

Fact Sheet

VLT® AQUA Drive deragging feature keeps your wastewater pumps clean



The deragging feature has been developed specifically for the VLT® AQUA Drive.

Wastewater from households and industry contains particles and fibres that are not removed by the screen filters. The VLT® AQUA Drive deragging feature removes clogs to protect the pump and reduce maintenance.

Clogged impellers in wastewater pumps can be a permanent and serious problem. Over time, fibres and particles will build up on the impeller vanes, leading to poor efficiency and extensive wear of the pump. Clogging reduces the capacity of the pump and risks blocking the pump, resulting in downtime for maintenance and ultimately a shorter lifetime expectancy.

Avoid costly maintenance

Manually cleaning the pump is time consuming, as maintenance staff must travel to the site to lift, clean and reinstall the pump; a process that often needs special equipment.

With Deragging, Danfoss has added an innovative pump cleaning and protection feature to the VLT® AQUA Drive, which ensures the preservation of the maximum pump capacity by minimizing deposits on the impeller. At the same time the Deragging feature can be optimized for the system by configuring the delay times, the speed and the energy monitoring system.

Proactive Deragging

With Deragging the pump cleaning can be done proactively. During the commissioning process, it can be specified when the system is to respond: At start and/or stop, at a certain time, via digital input, via serial communications or by using the Smart Logic Controller.

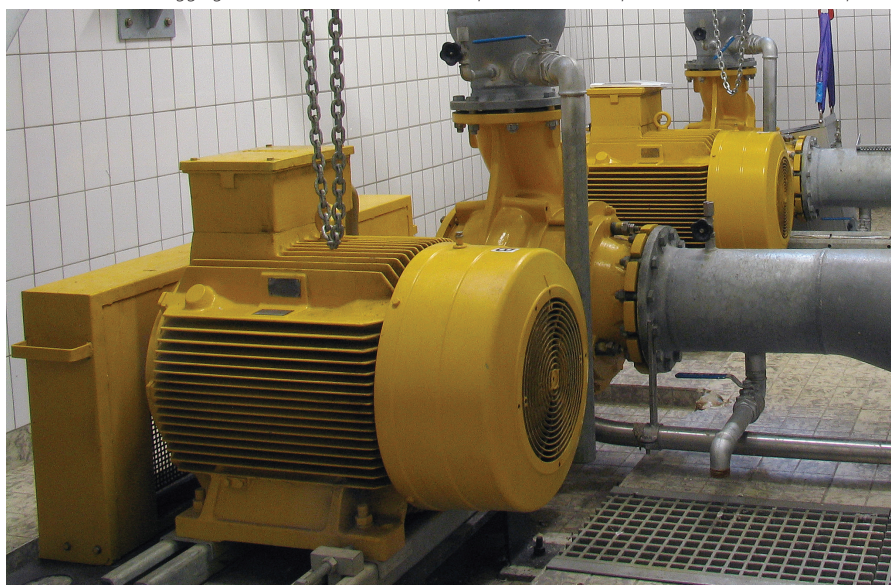
For easy programming, all parameters are arranged in one group.

The intelligent feature is flexible and can be adapted to the individual requirements of each application.

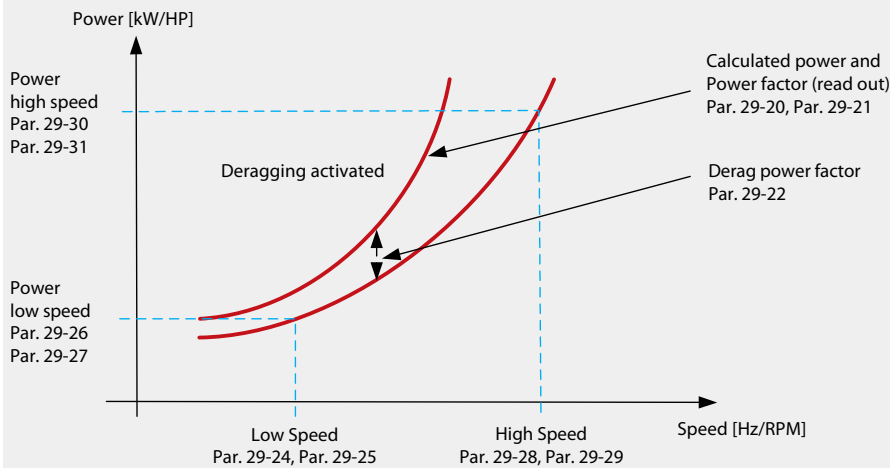
Reduce

maintenance costs
with regular de-
ragging; a unique
feature that increases
pump lifetime and
efficiency.

*Clogging is a common problem, especially in wastewater pumps.
The deragging feature of the VLT® AQUA Drive provides effective protection and maximum uptime.*



Intelligent Energy Monitoring



Reactive Deragging

During operation, an energy monitoring system initiates a cleaning cycle when pumping consumes more energy, as it normally should do. At this stage, the pump already starts to with getting clogged - what proactive deragging can prevent.

With the Danfoss VLT® AQUA Drive, proactive and reactive deragging can be combined. Therefore, we recommend to program the proactive Deragging, and the reactive deragging to be carried out automatically between the proactive deragging as needed.

The Cleaning Pattern

The new deragging feature of the VLT® AQUA Drive cleans the impeller by cyclic operation of the pump in both directions. The user can specify how often, how fast and how long the impeller rotates. The graphical display of the frequency indicates the status of the deragging mode.

Please note that not every type of pump can operate in the opposite direction. Operators should always consult the pump manufacturer before using this function.

Deragging Cycle

