


D-EMS 2000 QAL


QAL 3 Software Module according to EN 14181 for the D-EMS 2000 Environmental and Process Data Management System

- Logging, evaluation und documentation of AMS quality for compliance with QAL3
- Complete AMS document management according to EN 14181 point 9 Appendix D

CUSUM - card (EN14181) 

Date 30.09.05 11:00 Name of technician Peter Müller

Type of AM Name
Registration r
Manufacturec
Location
Measuring ra

Shewhart - card (EN14181) 

Date 5.01.09 08:45 Name of technician TL

Type of AMS Advance Optima Uras 14
Name
Registration number 3.250277.4
Manufactured / delivered by ABB Automation Products GmbH / Envirotec
Location klimatisierter Analysenschrank
Measuring range and unit 0...100 mg/m³

	Zero point	Reference point
s_{AMS}	3,000 mg/m ³	s_{AMS} 3,000 mg/
$C_{Reference}$	0,000 mg/m ³	$C_{Reference}$ 77,250 mg/
$C_{current}$	0,455 mg/m ³	$C_{current}$ 79,167 mg/
d_t	0,455 mg/m ³	d_t 1,917 mg/

Control limit

	3s	3s
	9,000	9,000

$d_t > 3s \Rightarrow$ Control limit reached

Control limit reached ? No Control limit reached ?

Control limit reached ? No

Warning limit

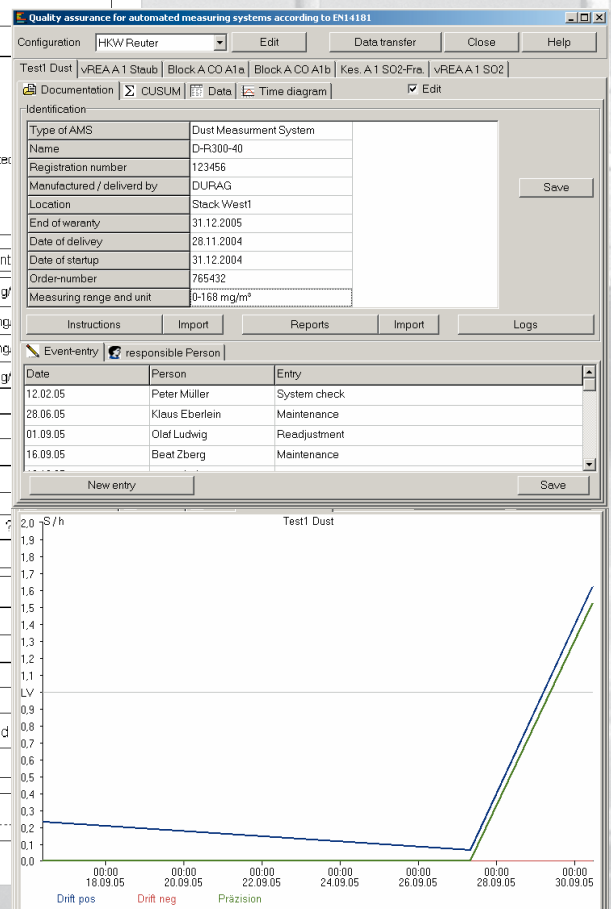
	2s	2s
	6,000	6,000

$d_t > 2s \Rightarrow$ Warning limit reached

Warning limit reached ? No Warning limit reached

Warning limit reached ? No

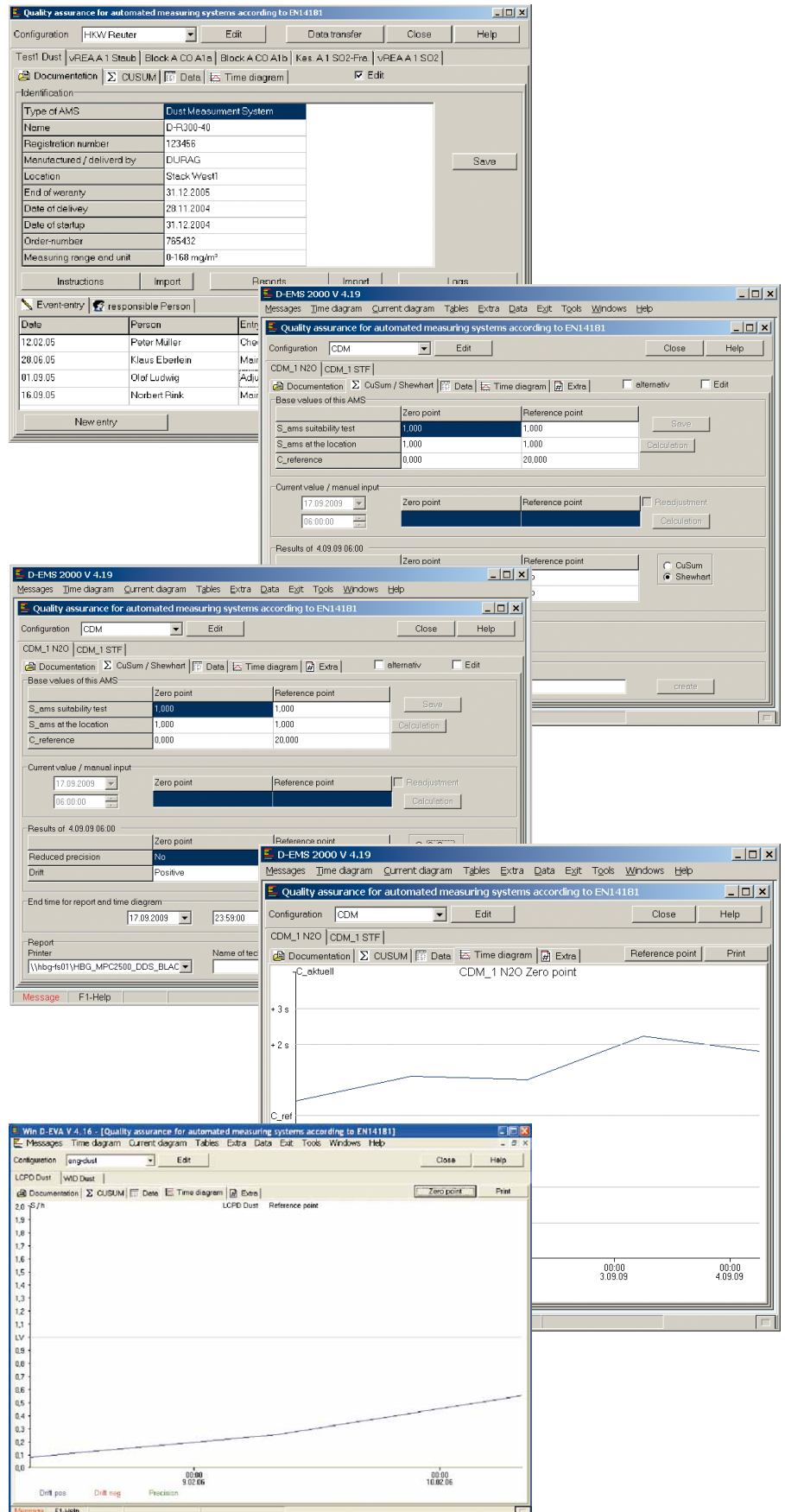
Date, signature technician



Software for complete documentation of AMS, drift and precision (QAL3) according to EN 14181

Features

- DURAG D-EMS 2000 Environment and Process Data Management System Module, also available as a separate programme
- Drift and precision calculation for zero and AMS reference point
- Automatic import of current zero and reference point values of the AMS
- Manual input option for calculation of AMS required values without automatic zero and reference point control
- Automatic archiving and long-term storage of all generated CUSUM control cards for documentation within the frame of functional testing
- Graphical/numerical representation of all input data and calculations
- Complete AMS document management according to EN 14181 point 9 Appendix D
 - Identification of AMS (type, manufacturer, installation site, etc.)
 - Connection entries (activities, events, personnel, etc.)
 - Test reports
 - Calibration reports
 - Reports on interventions
 - Drawings (gas operational plans, connections, etc.)
 - Pictures (overall configuration, particularities, etc.)
 - Procedural instructions
 - Operating instructions
 - Staff qualifications.



The screenshots illustrate the software's capabilities in three main areas:

- AMS Identification:** A form for entering details of a Dust Measurement System (AMS), including name, registration number, manufacturer, location, and dates.
- Configuration and Base Values:** A window for setting base values (S_ams suitability test, S_ams at the location, C_reference) and current values for zero and reference points.
- CUSUM Control Cards:** Graphical displays showing CUSUM curves for parameters like C_aktuell and C_ref against time, used for monitoring process stability.