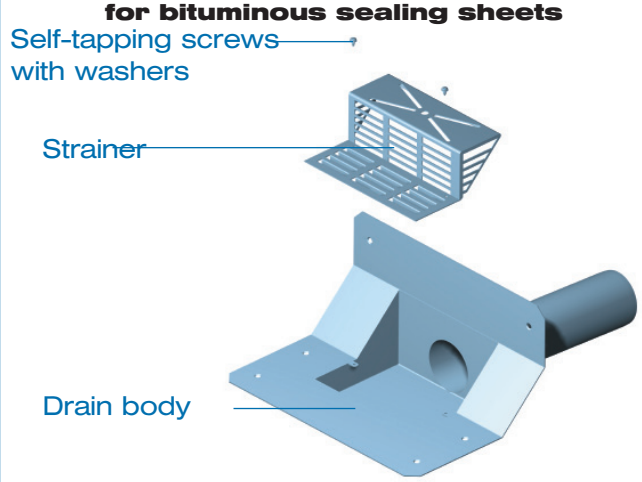
Installation instructions
LORO-X scupper direct drains
- with bonding flange
- with bonding flange, basin and lowered pipe

steel, hot-dip galvanised, for bituminous roof sealing sheets,
DN 70 and DN 100

LORO-X scupper direct drains consist of the drain body and the strainer.

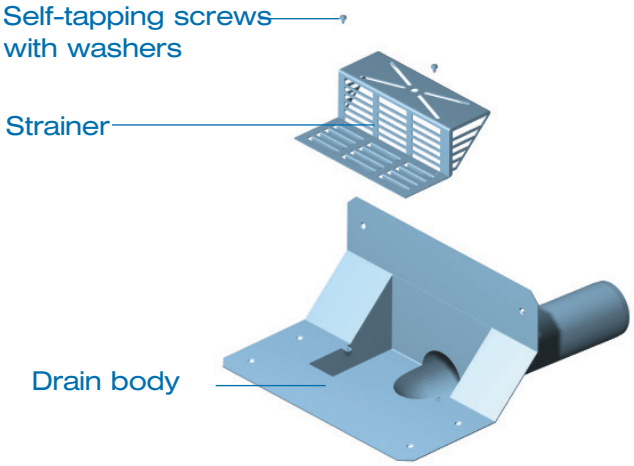
System overview

with bonding flange and basin for bituminous sealing sheets



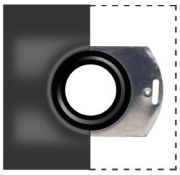
DN 70: 01330.070X
DN 100: 01330.100X

with bonding flange, basin and lowered pipe for bituminous sealing sheets



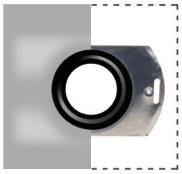
DN 100: 01350.100X

LORO sliding flange
for bonding the bituminous vapour barrier



13235.070X*
13235.100X

for bonding the plastic vapour barrier



13236.070X*
13236.100X

* DN 70, including sealing element

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 scupper 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!

Figure 1

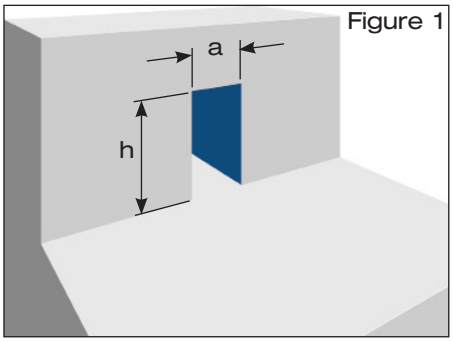


Figure 2

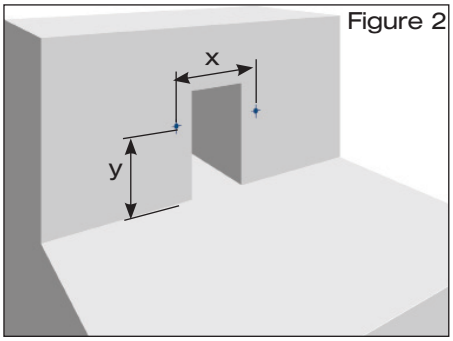


Figure 3

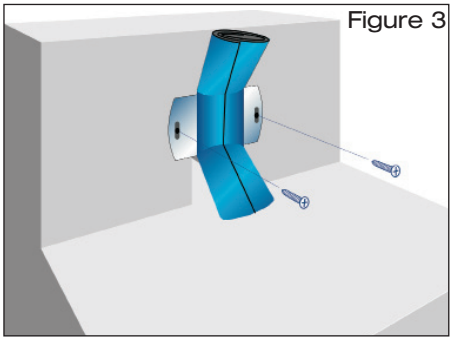


Figure 4

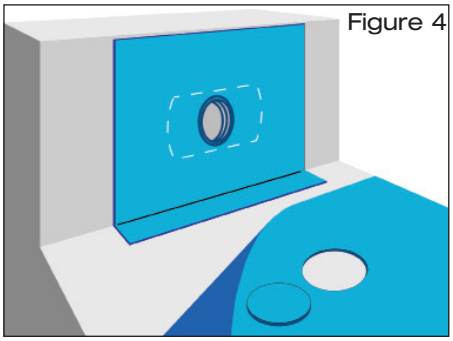
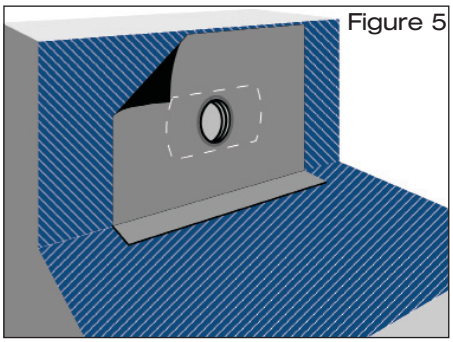


Figure 5



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**	**DN 100**
a	130	160
h (drain with basin)	w*+70	w*+100
h (drain with basin and lowered pipe)	-	w*+50

*w = thickness of the thermal insulation in mm

1.2 Make 10 mm diameter holes for the sliding flange with the connecting sleeve for connecting the vapour barrier according to the details specified in Table 2 and Table 3 (Fig. 2).

Table 2	**DN 70**	**DN 100**
x	196	238
y (drain with basin)	w*-17	w*-5

Table 3	**DN 100**
x	238
y (drain with basin and lowered pipe)	w*-53

*w = thickness of the thermal insulation in mm
Thermal insulation of 100 mm on the roof side on the parapet is assumed

1.3 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 and Table 3 must be maintained.

1.4 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. Roll back the vapour barrier sheet.

1.5 A bitumen primer must be applied to the floor slab and wall when bituminous vapour barrier sheets are used (Fig. 5).
High-polymer vapour barrier sheets must be attached to the substrate in accordance with the foil manufacturer‘s laying specifications.

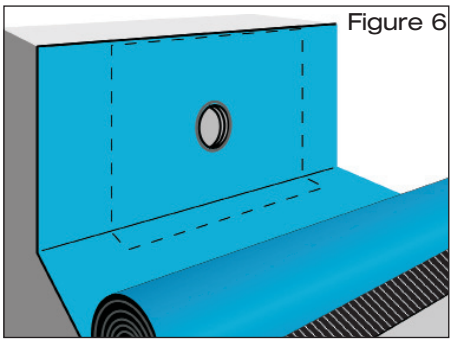


Figure 6

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. 6), 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.

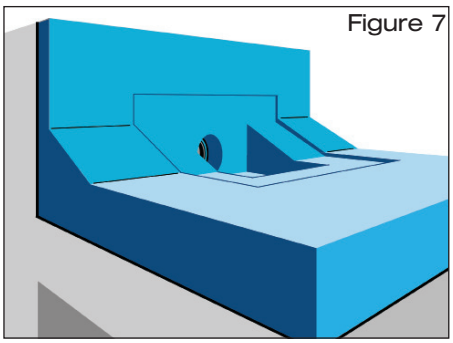


Figure 7

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

2.1 Lay thermal insulation panels.
Work the outlines of the roof drain into the thermal insulation (fig. 7).
According to the flat roof regulations, the fixed flange of the roof drain should be flush-mounted into the substrate.

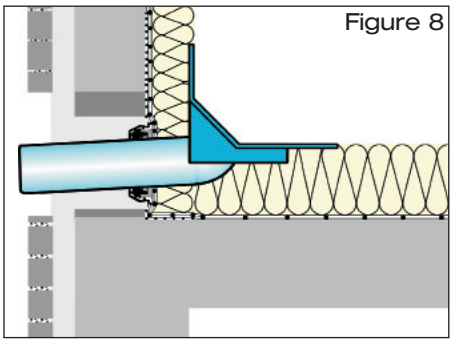


Figure 8

2.2 Trim surplus length off the discharge pipe of the roof drain appropriately for the circumstances at the site.
Apply sufficient LORO-X lubricant to the inside of the sealing element (in case of DN 70 sliding flange) or the clamping ring (in case of DN 100 sliding flange) and to the outside of the discharge pipe of the scupper drain.
Insert the discharge pipe of the roof drain into the sliding flange as far as its fitted position (Fig. 8). Close up any holes that have been made in the thermal insulation.
Apply adequate quantities of thermal insulation to the discharge pipe in the area of the wall and fix the roof drain.

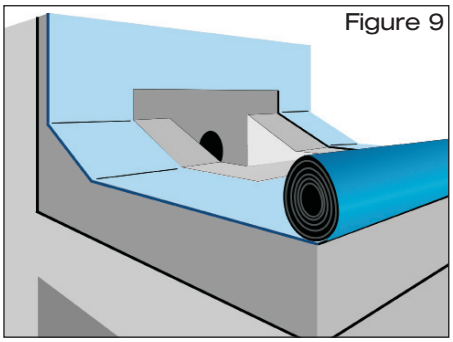


Figure 9

2.3 **Bitumen roof sealing sheet:**
Unroll the first layer of the roof sealing sheet over the scupper drain, and make a cut-out in the region of the bonding flange (Fig. 9).

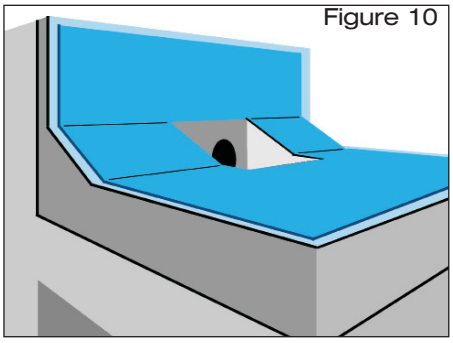


Figure 10

2.4 **Cut the connecting sheet on site to a size of approx. 700 mm x 1000 mm**
out of the existing bitumen roof sealing sheet (Fig. 10).
Apply bitumen primer to a width of 100 mm around the bonding flange.
Place the connecting sheet over the drain, and connect it to the bonding flange with the welding procedure.

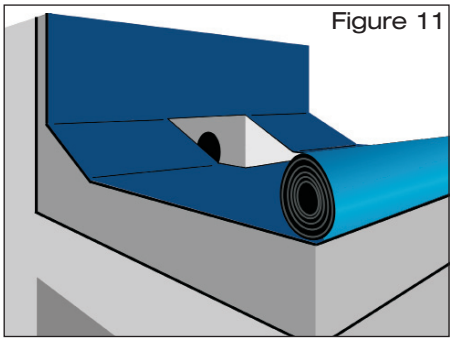


Figure 11

2.5 Unroll the second layer of the roof sealing sheet over the drain. Make cut-outs in the area of the scupper drain with dimensions according to the outer contours of the strainer opening (fig. 11). 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.

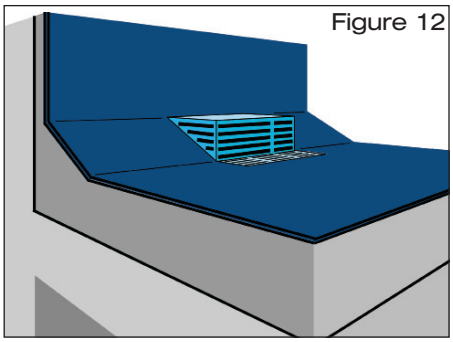


Figure 12

2.6 Fasten the strainer using the fastening materials provided (fig. 12).

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