

Installation instructions

LORO-RAINSTAR® scupper drains with clamping flange, penetration depth 55 mm

stainless steel, for bituminous or plastic roof sealing sheets, according to EN 1253

LORO-RAINSTAR® scupper drains with a penetration depth of 55 mm consist of the drain body and the strainer (for gravity flow) or the cover (for pressure flow).

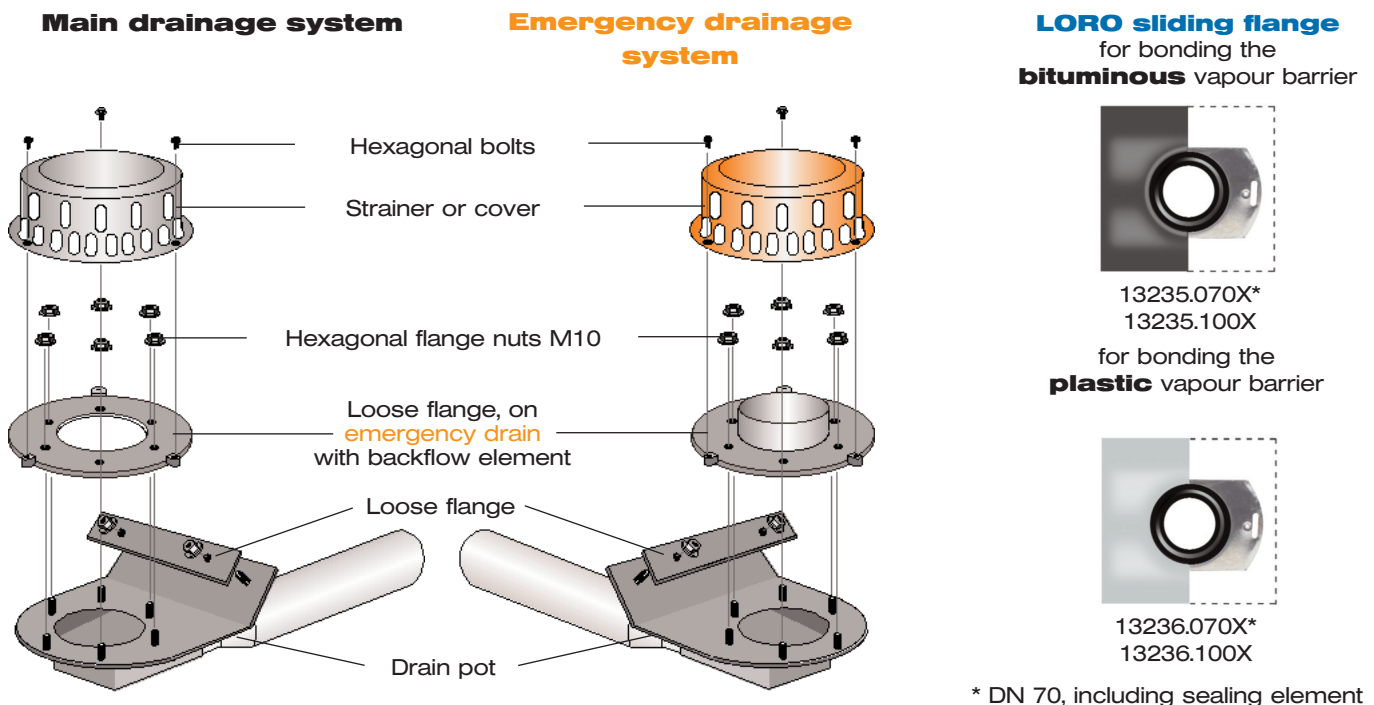
System overview

	LORO-RAINSTAR® scupper rain water drainage			
	Gravity flow		Pressure flow	
		Emergency drain		Emergency drain
with clamping flange for bituminous sealing sheets DN 70 DN 100	 01360.070X 01360.100X	 01361.070X 01361.100X	 01364.070X 01364.100X	 01365.070X 01365.100X
with clamping flange for plastic sealing sheets DN 70 DN 100	 01362.070X 01362.100X	 01363.070X 01363.100X	 01366.070X 01366.100X	 01367.070X 01367.100X

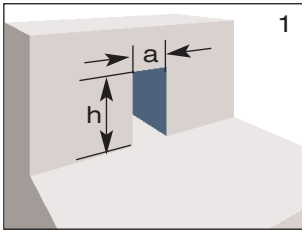
Trace heating

After checking the roof drains and pipes in areas endangered by frost, we recommend that customers install trace heating if necessary.

Construction diagram



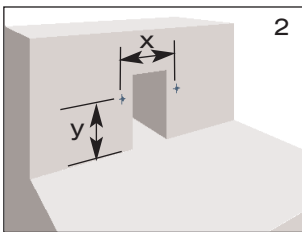
Determining the wall opening in the parapet, specifying the fitting height, bonding the LORO sliding flange into the vapour barrier



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.

Table 1	DN 70	DN 100
a	130	160
h	w*+50	w*+70

*w = thickness of the thermal insulation in mm

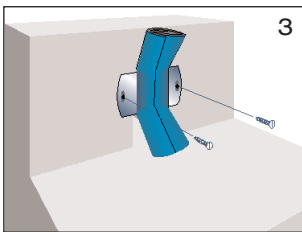


2 Make 10 mm diameter holes for the sliding flange with the factory-fitted connecting sleeve for connecting the vapour barrier according to the details specified in Table 2 (Fig. 2).

Table 2		DN 70	DN 100
x		196	238
y	Bitumen	w*-45	w*-35
	Plastic	w*-40	w*-32

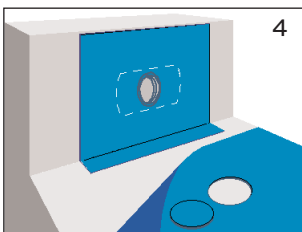
Thermal insulation of 100 mm on the roof side on the parapet is assumed

*w = thickness of the thermal insulation in mm



3 Fasten the sliding flange (with the connecting sleeve rolled up) using a screwdriver for slotted screws (Fig. 3).

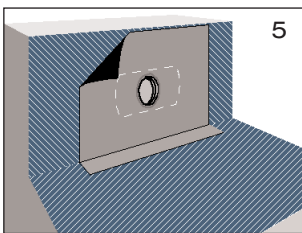
Note: The dimensions given under y in Table 2 must be maintained.



4 Spread out the factory-fitted **bituminous/EPDM compound** or **plastic** connecting sleeve, and attach to the substrate. Do not allow creases to form.

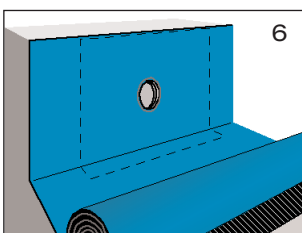
Note: The connecting sleeve must not be damaged.

Unroll the **bituminous** or **plastic** vapour barrier sheet. Make a circular cut (Fig. 4) in the vapour barrier sheet in the region of the sliding flange - hole diameter 150 mm.



5 A bitumen primer must be applied to the slab and wall when bituminous vapour barrier sheets are used (Fig. 5).

Plastic vapour barrier sheets must be attached to the substrate in accordance with the foil manufacturer's laying specifications.



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, then evenly press or roll in (Fig. 6).

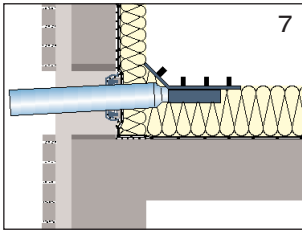
Continuation a).

Plastic vapour barrier sheet:

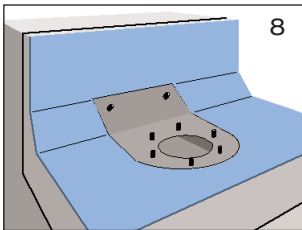
Clean the contact surfaces and make the connection between the connecting sleeve and the vapour barrier sheet in accordance with the laying instructions from the manufacturer of the roof sealing sheet.

Continuation b).

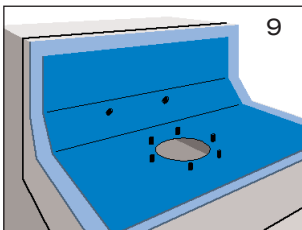
a.) Fitting the scupper drain with clamping flange when using bituminous roof sealing sheets



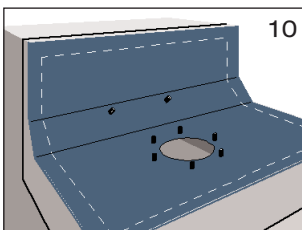
Adjust the length of the discharge pipe from the drain on site. Apply LORO-X lubricant to the gasket of the sliding flange and the discharge pipe of the drain. Cut out the thermal insulation panel in the area of the drain basin. Push the discharge pipe into the gasket of the sliding flange. Push the thermal insulation panel under the drain. Fasten both the drain and the thermal insulation panel (Fig. 7). Apply adequate quantities of thermal insulation to the discharge pipe in the area of the wall. Lay thermal insulation panels.



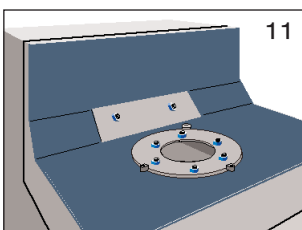
Unroll the first layer of the **roof sealing sheet** over the scupper drain, and make a cut-out in the region of the fixed flange (Fig. 8).



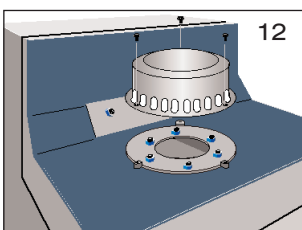
Cut the **connecting sheet** of the existing bituminous roof sealing sheet, with a size of 700 mm x 1000 mm to length on site (Fig. 9). Use a hole punch to make 14 mm diameter holes in the connecting sheet for the threaded bolts to pass through. The loose flange can be used as a template. Join the connecting sheet by welding to the first layer of the roof sealing sheet that has already been laid.



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. 10). 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.

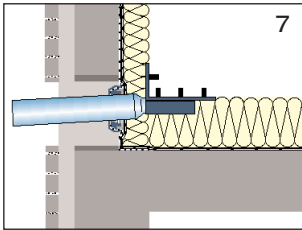


Clamp the roof sealing sheet with loose flange and the included hexagonal flange nuts (Fig. 11). Tighten the enclosed hexagonal flange nuts with an open-ended or ring spanner SW 15, starting at the flange side under 45°. Then tighten the remaining hexagonal flange nuts, working criss-cross. Tightening torque: 20 Nm.

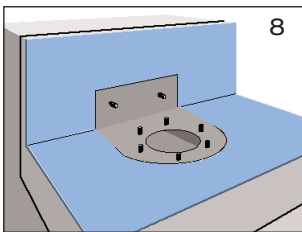


Screw the strainer (with gravity flow) or cover (with pressure flow) using the enclosed fastening screws to the loose flange (Fig. 12). Tighten the enclosed screws using an SW 10 open-ended or ring spanner.

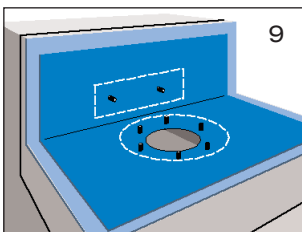
b.) Fitting the scupper drain with clamping flange when using plastic roof sealing sheets



Adjust the length of the discharge pipe from the drain on site. Apply LORO-X lubricant to the gasket of the sliding flange and the discharge pipe of the drain. Cut out the thermal insulation panel in the area of the drain basin. Push the discharge pipe into the gasket of the sliding flange. Push the thermal insulation panel under the drain. Fasten both the drain and the thermal insulation panel (Fig. 7). Apply adequate quantities of thermal insulation to the discharge pipe in the area of the wall. Lay thermal insulation panels.

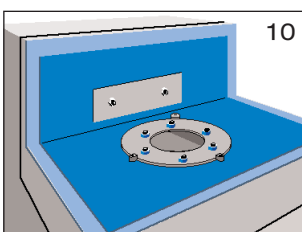


Unroll the **roof sealing sheet** over the scupper drain, and make a cut-out in the region of the fixed flange (Fig. 8).

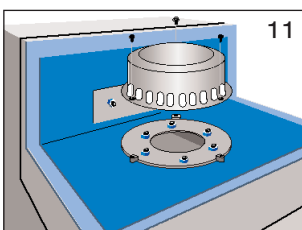


Cut the **connecting sheet** of the existing plastic roof sealing sheet, with a size of 700 mm x 1000 mm to length on site (Fig. 9). Use a hole punch to make 14 mm diameter holes in the connecting sheet for the threaded bolts to pass through. The loose flange can be used as a template. Insert the enclosed compression seals (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 loose flange, 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. Alternatively it is possible to request to compression seals, item no. 21810.100X (round) and item no. 21811.000X (rectangular) from the LOROWERK factory.



Clamp the connecting sheet with loose flange and the included screws (Fig. 10). Tighten the enclosed hexagonal flange nuts with an open-ended or ring spanner SW 15, starting at the flange side under 90°. Then tighten the remaining hexagonal flange nuts, working criss-cross. Tightening torque: 30 Nm.



Screw the strainer (with gravity flow) or cover (with pressure flow) using the enclosed fastening screws to the loose flange (Fig. 11). Tighten the enclosed screws using an SW 10 open-ended or ring spanner.

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