



Simple flowmeter to measure roof drainage

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A simple flowmeter is designed to measure the drainage of a roof. The flowmeter exists of a vertical PVC-pipe, perforated with small circular orifices, and a pressure meter. The device can easily be connected to the downspout of a roof. The perforations in the pipe are situated at a fixed distance of each other and follow Torricelli's law. The discharge depends on the water height in the pipe which is measured with the pressure meter. A clear Q-h relation was found by calibration. The flowmeter was tested in the laboratory and in the field. Results will be presented. With this flowmeter complete runoff hydrographs can be measured. The flowmeter can easily be used in urban areas to get more insight in the rainfall runoff relation of roofs.

The flowmeter will be placed on several locations on the campus of Delft University of Technology. Within the framework of Climate City Campus students will use the information of the flowmeter to map the water fluxes on the campus.

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