

BalanceCon

Measuring system for determination and control of calcit saturation

- High operation safety by defined reaction time in the marble filter
- Low maintenance by automatic zero calibration
- Automatic zero point alignment of the pH sensors



applications



Drinking Water / Beverages



Cooling And Boiler Feed Water

description

The measurement is based on the pH-difference method described in DIN 38404-10 : 1995-04 Calcit saturation of water

Automatic zero-point calibration of the pH-difference measurement

Reaction time in the marble filter controlled by stepmotor-driven peristaltic pumps

Two separate controllers both of which can be assigned to the pH value of the incoming water or after the marble filter or to the pH difference



particular characteristics

- 2 limit values with delay, assigned to alarm relay for pH value or difference
- 2 separate PI controllers for pH value or difference
- Automatic zero calibration of the pH difference in adjustable time interval
- Semi-automatic two-point-calibration
- Manual or automatic temperature compensation by integrated Pt100
- Background illuminated two-line LC-Display for pH value and pH difference or pH value before and after marble filter or pH value and temperature
- Serial interface RS 485 - optional
- 4x scaleable, galvanically isolated 0/4 .. 20 mA outputs
- Display of relay status

information

Water inlet: Tube connector DN4/6, PP, with manual valve for flow adjustment (Q=5 .. 50l/h, pressure 0.5 - 1bar, temperature max. 40°C)

Water outlet: Tube connector DN10, PVC (free outlet, pressureless)



technical data

measuring parameter

pH-value	0.00 .. 14.00 pH measuring value 1: before the filter
	0.00 .. 14.00 pH measuring value 2: after the filter
	-14.00 .. +14.00 pH pH difference (measuring value 1 - measuring value 2)

input characteristics

accuracy	+/- 0.02 pH
temperature measuring range	-30 .. +140°C display range
conditions	max. pressure 1 bar
	flow min 15 l/h
	ambient temperature 0 .. 50 °C
	min. conductivity >150 µS/cm

output characteristics

output signal	4x 0 .. 20 mA (scaleable, galvanically isolated)
load	max. 500 Ohm
registration range	free adjustable within the measuring ranges
serial interface	RS 485 - optional
	baud rate 9600
	data format 8 bit

power supply

line voltage	broad range power supply 85 .. 265 V AC or DC
power consumption	36 VA

ambient conditions

ambient temperature	operation 0 .. +50 °C, storage -20 .. + 65°C
	exception sensors: 0 .. 30°C
relative humidity	max. 90% at 40°C non-condensed
protection class	wall mounted housing IP 65
	IP 54 (with two pumps)

controller

control response	On/off controller (adjustable hysteresis) P/PI/PID-controller (pulse-pause, pulse-frequency or continuous controller output)
relays	2 x potential-free NO-contact, max. 250 V, 6 A, 550 VA for activation dosing pumps / Servo-motor
	1 x potential-free CO-contact, max. 250 V, 6A, 550 VA for alarm
onset delay	0 .. 2000 sec
digital input	1) External controller stop 2) Surveillance of the measurements 3) Ext. Initiation of the automatic zero-point calibration



BalanceCon

Measuring system for determination and control of calcite saturation

certificates and approvals

CE-symbol

Declaration of conformity: The product meets the requirements of the harmonized European standards. It thus complies with the legal requirements of the EC directives.

The manufacturer confirms successful testing of the product.

mechanical construction

material

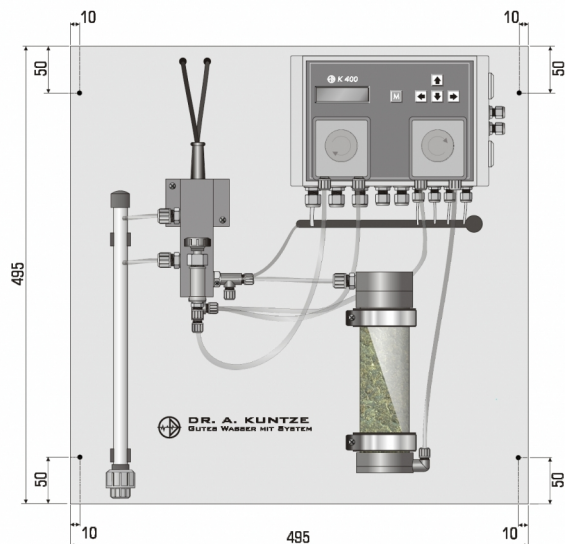
board: PVC, assembly: PVC, cocks: PP instrument: ABS, sensors: Glas

dimensions

550 x 545 x 150 mm

water coupling

pipe connection DN 4/6, pre-pressure 0.5 .. 1 bar
outlet pipe connection DN 10, free outlet



order information

<u>name</u>	<u>description</u>	<u>article number</u>
BalanceCon	Measuring system to measure and control calcite solubility	77612729K
BalanceCon Refill-Set	Refill set for the filter	57000000K

accessories

sensors

AH-300-K-2-1(-PG)

The Kuntze AH-300-K-2-1(-PG) is a combination electrode for pH measurement in all-purpose applications. The sensor is gel filled, not refillable and requires little maintenance. The reduced junction increase the expected life time in deionised media.



BalanceCon

Measuring system for determination and control of calcit saturation

accessories

pH buffer solutions

The slope of pH sensors changes over the time (depending on the measuring media). We recommend a regular calibration with our buffer solutions. We offer 1000 ml packages of pH 2, pH 3,56, pH 4, pH 7, and pH 9,22, and 50 ml packages of pH 4, and pH 7.

