References

Reservoir tank for unordinary village of Tuuri



Uponor involvement

- Two 100-m3 Weholite reservoir tanks and a pressure boosting station with relevant anchoring
- Installation

Securing safe water distribution

In an ordinary village with less than 1,000 residents, a reservoir tank would normally be unnecessary, but Tuuri in Southern Ostrobothnia in Western Finland is not an ordinary village. The village tourist attraction draws visitors up to six million visitors annually. This needs special solution for potable water delivery.

Project Facts:

Location	Completion
Alavus, Finland	2021
Building Type	Product systems
Municipal	Potable water

The village of Tuuri is part of the town of Alavus, and the attraction of the village is Veljekset Keskinen Oy's Keskisen Kyläkauppa, a 'village store' that has grown over the decades from an actual village store to Finland's biggest department store and the most popular tourist destination of the country with around six million visitors annually. A number of other services have also been built around the Kyläkauppa, including a hotel, a caravan site with 500 caravan pitches, several restaurants, a Moomin playground and a miniature golf course. In summer, tourists are attracted by a funfair and numerous other events – from dog shows to rock festivals. For several years, the active life in Tuuri has also been the focal point of a popular reality TV show.

Water consumption doubles in the summer

From the viewpoint of the Alavus water utility, the growth of the Kyläkauppa area in Tuuri has meant repeated measuring reviews on their water supply network. The water comes from two intake facilities, which are located about 10 and 15 kilometres from the village. If one line would fail, the other line could supply enough water – provided, that they were lucky enough. If such failure took place in the middle of the summer, a shortage of water would be a very likely scenario.

“Summer brings big crowds to the area, and the water consumption can be as high as 300 cubic metres per day. On the other hand, 130 cubic metres per day is more than enough in winter”, says Plant Manager Timo Seppä from the Alavus water utility.

“The Tuuri area has grown rapidly over the last ten years and continues to grow. We decided to install two 100-cubic-metre low water tanks on the area to balance consumption peaks and help in preparing for potential failures.”

Ready from the factory

Before making the decision to purchase the low water tanks, the water utility studied other options. These included, for example, increasing the size of the supply lines, but soon it was clear that storing the water is the way to go. Seppä had cost estimates calculated for both concrete and plastic tanks.

“It turned out that plastic is more cost-effective than concrete. Following a competitive tendering, Uponor won the contract, and they built the tanks and a pressure boosting station ready for installation at their factory.”
Both the tanks and the pressure boosting station were made from Weholite polyethylene pipe with an inner diameter of 2.4 metres. The length of each tank is 23.4 metres.

Straight into the trench

Uponor delivered the products to the site in Tuuri in September 2020. The Alavus water utility had commissioned the necessary excavation work and the construction of foundations, on which the tanks and the pressure boosting station were lifted and anchored by Uponor’s installation team. After the anchoring was completed, the water utility connected the tanks to the pressure boosting station and water supply network and filled the trench. Now the only things that are visible above ground are three manhole covers and two control cabinets for the electrical and automation systems.

“Installation was quick and smooth. The inlet and outlet fittings were exactly where they supposed to be, so it was easy for us to fit the pipes and valves between them.”

During the winter, the water utility’s own team continued to install the electrical and automation systems, and a decision was made to postpone commissioning so that it will take place closer to the summer, the high season of Tuuri. By that time, the installation of the remote monitoring of the tanks and the pressure boosting station will also be completed.

Reservoir tank installation





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