

## Emergency overflow

### 1.1.6 Emergency overflow

According to the standards every flat roof should be able to cope with the 5 minute rainfall which occurs ones in a hundred years. A light construction (steel) roof should always have an emergency overflow system. With all other roofs it has to be checked if an emergency overflow system is necessary. This depends on the construction and shape of the roof and the expected rainfall. The emergency overflow should be able to drain the amount of rainfall exceeding the amount on which the standard system was dimensioned or even the maximum hundred-year storm (different per country).

In a standard situation an emergency overflow is a rectangular or round opening. This is for sure the most economical solution but unfortunately not always possible or desired. In many projects it is necessary to drain the extra rainfall with emergency overflow roof outlets which are placed higher than the roof surface. An emergency overflow system can be constructed in a number of ways:

- Spouts through the roof edge
- Traditional gravitational system
- Roof drainage siphonic system

In case of a siphonic emergency overflow system, the location of the emergency overflow roof outlets is important in order to prevent the intake of air. The location must be determined in collaboration between the builder and the designer of the emergency overflow system.

In addition, the roof outlets and the connected pipes of the emergency overflow system can be compartmentalised into smaller drainage areas, for which every collector has a separate outlet. The emergency overflow system may not be connected to the sewer. The distance between individual emergency overflow roof outlets may be no more than 30 m.

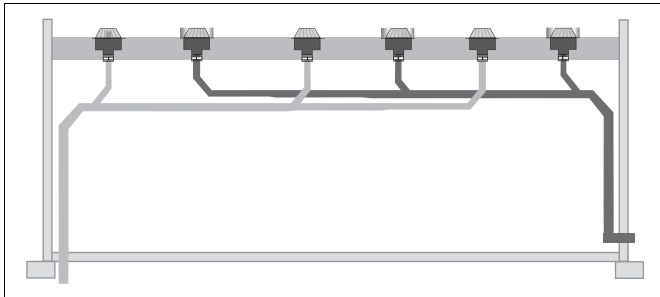


Illustration 1.4 Siphonic roof drainage system with siphonic emergency overflow (not connected to sewer)

### Overflow collar

Akatherm offers collars which can be combined with the standard Akasison roof outlets. This combination is an important element in the emergency overflow system. The collars are only used in combination with roof outlets in case of an overflow system.



Illustration 1.5 Overflow collar

The Akasison siphonic roof outlet DN70 overflow collar is 55 mm high and has a capacity of 15 l/s (capacity as defined in standard EN 1253).

### 10.1.8 Akasison emergency overflow

The Akasison emergency overflow is placed on the top roofing layer (top layer). Akatherm has 2 available versions.

Roofing	Version
Bitumen	PP
Other	PVC

Table 10.10 Versions of the Akasison emergency overflow

### Installation of the emergency overflow

The installation of the emergency overflow on the roof is the same for all versions. Only the attachment to the roofing will be described separately for each type of roofing.

#### 1 Remove the leaf guard from the roof outlet



Illustration 10.55 Removing the leaf guard

#### 2 Mounting the emergency overflow collar

The emergency overflow collar must be centred.

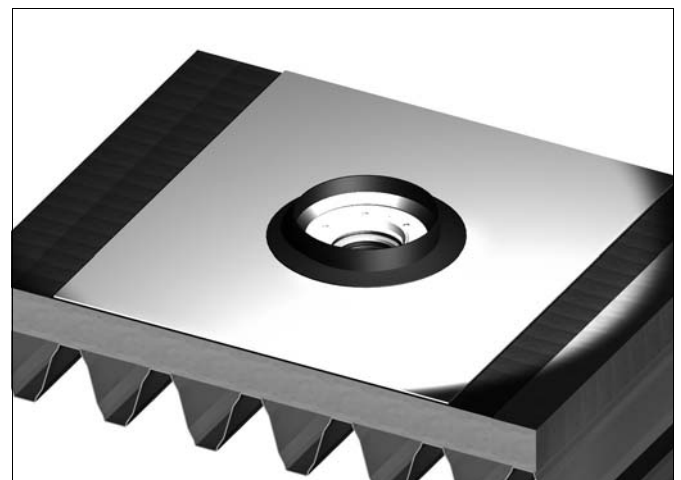


Illustration 10.56 Positioning the emergency overflow collar

### 3 Make an adhesive patch

The emergency overflow collar must be fastened to the top layer using a 600 x 600 mm square patch of roofing made from the same material as the top layer. Make a hole with a diameter of 296 mm in the middle of the patch and insert the emergency overflow collar through it.

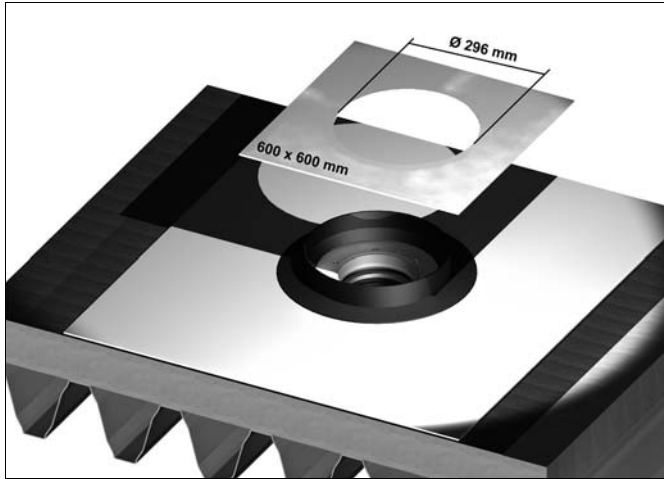


Illustration 10.57 Making an adhesive patch

### PVC roofing

#### 4a Attach the PVC patch

Fasten the PVC patch to the emergency overflow collar and to the top layer so that the emergency overflow collar is firmly held in place.



Illustration 10.58 Installing the PVC patch

### Bitumen roofing

#### 4a Attach the bitumen flap

Fasten the bitumen patch to the emergency overflow collar and to the top layer so that the emergency overflow collar is firmly held in place.

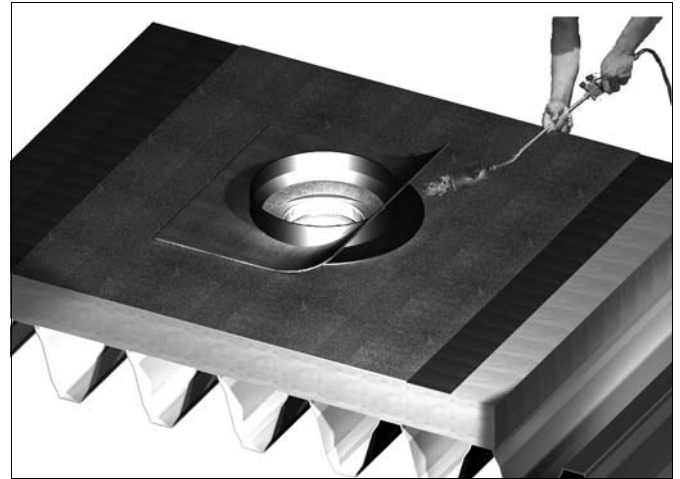


Illustration 10.59 Installing the bitumen patch

### 5 Place the leaf guard back in the roof outlet

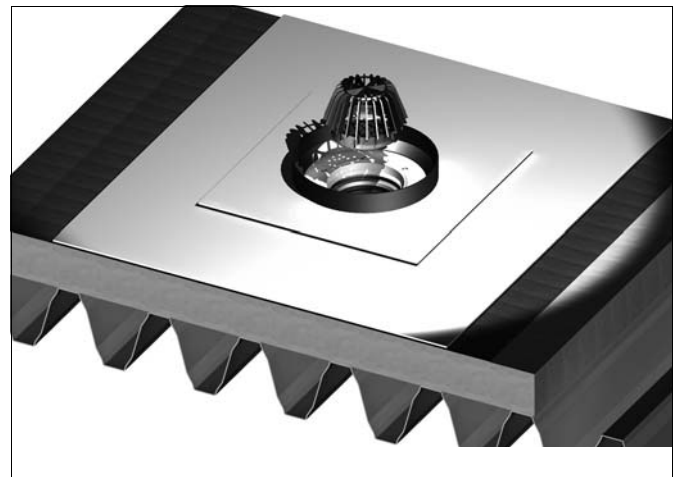


Illustration 10.60 Installing the leaf guard