



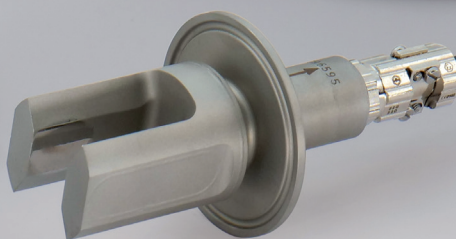
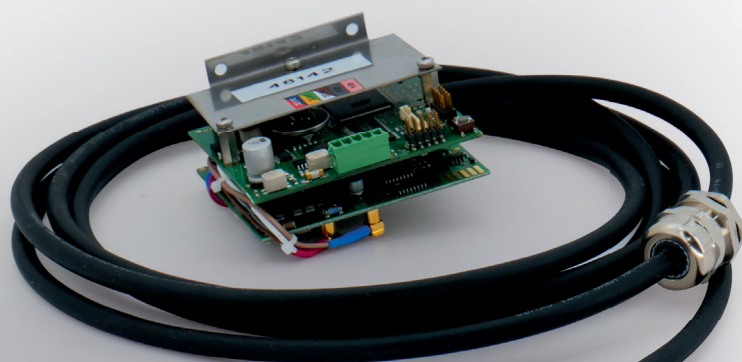
BETTER SOLUTIONS

TECHNICAL DATA SHEET

ELECTRONIC CONCENTRATION ANALYSIS

ECA

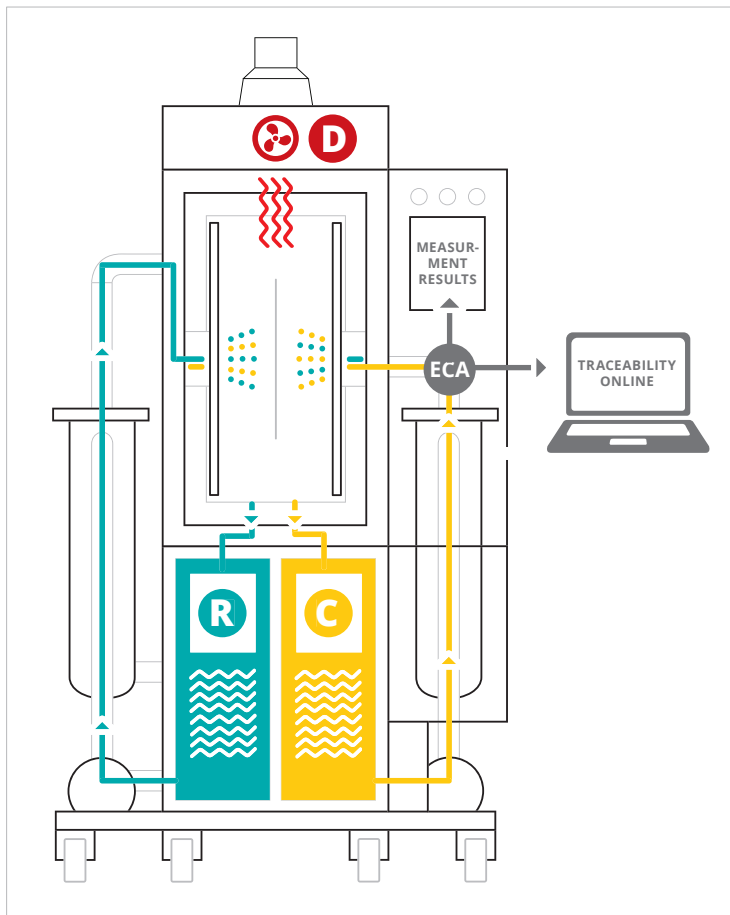
AUTOMATIC CLEANING AGENT CONCENTRATION MEASUREMENT





GENERAL INFORMATION

- Automatic and real-time measurement of cleaning chemistry concentration in cleaning system during the ongoing cleaning process.
- Combined with the automatic cleaning agent refill, ECA provides you with an automatic optimization and management of the cleaning agent concentration.
- The bath concentration monitoring is developed for maintaining the high and uniform quality of cleaning processes in the electronics industry.
- ECA is very reliable, cost-effective, easy to maintain analytical method for cleaning bath concentration monitoring.



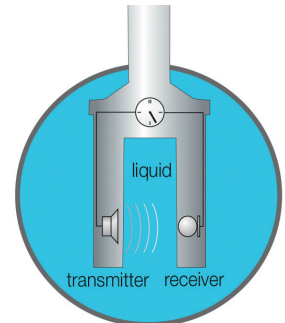


MEASURING METHOD

- The measuring is based on an ultrasonic method, which measures the travel time of the sonic signal. The sensor firmware calculates the sonic velocity by using the known distance between the transmitter and receiver.
- The sending sensor has an integrated temperature measurement.
- The distance between the sender and receiver is constant, therefore the sonic velocity can be determined.
- The measuring method is reliable regardless the changing agent's conductivity, color and transparency.

$$V = \frac{s}{t}$$

V: sonic velocity
s: distance between sender and receiver
t: signal delay



RESULTS TRACKING

- The measurement is being constantly updated and is displayed directly on the cleaning system's PLC.
- Combined with DCT's Online Traceability feature, the ECA measurement results can be sent and saved directly into your existing monitoring system.



APPLICATION

- The measuring sensor is integrated directly into the cleaning loop in the cleaning machine.
- ECA is mostly used during PCBA cleaning processes, where a high quality and sustainability of cleaning procedures is necessary.
- ECA concentration measurement is compatible with all DCT cleaning agents.
- ECA is primarily intended for integration to Injet® series cleaning systems with vertical and horizontal Spray-In-Air technology.



ADVANTAGES OF ECA

- ✓ Online and automatic monitoring of cleaning bath concentration.
- ✓ The most precise method of concentration measurement: ± 0.2 % accuracy.
- ✓ Tool for avoiding overdosing and underdosing of the cleaning liquid.
- ✓ Maintain the quality of PCBA cleaning processes.
- ✓ Compatible with all DCT cleaning agents.
- ✓ Can be integrated directly into Injet series cleaning systems.
- ✓ Can be combined with DCT automatic refilling of cleaning agents (optional accessories) for the fully automatic process without the operator.
- ✓ Measurement results are displayed directly on the cleaning machine PLC.
- ✓ Measurement results can be also sent to your internal system and tracked on a PC (DCT traceability online).