

# Development of a truss mount *with focus on ease of installation*

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**During this thesis a mount for surveillance cameras was developed. The mount was designed to make the process of installing the mount as easy as possible and was aimed to work with the most common truss structures. Making the installation process easy is important since it is performed at high altitude in rough conditions. This was done by dividing the installation into steps that allow the installer to let go of the mount and pause in between.**

Imagine yourself being 15 m above the ground in a skylift. You are in an industrial harbour. Your job is to install a new Axis surveillance camera in a truss tower. At this height, the wind makes both the lift and the truss sway. The camera is heavy and needs to be installed on an arm that is supposed to be fastened on the truss. Since Axis does not sell any mounts that can be fastened on truss structures you have to make your own. You have to measure the truss, drive to a hardware store to buy material and then you have to build and assemble all the material into something that could work. Large sheet metal plates, clamps and screws might do the job.

The newly designed truss mount concept at Axis does not consist of any of that. Instead it is a flexible, easy to use mount, that easily can be clamped around the pole of the truss and fixated around one

of its diagonals. It works with the most common trusses consisting of round poles that vary in diameter. No need to measure your truss before installing your new Axis camera and no need to build your own mount.

The new installation process is divided into steps and affords pausing in between the steps. This is done by the use of a snap mechanism, a mechanism that allows a bracket to be pushed on to screws that does not allow the bracket to be pulled out again. Without the use of tools, you can secure the mount for its own weight allowing you to let go of the mount and pause. Before an arm and camera is attached the mount is tightened with two nuts on the back of the screws.

The mount is designed to work beautifully with the more popular Axis arm and cameras, usually used in environments where truss installations are being made.

By using a human-centered design process the mount has been designed with the installers and their everyday environment in mind. A rigorous research and a number of different user tests have been conducted to come up with the final concept that in a near future will be further developed by Axis to be able to hit the market.

