

---

# Top quality – no charge

FOUNDED IN 1956, WILHELM WERNER GMBH IN LEVERKUSEN, GERMANY, IS A LEADING SPECIALIST IN WATER TREATMENT SYSTEMS, ESPECIALLY SYSTEMS FOR ULTRA-PURE WATER. ALL THE WATER TREATMENT SYSTEMS DEVELOPED AND PROVIDED BY THE COMPANY ARE ULTRA-PRECISE, CUSTOM-BUILT INSTALLATIONS THAT UTILIZE THE VERY LATEST TECHNOLOGY.

## THE SITUATION

In the electronics industry, pure water is absolutely crucial for use in the delicate cleaning processes associated with the grinding, sawing and slicing of sensitive wafer elements. With water of normal purity levels of 18.2 Mega Ohm x cm, undesirable static electricity charges can arise. This causes the effectiveness of the cleaning to fall significantly, and the quality and reliability of the product decline correspondingly.

In order to help prevent any electrostatic charge, it is possible to lower the electrical resistance of the water by dosing it with measured quantities of CO<sub>2</sub>. The conventional approach is to use a membrane-diffusion process. This has the drawback of slow reactions to any changes in the water consumption if the flow diminishes, and produces an undesirably high deviation of results in the most commonly used operating band-1 Mega Ohm x cm.

## THE GRUNDFOS SOLUTION

The solution was quickly found in the form of new Grundfos Digital Dosing pumps. These feature an exceptionally wide operating range of 0,1-100%, and exactly the same high degree of precision regardless of how large or small the dosage. In addition, any pressure peaks are virtually eliminated by digital dosing, ensuring a supply that is smooth and even, with no pulsation in the flow.

---

### TOPIC:

Smooth, even dosing - Wide operating band with a turndown ratio 1:1000 - Same high degree of precision regardless of how high or low the dosage

---

### LOCATION:

Leverkusen, Germany

---

### COMPANY:

Wilhelm Werner GmbH

---

The configuration decided upon features two redundancy coupled Grundfos Digital Dosing pumps, installed in a cascade control, the first step of which consists of two DME8 Digital Dosing pumps in the second step. The pump insertions take place over 2 PID controllers coupled to a bus system, where each controller operates a set of pumps.

#### THE OUTCOME

For Werner Reinstwassertechnik the solution ensures the consistently high precision available with Digital Dosing technology, and the extremely wide band of capacity. Furthermore it makes it possible for Werner to design a system that can produce water with a consistently high quality, even though the system is required to operate throughout a range that extends 400 to 6.000 l/hour.

---

## Related Products



### DIGITAL DOSING, DME DIAPHRAGM DOSING PUMP

The DME/DMS/DDI dosing pumps are designed for handling chemicals