

### More information?

A quick way of obtaining the information you need – with our brochures or on the internet: www.festo.com/water

Your overview of automation concepts with pneumatics in "Partners for water technology".

Find advice on constructing and designing pneumatic solutions in water treatment plants in our "Planning manual for water treatment plants".

To get the most from the manual, we recommend

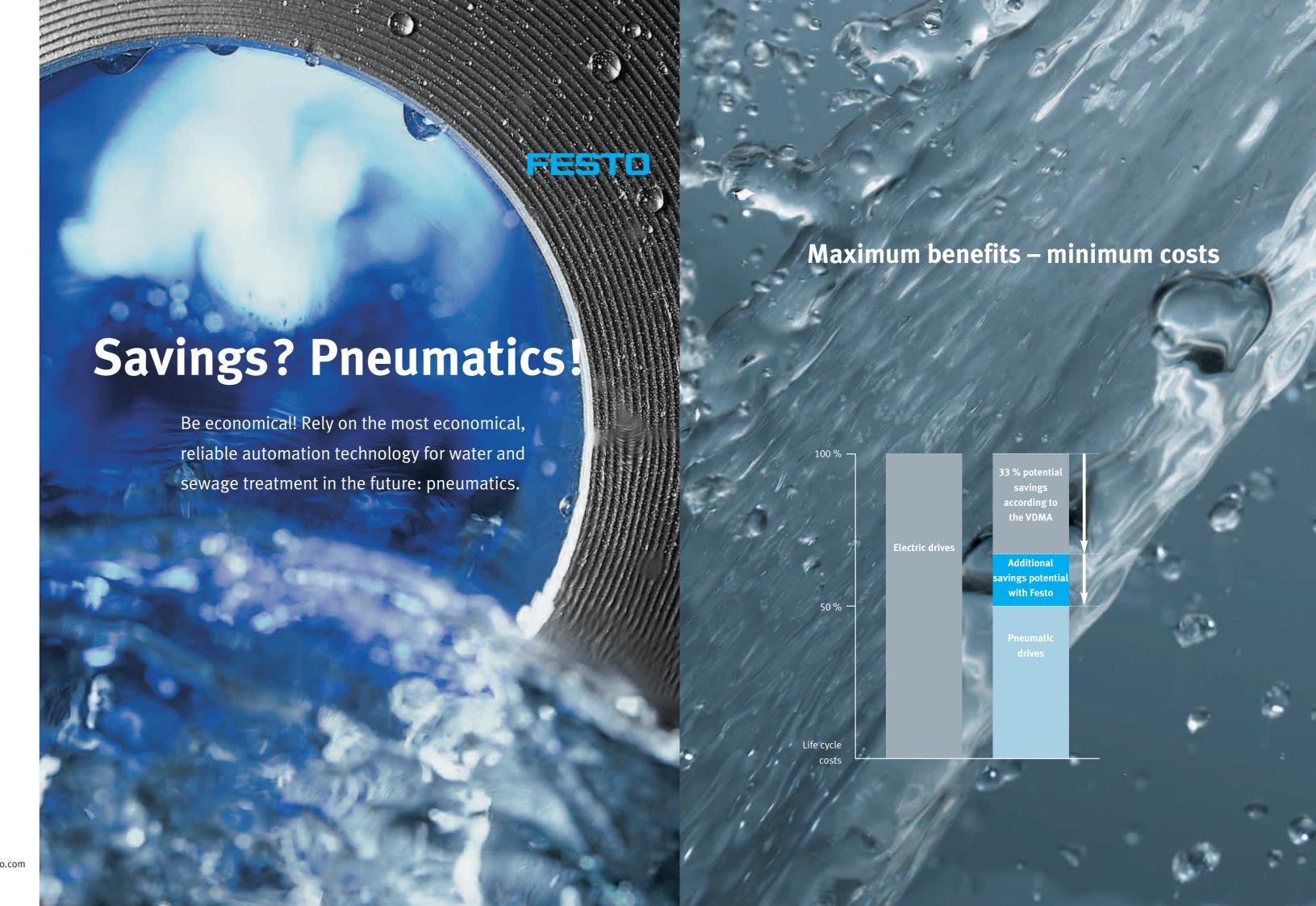
Request the manual by simply replying by fax.

that you go through it with our experts.

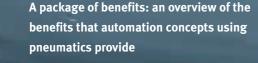
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# 10 good reasons to use pneumatics from Festo





- Fast design and commissioning

- Fewer interfaces • Longer service intervals
- Economies of scale through
- knowledge transfer



- Concept design to detail design of
- Supply of 3D models and PID schemes



### 3 Everything from a single source

- Integrated equipment from one supplier
- Proven connection and reliability Reduced interface problems
- International support in all time zones

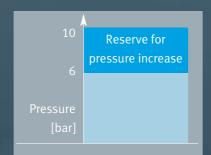


## 4 Energy-efficient, environmentally-

- Low energy costs
- Zero energy waste from leaks
- Few moving parts
- Precisely dimensioned systems



- Low voltage control systems
- Emergency operation from air reservoir
- Emergency Shut Down guaranteed Low operating pressure
- Diagnostic and condition monitoring



### 6 High performance

- High density automation systems
- Space, weight and time reduction
- Adjustable speed control
- 100 % duty cycle
- 5mm 2000 mm valves
- Reserve power by simply increasing the pressure



### 7 Robust and reliable

- High switching cycle rate
- Maintenance free actuator

Life cycle costs

Pneumatics

Electrical engineering 295.000,-€

199.000,-€

- High plant induced vibration tolerance
- No batteries for power or position



## Follow-up costs Front-end costs

#### Facts and figures

The actual filter plant of a waterworks in Germany with

- 8 filter tanks with 8 inlets/discharges each and
- 7 on/off process valves each and 1 in positioning operation

## Total cost of ownership concept on, for example,

The comparison of electrical and pneumatic drive systems in a VDMA\* study reveals that pneumatics can help you save on large cost pools. The study took investment and operating expenses, idle period costs and depreciation over a 25-year life cycle into

The daily output is 67,000 m<sup>3</sup> – there is a significant increase in the savings effect for larger plants.

\* VDMA (German Engineering Federation) and

TU Braunschweig: LIMA "Life Cycle Costing in

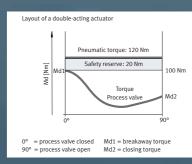
Mechanical and Plant Engineering"



• Standard temperature range -20° to +80° C Ultra Violet resistance

8 Perfectly suitable for outside use

- Extreme temperature options -40° to +120° C



### 9 Overload-proof

- Damage-free load bearing until system
- Reserve force to overcome increased breakaway torques, for example for deposits
- 100 % duty cycle
- Perfectly suitable for variable-speed drive



- ATEX-approved to zone 1 as standard
- No additional costs
- No high voltages and electrical isolation required for pneumatic actuators