Guaranteed economic advantages for the entire service life of your plant

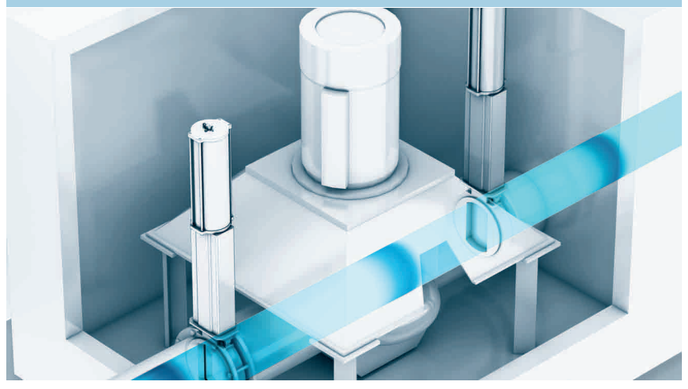
Maybe you will like this too

The Sindelfingen wastewater treatment plant is designed to provide a treatment capacity for a population of 250,000 people. In the pumping station wastewater is pumped from the primary sedimentation basin into the biological treatment process.

Operating specifications:	6 pumps, up to 5 pumps in continuous operation, 1 redundant. Pipe width: DN 350
Pump specifications:	90 kW rated output, 500 l/s delivery rate with a delivery head of 8 – 9 m.
Energy savings:	89,469 kWh per year
Cost savings:	11,594 EUR per year
Investment:	25,000 EUR

Festo's automation solution enables the Sindelfingen wastewater treatment plant to realise a total saving of 2% on its annual energy costs and a ROI in 7 months.*

* Investment conventional solution without any energy saving potential = 18.000 EUR
Investment solution of Festo with energy saving potential = 25.000 EUR



Nobody has money to throw away these days! So don't wait, get started now

Good references are the best recommendation

Shutting off, opening, closing, controlling: complex process sequences require an intelligent approach and reliable actuators. Festo pneumatic components are used on a daily basis for heavy-duty operation at more than 100 water treatment plants and more than 200 wastewater treatment plants.

The wastewater treatment plants in Sindelfingen, Renningen, Uhingen and Langwiese have already opted for Festo's energy-efficient applications, such as the automated knife gate valve with actuators from the DLP series.

"The decision to implement pneumatic solutions from Festo is a decision to use reliable technology that is easy to install. And it has also helped us to realise energy savings, which I wouldn't have thought were possible before."

Hartmut Zerrer
Plant manager at the wastewater treatment plant in Böblingen-Sindelfingen

Be the next customer to invest in an energy-saving project. You're keen to start as soon as possible? We are happy to oblige.

We can quickly supply customers with components, subsystems and complete systems for automation tasks.

Get in touch today and let us advise you about the available options.

Festo AG & Co. KG

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Guaranteed operation and energy cost savings: technology that pays for itself

FESTO

Up to 10% in energy savings = a very worthwhile investment

New energy-efficient application from Festo: automated knife gate valve with actuators from the DLP series

Optimum economic efficiency coupled with maximum operational reliability

Festo offers customised automation solutions from a single source for water and wastewater treatment plants – solutions that are efficient, reliable and sturdy. You too can benefit from this advance in technology. With the right components, from actuators to valve terminals, including all the necessary systems for compressed air preparation and distribution, you can significantly increase the energy efficiency of your plant.

Automation solution for pumping stations

Festo's automation solution for pumping stations can be controlled via a **centralised or decentralised PLC**. The **Namur valves NFV3**, which are mounted directly on the **linear actuators from the DLP series**, enable the opening/closing function of the knife gate valve to be directly synchronised with the pump operation. A compressed air reservoir, which acts as a safety reserve, switches itself on automatically if power is lost. This emergency function guarantees reliable operation even in the event of a power failure.

Pneumatic solutions that provide a convincing alternative to electrical automation systems

As a leading innovator in the field of factory and process automation, Festo has demonstrated an active commitment to the areas of water and wastewater treatment for a number of years, offering complete automation solutions from a single source, which satisfy all the necessary requirements, and providing expert consultation throughout the specific project and value creation phases.

Today, pneumatic automation concepts are used all over the world and contribute significantly to the economical and environmentally friendly processing of water, one of our most precious resources. As the leading technology in the field of automation, pneumatic solutions set themselves apart thanks to their particular stability, weather-resistance and system capability.

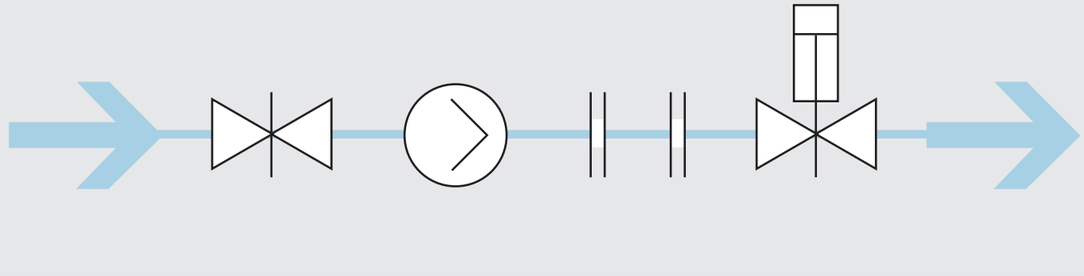
You would like to know for sure? Whatever the comparison, our solution will always come out on top!

Festo's solution: without a check valve, providing operational reliability and savings potential

Using Festo's automated knife gate valves with actuators from the DLP series instead of check valves makes your system more energy efficient. The pumps no longer have to work against the hydraulic resistance of the check valve.

Additional advantages of the system:

- **Increased operational reliability**
  The automated knife gate valve opens in synchronisation with the pump. Formed gas bubbles can be displaced immediately by opening the knife gate valve, allowing the normal pump operation.
- **The piping system remains free of damage**
  Water hammering is avoided thanks to the controlled closing function of the automated knife gate valve. This means that the pipe systems are no longer subjected to damaging vibrations, and thus have a longer service life.
- **Longer service life of the Automated system**
  The low wear of the automated knife gate valve and the efficient sealing properties are conducive to a long service life.



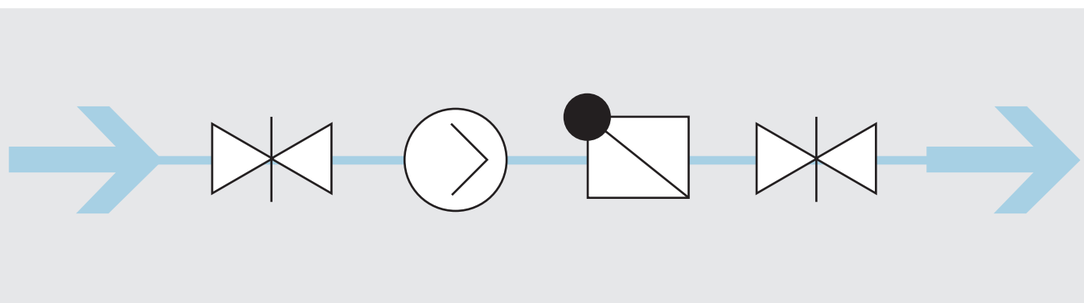
No hydraulic resistance: open knife gate valve with actuator DLP from Festo

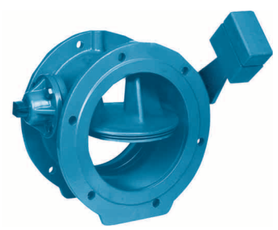
Conventional solutions: with a non-return valve, resulting in systems that are inefficient and subject to malfunction

Conventional systems for pumping stations require an unnecessary amount of energy, because in addition to performing its actual functions, the pump must also constantly work to overcome the flow resistance of the non-return valve.

Additional disadvantages of the system:

- **Operational reliability is impaired**
  When the pump is not in operation, gas bubbles produced by microorganisms build up at the check valve, preventing an automatic start-up of the pump. To start the pump up again, the check valve has to be operated manually so that the gas bubbles can be displaced, allowing the pump to function.
- **Damages in Piping System**
  When the non-return valve closes, the water hammer effect causes vibrations in the pipe systems, eventually leading to permanent damage.
- **Shorter service life of the system**
  Based on experience, non-return valves have a maximum service life of 12 years. The consequences of a worn valve include leaks and backflows which are not always easy to recognise. In the long term, it will be necessary to replace the check valve, or in the worst-case scenario, the pump itself.





Energy guzzler: check valve with flap and counterweight