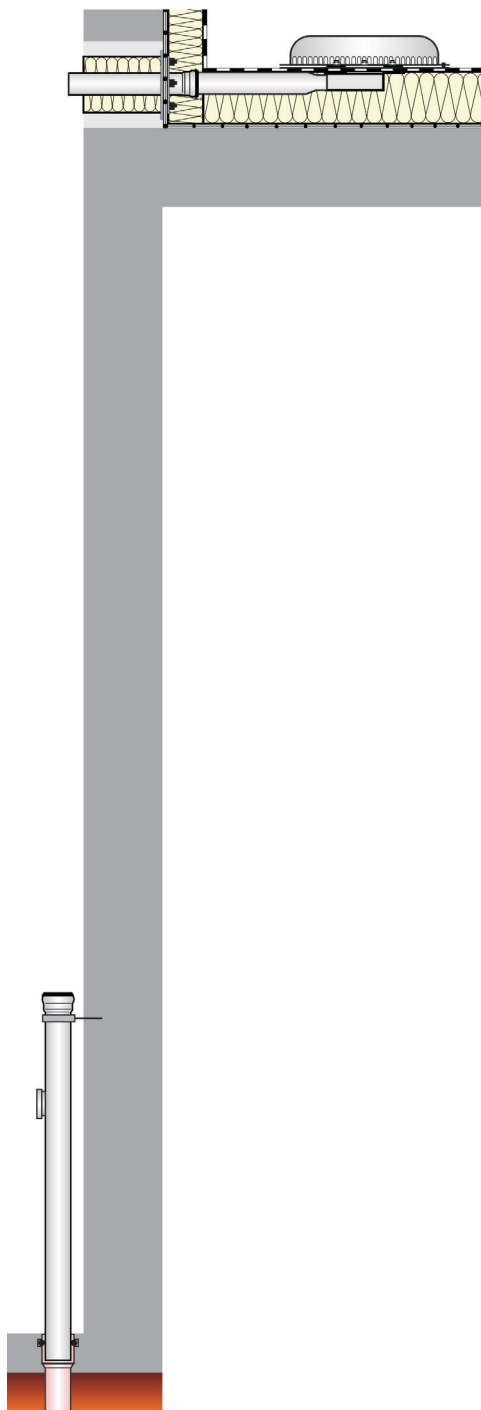
Necessary system components for item number **13766.CC0X**: Attikastar emergency drain, sliding flange (for bonding the vapour barrier), pipe with socket, Attikastar Y-shaped joint, rainwater downpipe with a socket, 45° elbow, sealing element, pipe clips with spike, lubricant - see data sheet **LX 766**.

Trace heating

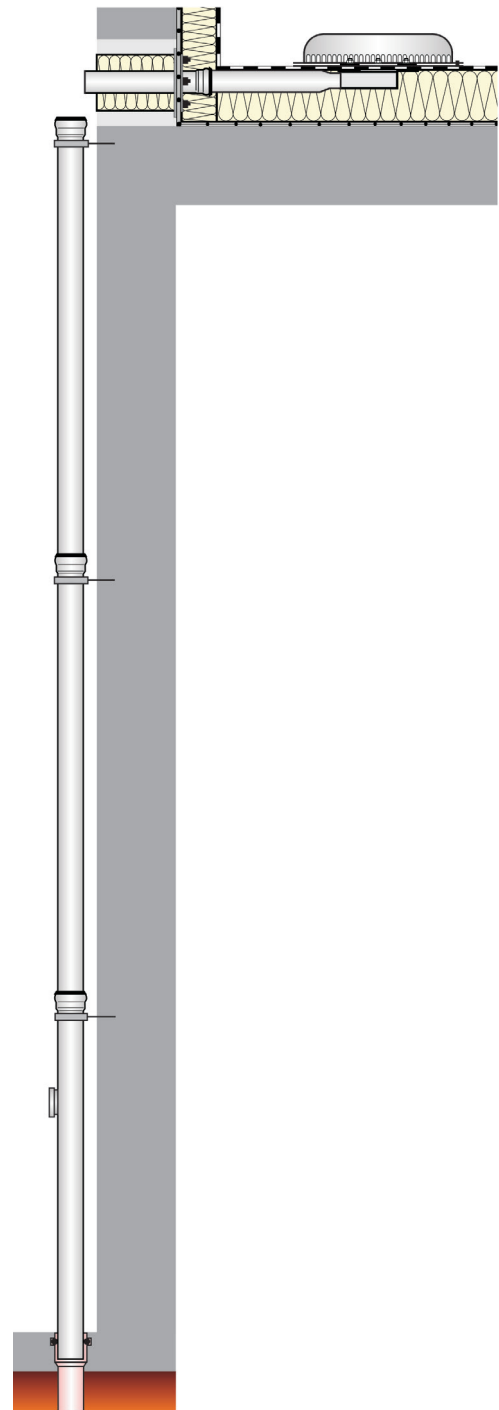
After checking the roof drains and pipes in areas endangered by frost, we recommend that customers install trace heating if necessary (see EN 12056, Part 1, or DIN 1986, Part 100).

LORO-X ATTIKASTAR® drains are to be serviced at 1/2 yearly intervals in accordance with DIN 1986, Part 30. Please also give these installation instructions to the plumber!

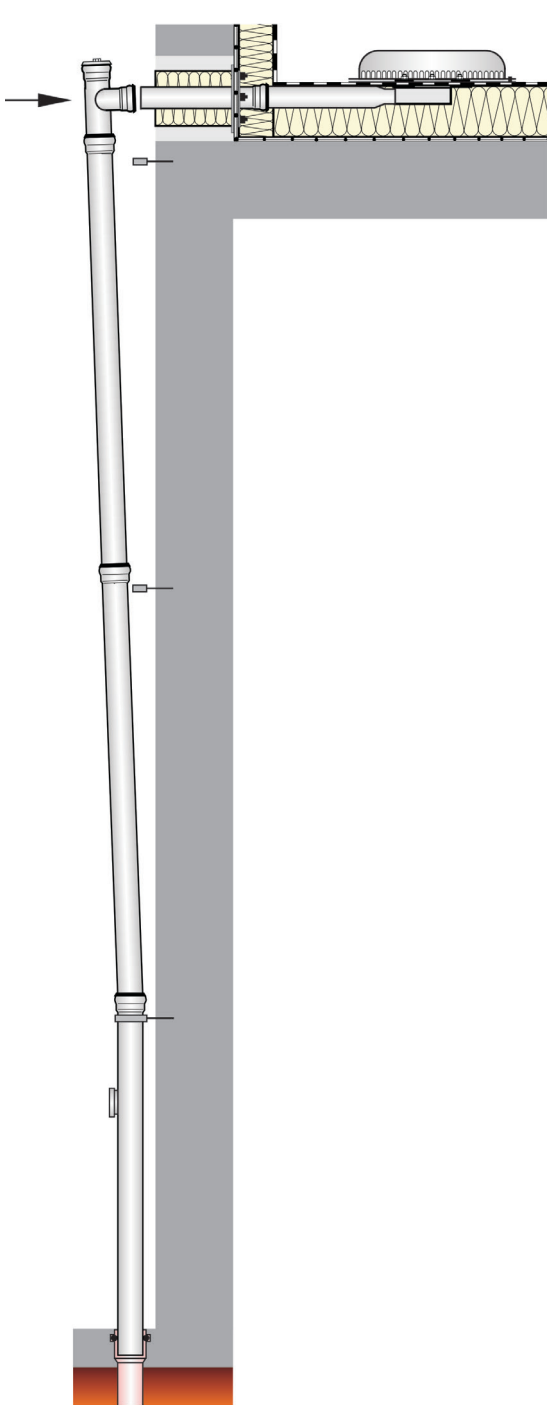
4. Installation of the downpipe



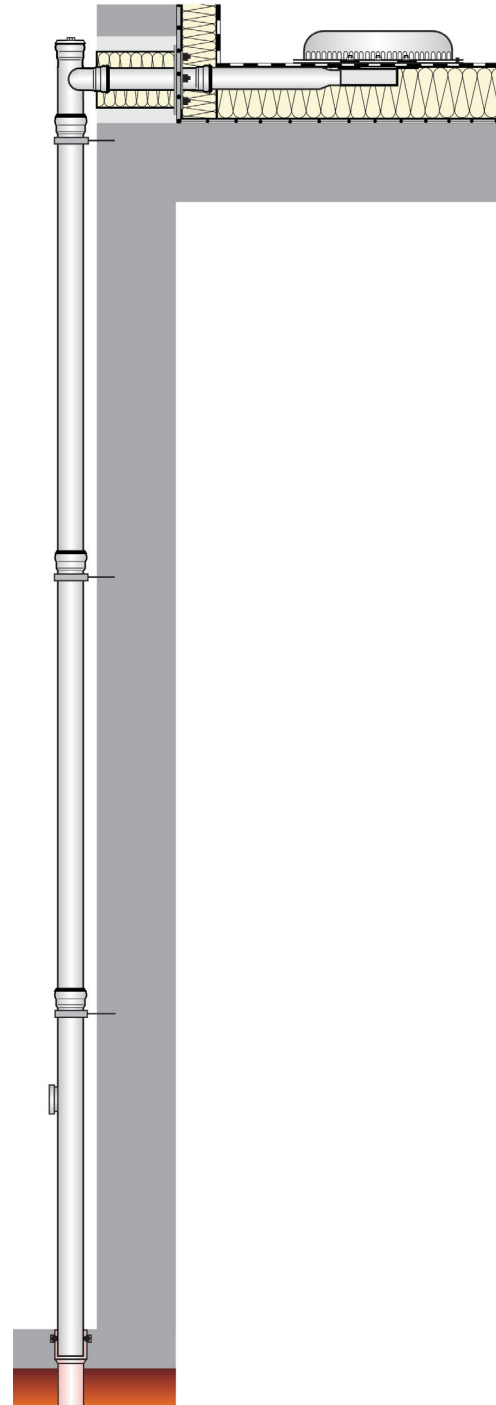
4.1
Installation is to be performed from bottom to top. Connect the LORO-X rain standpipe to the underground pipe. Fix the downpipe underneath the socket using a LORO-X pipe clip.



4.2
Add further pipes to the downpipe until the parapet opening is reached. Fix the pipes of the downpipe underneath the socket using a LORO-X pipe clip.



4.3
Coat the discharge ends of the double pipe drain on the roof with LORO-X lubricant. Insert LORO-X DN 70 sealing elements into the sockets of the LORO Y-shaped joint and coat with LORO-X lubricant. Release the LORO-X pipe clips. Push the downpipe at a slight angle onto the discharge ends of the double pipe drain. Please ensure that the double pipe drain is not pushed out of position.



4.4
Fix the downpipe under each socket connection with a LORO-X CN 100 pipe clip.

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Technical status: July 2011.
Subject to technical changes.