PRODUCT INFORMATION
PROCESS ANALYSIS
PARTICLE COUNTER
ARTI

ARTI particle counter for optimal monitoring of drinking water

- → **Universally compatible**
- → **Low operating costs**
- → **Stand-alone or network operation**
- → **Particle sizes: 8 optional, 1 fixed size, 2nd optional, programmable fixed or scanning**

Choice of measurement options

Water quality is also judged on the basis of the particle count. Depending on the particle size, this parameter can be monitored cost-effectively and seamlessly with one of the two ARTI particle counter models: with WPC 21 from 1.3 µm or with WPC 22 from 2.0 µm. A special laser diode and a highly sensitive detector determine the particle count and size in a flow cell using the light blocking method. The measurement results are displayed on two measurement channels. The first and smallest size channel is fixed and the balance of the seven sizes are user selectable.

Robust and versatile

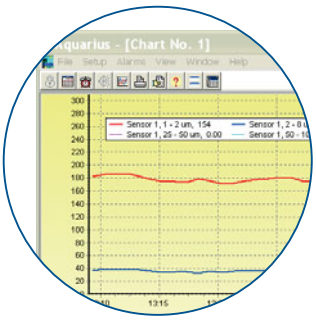
The external mounted sensor can be easily cleaned and the electronics do not come into contact with water. The measurement data is available on a LCD, or via analogue outputs, digital interfaces or limited value transmitter. LEDs show the status of the instrument functions and the sensor and indicate the alarm status.
ARTI can be used as a stand-alone instrument with on-site display or networked with AQUARIUS software. In combination with turbidity meters, ARTI forms the basis for an optimal filtration management system.

Convenient data management

Evaluation with AQUARIUS

The AQUARIUS user software enables up to 32 particle counters to be networked, monitored and continuously evaluated through the RS 485 interface.The user-friendly software runs via Windows (from Windows95). Its removal calculation provides:

- ➔ Evaluation and graphic representation of the particle content of the filtrate and raw water
- ➔ Up-to-the-minute status reports at the push of a button
- ➔ Transmission of alarm signals
- ➔ Scheduled routine reports



Time-course curves are generated for both channels by AQUARIUS

Technical Data

	WPC 21	WPC 22
Particle sizes	1,3; 2; 3; 5; 7; 10; 15; 25 µm	2; 5; 7; 10; 15; 25; 50; 100 µm
Sample flow	45 to 55 ml/min.	90 to 110 ml/min.
Flow cell dimensions	600 x 600 µm	800 x 800 µm
Calibration	Calibrated with PSL (polystyrene latex spheres) in water at a sample flow of 50 ml/min.	Calibrated with PSL (polystyrene latex spheres) in water at a sample flow of 100 ml/min.
Coincidence fields	10 % loss at 25,000 particles/ml	10% loss at 15,000 particles/ml
Counting efficiency	20 to 80 % at 1 µm; 70 to 130 % with 2 µm particles at 1 µm threshold	30 to 70 % at 2 µm; 80 to 120 % with 5 µm particles at 2 µm threshold
Ambient temperature	0 to 40 °C	0 to 45 °C
Sample temperature	0 to 50 °C	0 to 50 °C
Channels	2 channels, selected from 8 calibrated channel sizes (depending on model)	
Measurement method	Light blocking	
Light source	Laser diode (780 nm)	
Detector	Photodiode	
Average life of laser	30,000 hours	
Resolution of measured value	≤ 10 % of 10 µm per ASTM-F658-87	
Zero count deviation	≤ 1 particle per minute	
Maximum operating pressure	8.3 bar	
Unit	Concentration: Number of particles/ml	
Display	4 lines x 16 characters, LCD, LEDs for instrument function, power supply, alarm status	
Interfaces, outputs	RS 485 and RS 232, 2 channels analog inputs/ outputs (0-10 V, 4-20 mA)	
Power	90-264 V AC, 47-63 Hz	
Housing	Modified NEMA 4X/IP 66	
Dimensions	114 x 248 x 302 mm	
Weight	2.25 kg	
Data storage	Internal memory for 100 measured sample values	
Standards	CE	

Accessories

DESCRIPTION	ART.-NO.
Overflow collector for sample volume dosage	2081335-1
AQUARIUS software	CS200011-01
RS 485 / RS 232 converter	2082393-2

Subject to change. * Other models on request.

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HACH LANGE

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