

KALKAS-3

THE THIRD GENERATION OF THE POPULAR DEVICE FOR MEASURING CALCITE SOLUBILITY IN DRINKING WATER

NEW
multiparameter
controller



BACKGROUND

The lime-carbonic acid equilibrium plays an important part in the process of drinking water treatment. An excess of free carbon dioxide in drinking water can cause corrosion and thus damage the piping system, while a low concentration of carbonic acid may lead to calcium precipitation and an obstruction of pipes. In addition to that, German drinking water regulations demand calcite solubility values below 5 mg/l CaCO₃ in water from water treatment plants.

WORKING PRINCIPLE

Kalkas devices allow a continuous measurement of calcite solubility. Similar to the procedure applied in DIN 38404-C10-S5, the device measures the drinking water pH-value and compares it with that of water saturated with calcite. ΔpH -values < 0 indicate calcite solubility and ΔpH -values > 0 indicate calcite precipitation in drinking water. The ΔpH -value can then be used to control air blowers or milk-of-lime dosing stations for an optimization of the system's energy consumption.

DEVICE AND MANUFACTURER

Since 1964, Kalkas measuring devices are being applied successfully across Europe. In 2009 the m. hübers gmbh took over the sales and maintenance service for the device and pursued its further development. The result is KALKAS-3, a device that combines the well-proven wet unit with a professional measuring unit. While its predecessor only displayed the ΔpH -value, KALKAS-3 displays both pH-values. Furthermore, KALKAS-3 permits the attachment of additional measurement sensors, e.g. for measuring the temperature, turbidity or the redox potential.

FEATURES

- _ 2 memosens sensor inputs
- _ 4 analogue outputs 0/4...20 mA
- _ free configuration of relay control functions, e.g. limit indicator, alarm switch, control of air blowers and dosing stations
- _ low-maintenance, reliable
- _ easily upgraded for measuring various water parameters
- _ easy conversion of Kalkas 2 to KALKAS-3 by using the water measurement fittings and only changing the measurement unit and electrodes



PRÄZISE TECHNIK –
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