



better together

CASE HISTORY

Facing down flood risk with Zenit Uniqa pumps

OUR PARTNER AND LONG-TIME DISTRIBUTOR IN THE UK, T-T PUMPS, SUPPLIED THE NEW PUMPING SYSTEM TO LOWESTOFT'S FLOOD RISK MANAGEMENT PROJECT.

Situation

Coastal flooding can be a devastating event. The tidal flooding in 1953 and more recently in 2013 that saw 160 properties damaged by an extreme rain event and again in 2015 prompted the town of Lowestoft in the UK to take action to reinforce its flood defences.

After consultation with residents, a new pumping station was considered the most practical option to protect properties and businesses within the flood risk area at Velda Close in Suffolk. As the pumping station would be an essential component of the long-term flood defence strategy, it was vital that suppliers had experience in water management and the capacity to supply the proper pumps to be used by the project.

T-T Pumps, Zenit long-time partner in the UK, was the choice made by the construction contractors.

Solution

The actual specification of the pumps that would be used at Velda Close included a four-pump layout with each pump capable of pumping up to 27.5% of the maximum discharge at the maximum design head.

In addition, the pumping arrangement must also be capable of pumping a stepless range of flows from about 40 litres per second to maximum discharge of 320 l/s.

The pumping station contains four pumps and a unique control system on site, as the flows that enter the pumping station vary. Therefore, the station may only require one pump to operate, or up to all four pumps in operation, should the inflow determine this.

The task was to select pumps that would handle a combination of the minimum flow rate and the maximum flow rate required, plus all flows in-between, to design a control system, which would allow the pumps to react subject to demand.

Benefits

The pump chosen for the Velda Close flood risk management project was the Zenit UNIQA model ZUG OC200B 7.5/6AD. This was the preferred choice based upon the quality, reliability, and efficiency standards required. Zenit Uniqa perfectly handles the combination of the minimum and maximum flow rate required, as for all the flows in-between.

Indeed, each Uniqa model comprises a motor-hydraulics combination chosen to provide optimal performance at the duty point, low energy use and high reliability, to fit better to the application requirements.

The channel impeller (ZUG OC) chosen offers a large free passage, essential in anti-flooding applications, and it is protected by the Anti-Clogging System (ACS) that prevents clogging even with highly fouled liquids, so that hydraulics are clogging-proof. The anti-flooding requirements were well satisfied by the generous discharge of Uniqa hydraulic.

Last but not least, the Zenit Uniqa pump IE3 6-pole motor provides maximum efficiency for the new energy consumption standard requirements.

With T-T Pumps' expertise, and Zenit Uniqa pumps' reliability and efficiency, the residents of Lowestoft can look forward to a safe future with a massively reduced risk of tidal flooding.



View of part of the project plant.



The Uniqa pumping station.

Customer	Valda Close project				
Company Profile	Flood risk management				
Location	Lowestoft (Suffolk)	Country	United Kingdom	Area	Europe
Application	Rainwater drainage				
Installed Products	ZUG OC200B 7.5/6AD				
Date	2021				