

SYSTEM

STAL

GALECO

# Installation instructions

## 1. Notes before installation

- 1.1 The Galeco STAL system should not be installed when ambient temperature is lower than 5 °C.
- 1.2 Galeco STAL system components should be stored in their original collective packaging until the time of installation.
- 1.3 Components should not be stored in damp places. The plastic protective sheet should be removed from the gutters and pipes no later than 3 months from the date of purchase.
- 1.4 Gutters should be installed with the recommended slope of 3 mm per 1 running meter of gutter.
- 1.5 The gutter should be positioned in relation to the roof end, so that the theoretical line drawn as its extension passes over the outer edge of the gutter (see the example application in **(Fig. 1)** and that rainwater falls into the gutter. If due to the construction of the roof, the line passes below the outer edge of the gutter, snow fences should be installed on the roof to protect the gutter from damage caused by sliding or piled up snow.
- 1.6 The long components of the system should be cut with a hacksaw.
- 1.7 Recommended bracket spacing is 60 cm **(Fig. 2)**
- 1.8 At the outlet, connector and corner, the brackets should be installed up to a maximum of 15 cm **(Fig. 3)**

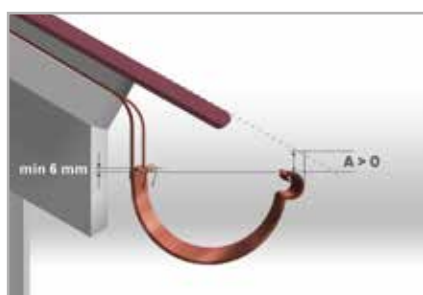


Fig. 1

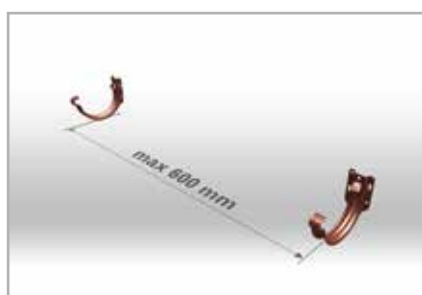


Fig. 2

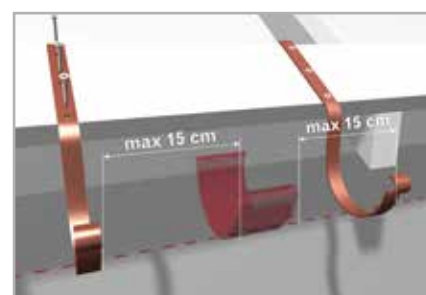
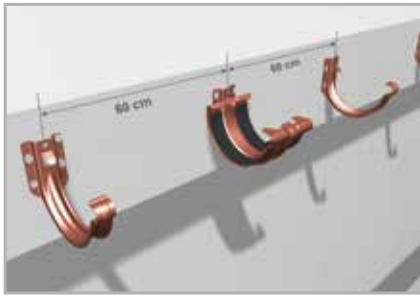
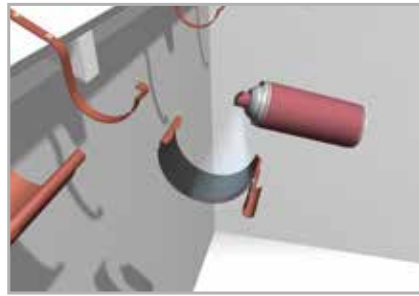


Fig. 3

- 1.9 In the Galeco STAL System, the connector on the bracket is mounted rigidly to the fascia board, stabilising the entire system **(Fig. 4)**
- 1.10 Before commencing installation of the Galeco STAL System, lubricate the fitting seals with a lubricant to ensure free gutter movement when temperature changes **(Fig. 5)**
- 1.11 Aggressive adhesives and acetic acid-based silicones are forbidden because they damage the outer organic coating of the steel. Any seals should be made with DEN BRAVEN Montagefix MS.
- 1.12 Gutters of the Galeco PVC System can be installed after completion of roofing work. In this way, the risk of damaging the gutter system during roof work is avoided.
- 1.13 To protect the system against damage caused by snow and ice, snow fences should be installed.
- 1.14 The manufacturer allows slight differences in shade or gloss within products of the same color due to different technological process used in the production of powder coated elements.



**Fig. 4**





**Fig. 5**

## 2. System design

Design the system taking into account the size of the system, the number of downpipes draining water from your roof (Table 1), the number of outlets, brackets, gutters

(1 gutter = 3 or 4 running meters), connectors, corners, end caps, pipes (1 pipe = 3 running meters ) and pipe fittings.

## Capacity table

Downpipe positioning	Gutter type/downpipe size				
	120/90	135/90	135/100	150/100	150/120
	60 m <sup>2</sup>	110 m <sup>2</sup>	110 m <sup>2</sup>	150 m <sup>2</sup>	150 m <sup>2</sup>
	120 m <sup>2</sup>	220 m <sup>2</sup>	220 m <sup>2</sup>	300 m <sup>2</sup>	300 m <sup>2</sup>

### 3. Gutter installation

- 3.1 Determine the location of the outlet. Remember, the outlet should always be the lowest point of the gutter system **(Fig. 6)**
- 3.2 Determine the position and install one outermost bracket on each side of the outlet - these brackets are located in the furthest and the highest point in relation to the outlet level **(Fig. 7)**
- 3.3 Stretch a string between the outermost brackets - its slope towards the outlet should be about 30 mm per 10 m **(Fig. 8, 9)**
- 3.4 Following the level of the string, determine positions and install the remaining brackets with spacing of 60 cm **(Fig. 10)**
- 3.5 If you use a connector on the bracket to connect the gutters, install it at a distance of 60 cm from adjacent brackets **(Fig. 4)**
- 3.6 In the place where the outlet is to be installed, cut a round hole in the bottom of the gutter with a diameter equal to the diameter of the downpipe. Bend the edges of the hole according to the direction of rainwater flow and secure them with Galeco touch-up paint **(Fig. 11, 12, 13)**
- 3.7 Galeco STAL sealed corners should be mounted directly with the gutter using a clamp or a key connection system **(Fig.14, 15, 16, 17)**

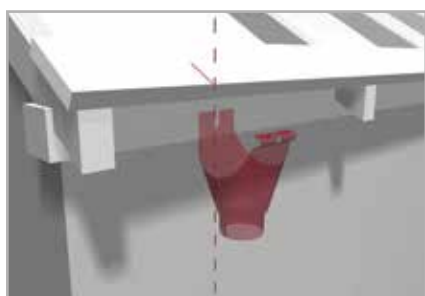


Fig. 6



Fig. 7



Fig. 8

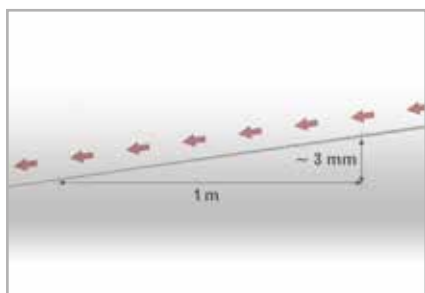


Fig. 9

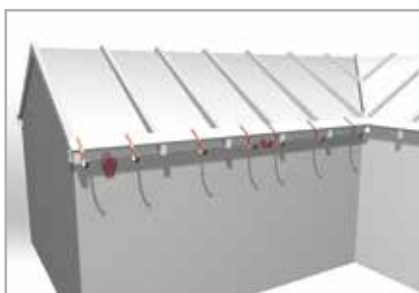


Fig. 10

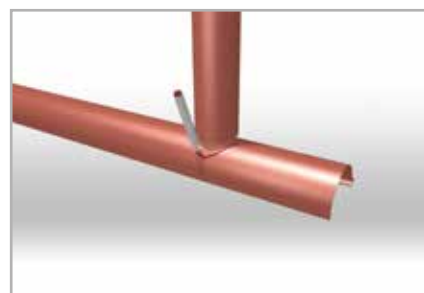


Fig. 11



Fig. 12

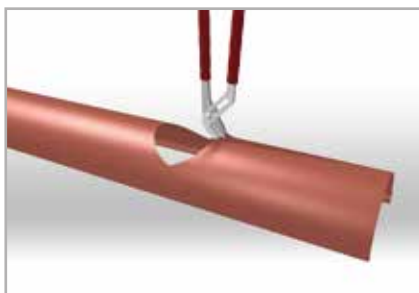


Fig. 13

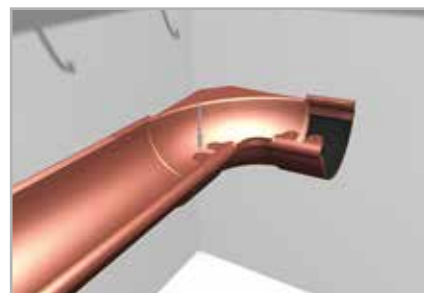


Fig. 14

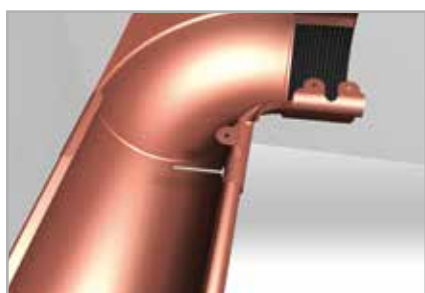


Fig. 15

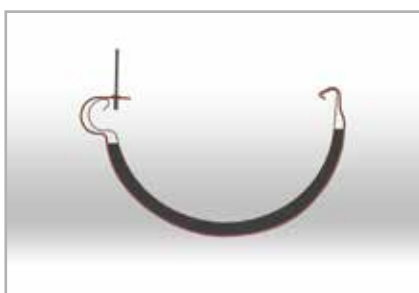


Fig. 16

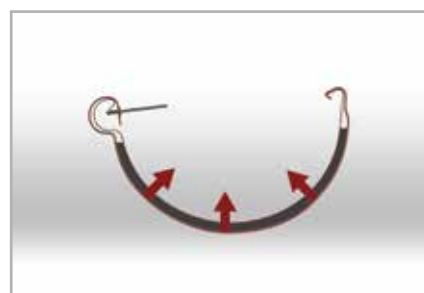
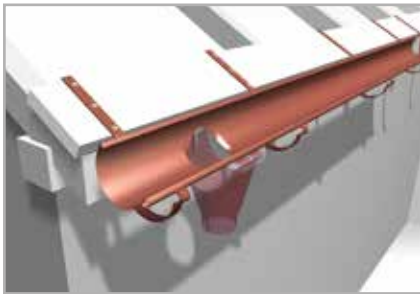


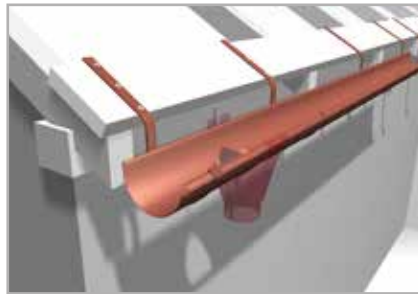
Fig. 17

- 3.8 Install the gutters by placing them in the rear and then in the front flange if fascia brackets are used, or in the front and then in the rear flange if rafter brackets are used **(Fig. 18, 19)**
- 3.9 Bend the rafter bracket plates **(Fig. 20)**
- 3.10 Install a clamp connector in places where two gutters are to be joined together **(Fig. 21, 22, 23, 24)**

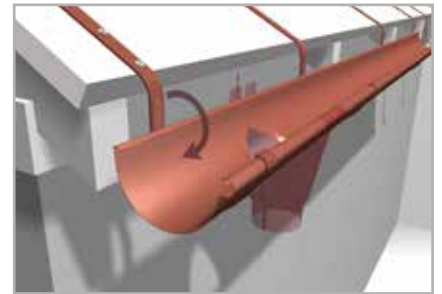
- 3.11 The other way to connect the gutters is to install the connector on the bracket **(Fig. 4, 25, 26, 27)**
- 3.12 Insert the outlet in the hole cut in the gutter and bend its back plates **(Fig. 28)**
- 3.13 Insert sealed end caps on the ends of the gutters **(Fig. 29, 30)**



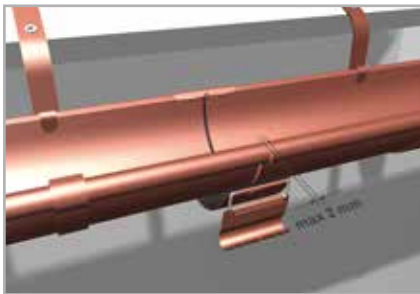
**Fig. 18**



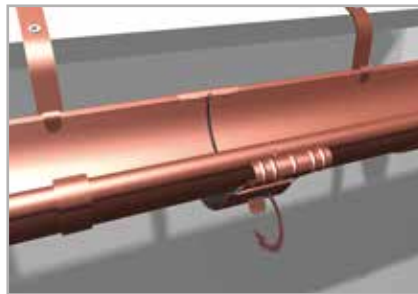
**Fig. 19**



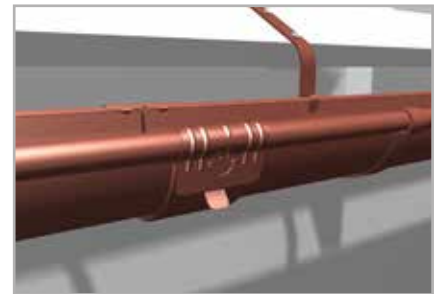
**Fig. 20**



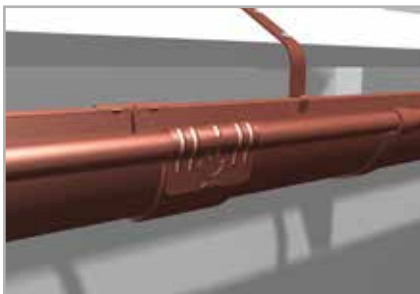
**Fig. 21**



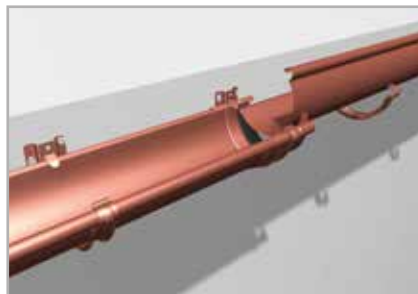
**Fig. 22**



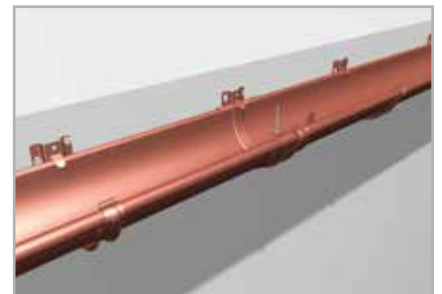
**Fig. 23**



**Fig. 24**



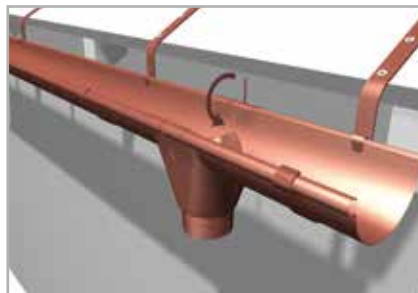
**Fig. 25**



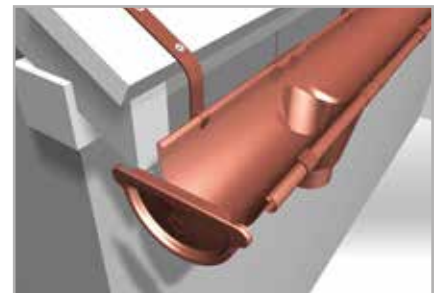
**Fig. 26**



**Fig. 27**



**Fig. 28**



**Fig. 29**



**Fig. 30**

## 4. Connection of the outlet with the downpipe

4.1 If the roof is equipped with eaves, connect the outlet to the downpipe using two elbows and a section of the downpipe cut to the required length (**Fig. 31**).



Fig. 31

4.2 If the roof is not equipped with eaves, connect the drain to the downpipe using a sleeve.

## 5. Downpipe installation

5.1 Fix the wall plugs in the façade. The length of the dowels should allow for the building insulation thickness. Screw the clamps onto the wall plugs. The maximum distance between subsequent clamps is 1.8 m (**Fig. 32**).

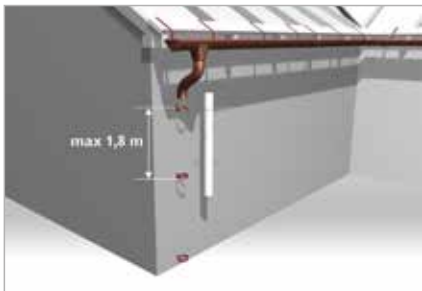


Fig. 32

5.2 Insert the downpipes in the clamps and connect them with a sleeve (**Fig. 33**).

5.3 Tighten the clamps on the downpipe but not too tight.



Fig. 33

## 6. Completion of Installation

6.1 Drainage to the sewage system. Install a standard sedimentation tank in the ground, under the downpipe. Join its bottom outlet with a flexible elbow connected to the underground sewer pipes (**Fig. 34**).

Cut a hole in the standard sediment tank flap. The hole diameter should match the outer diameter of the downpipe used (**Fig. 35, 36**).

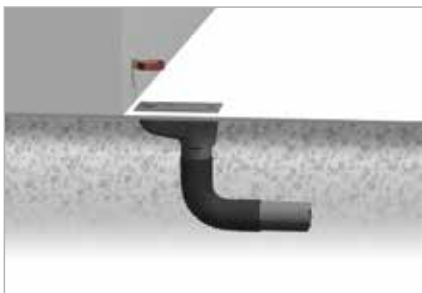


Fig. 34

Insert the downpipe into the hole.

6.2 Drainage to the ground. At the end of the downpipe, install a pipe clamp elbow or a standard elbow. The minimum distance between the elbow and the ground is 20 cm.

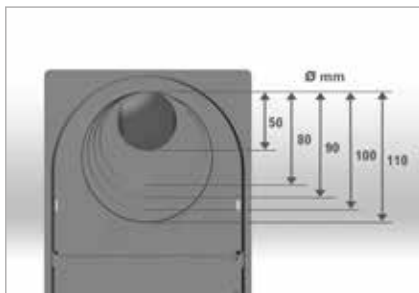


Fig. 35

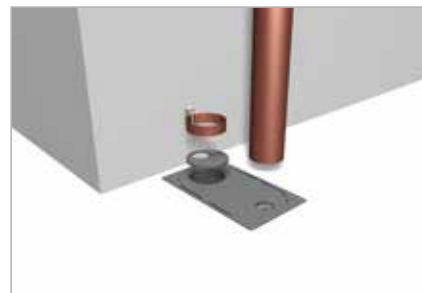


Fig. 36

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