

SYSTEM PVC² GALECO

Installation instructions

1. Notes before installation

- 1.1 The manufacturer provides a 15-year warranty on the mechanical durability of the system and a 5-year warranty on discolouration, provided that the system is installed in accordance with the following guidelines.
- 1.2 Store the Galeco PVC² system components in the original packaging until they are installed. Components must be stored in shady place and in accordance with the manufacturer's other instructions.
- 1.3 Galeco PVC² must not be installed if the ambient temperature is lower than + 5° C.
- 1.4 When cutting and assembling system elements, use appropriate tools, so that the material the elements are made of does not lose its physical and chemical properties.
- 1.5 The Galeco PVC² System should not be installed on sunny cornices. High temperatures occurring in these places may cause deformations of the components as temperature may exceed the thermal resistance of the material the system components are made of.
- 1.6 The material the Galeco PVC² System is made of is characterized by typical linear PVC elongation. When installing, make sure that the ends of the gutters and pipes can move freely to allow for thermal expansion. Therefore, set the end of the gutter or pipe in the connector, drain, corners, elbow and socket in line with the auxiliary lines or with appropriate movement joint. **(Fig. 1, Fig. 2)**



Fig. 1



Fig. 2

- 1.7 Before installing Galeco PVC² System components, apply a lubricant offered by Galeco on all seals, which will facilitate joining the components together. Thanks to this, the gutter will freely expand in the fittings as a result of temperature changes, and the joints will stay tight (**Fig. 3**).
- 1.8 All connectors, corners, end caps of the Galeco PVC System² have sealing inserts included (**Fig. 4**). These are necessary to ensure 100% tightness of individual system components.
- 1.9 Position the gutter in relation to the upper plane of the roof, so that sliding snow does not cause damage and that the water flowing from the roof is drained smoothly to the gutter (**Fig. 5**).
- 1.10 When installing on PCV fascia brackets, Galeco PVC² gutter system components can be fixed on the brackets after roofing installation is complete. In this way, the risk of damaging the gutter system during roof work is avoided.
- 1.11 To protect the system against damage caused by snow and ice, snow fences should be installed.
- 1.12 In order to ensure long-term operation, carry out inspections of the gutter system at least once a year. In particular remove any dirt from the gutter and check the downpipes for any obstruction.



Fig. 3



Fig. 4

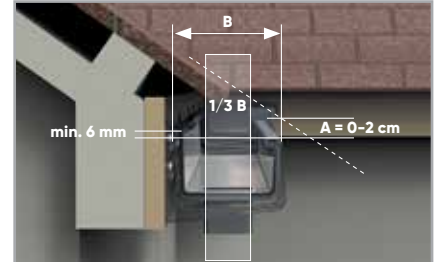




Fig. 5

2. System design

After comparing the table data with the surface to be drained, choose a suitable number of downpipes for a given building. The data in the table specify the maximum roof surface from

which a single downpipe of the system can drain water, with the downpipe situated at the corner or on the wall.

Capacity table

Downpipe positioning	System efficiency*
	90 m ²
	180 m ²

3. Gutter installation

- 3.1 Select the method of attaching the gutter to the eaves, i.e. the type of brackets used to install the system. There are two ways to install the the Galeco PVC² System on the roof:
 - to the fascia board - using PVC fascia brackets(**Fig. 6**);
 - on the roof slope - using rafter brackets made of steel bent during assembly and screwed to the roof (**Fig. 7**).
- 3.2 In the case of fascia mounting, all elements connecting the subsequent gutters, that is connector, corner and outlet, should be screwed permanently to the fascia board. This method of installation guarantees the best operation of the system.
- 3.3 Design the position of the outlet. Remember, the outlet should always be the lowest point of the gutter system (**Fig. 8**).



Fig. 6

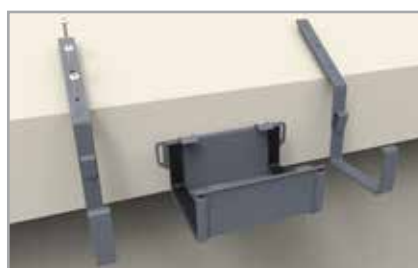


Fig. 7



Fig. 8

- 3.4 Design the slopes so that the straight line connecting the bracket installed farthest from the outlet has a slope to the outlet of no less than 10mm per 10 running meters (**Fig.9**).
- 3.5 Determine the position and install one outermost bracket on each side of the outlet - these brackets are to be located in the furthest and the highest point in relation to the outlet level (**Fig. 10**)
- 3.6 Stretch a string or mark a slope line using a laser device between the outermost bracket and the outlet, at the level of the bottom of the gutter. (**Fig. 11**).
- 3.7 Following the marked line, set the positions of the other brackets and install with 60 cm spacing (**Fig. 12**), so that after installing components like connector, corner, end cap and outlet, the bracket will be located not further than 15 cm from the end of the connecting component (**Fig. 13, Fig. 14**)
- 3.8 In locations where two gutters are connected in one line, install the connector at such a height that after locking the gutter its bottom surface presses the connecting component seal all over the entire width. Before locking the gutter in the component, apply the sliding spray offered by Galeco on the seals (**Fig. 15**).
- 3.9 In locations where two gutters are joined at an angle of 90 degrees, install a corner (internal, external) at such a height that after locking the gutter, its bottom surface presses against the connecting component seal all over the entire width. Before locking the gutter in the component, apply the slide spray offered by Galeco to the seals.
- 3.10 The Galeco PVC² System allows you to suspend the outlet under the gutter or install it as an expansion joint (with a connector). When installing the outlet as an expansion joint, follow the installation instructions given in point 3.8, maintaining a distance between the gutters which enables drainage of water to the downpipe.
- 3.11 When installing the outlet as a suspended component, follow the instructions below:
- mark the axis of the downpipe on the gutter (**Fig. 16**)
 - hold the outlet near the gutter and draw the inner shape of the pipe on the gutter (**Fig. 17**);
 - enlarge the drawn rectangle up to 0.5-1 cm in each direction;
 - cut the hole (**Fig. 18**);
 - apply Galeco slide spray to the outlet seals and fasten the outlet on the gutter;

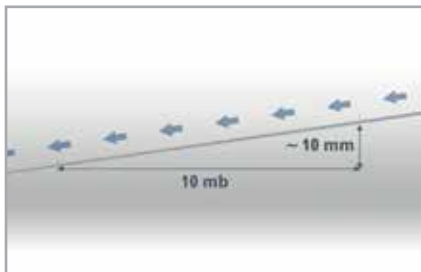


Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13



Fig. 14



Fig. 15

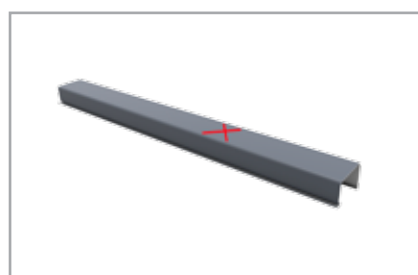


Fig. 16

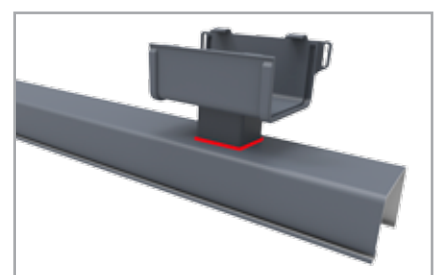


Fig. 17

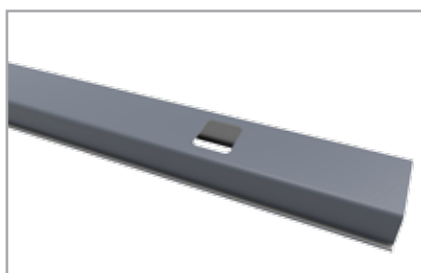


Fig. 18

- 3.12 Install the gutters in the brackets and fitting by inserting them into the rear and then into the front flanges of the fittings **(Fig. 19, 20)**
- 3.13 When mounting on rafter brackets, after inserting the gutter and locking it at the front, bend down the rear toe of the bracket.
- 3.14 Before installing the gutter in the brackets, install the end cap on its ends. Before installing the end cap, spray the seals with the slide spray offered by Galeco **(Fig. 21)**

- 3.15 After installing the gutters, install sealing inserts where the gutter is joined with the connector, corner and end cap. The insert should be installed in the place where the gutter surface touches the fitting seal. The number of inserts needed: 1 pc/end cap, 2 pcs/connector, 2 pcs/corner **(Fig. 22, 23)**



Fig. 19



Fig. 20



Fig. 21



Fig. 22



Fig. 23

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. 24)**. Fix the upper elbow permanently to the drain (adhesive, screw). In this way you will avoid the possibility of it slipping out of the outlet.
- 4.2 If the roof is not equipped with eaves, connect the drain to the downpipe using a sleeve.

5. Downpipe installation

- 5.1 Design the spacing of the downpipe clamps. Recommended clamp spacing is 1.8 m **(Fig. 25)**
- 5.2 Design the highest clamp directly under the highest elbow or sleeve (see point 4.1, 4.2) **(Fig. 25)**.
- 5.3 Select the wall plug length taking into account the type of load-carrying wall and thickness of the building insulation. The wall plug length should not be less than the thickness of external insulation plus a minimum of 8 cm.
- 5.4 Install the wall plugs and screw on the clamps.



Fig. 24



Fig. 25

- 5.5 Insert the downpipes in the clamps and connect them with a sleeve (**Fig. 27, 23**)
- 5.6 When installing downpipes on high floors, provide expansion joints of 2 cm on the sleeves to allow free movement of the pipe (**Fig. 28**).
- 5.7 Tighten the pipe clamps but not too tight, allowing the pipe to move freely in response to temperature change.



Fig. 26



Fig. 27



Fig. 28

6. Completion of Installation

- 6.1 To connect the downpipe to the rainwater drainage 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. Cut a 110 mm hole in the standard sediment tank flap (the hole diameter is marked on the tank flap), and then put the flap prepared for the PVC² pipe on the tank. (**Fig. 29, 30, 31**).
- 6.2 When draining rainwater to the ground, attach an elbow to the end of the downpipe. We recommend connecting the elbow to the pipe permanently using PVC glue or a screw. The minimum distance between the elbow and the ground is 20 cm.



Fig. 29



Fig. 30



Fig. 31

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