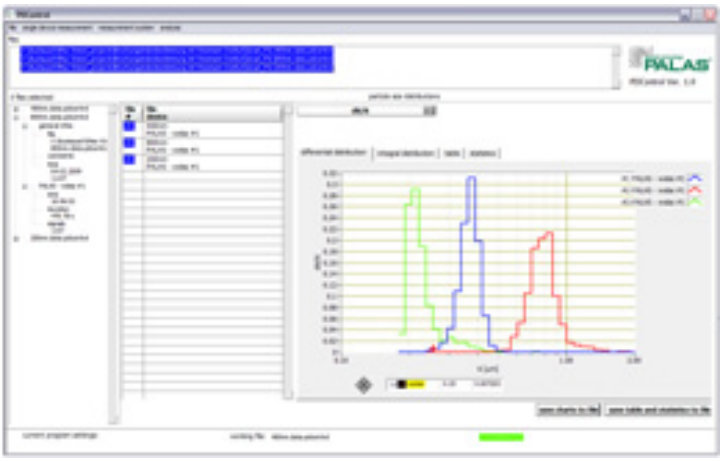
PDCONTROL



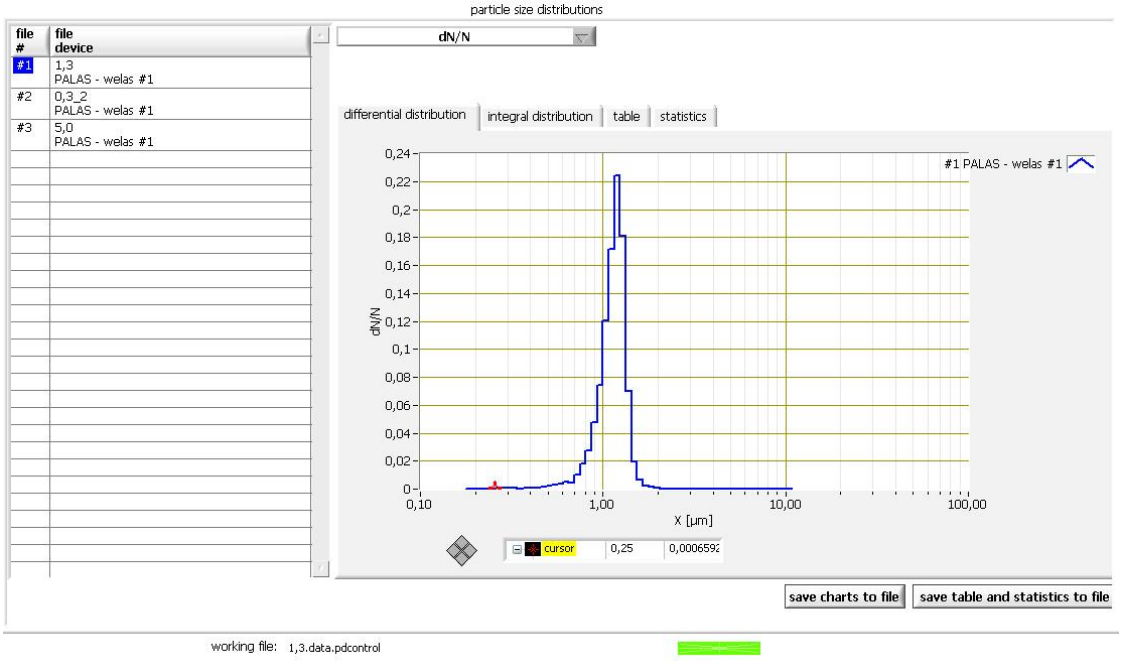
The PDControl software is designed for measurement value acquisition and data analysis by all the welas® digital and Promo® systems. It enables quick and easy particle size and concentration analysis.

The PDControl software provides special advantages for analyzing rapid changes in concentration and particle size distributions using the high time resolution of 10 ms, depending on the measurement system. In addition, PDControl enables the transparent display of measured distributions with analysis of the coincidence percentage, as per Dr. Umhauer and Prof. Sachweh (see last figure). Palas software solutions in particle measurement technology, filter testing, and test rig control are based on our many years of experience. They have been continuously optimized and further developed in close collaboration with our international customers based on their requirements. As a result, Palas software is efficient and provides many advantages in daily applications.

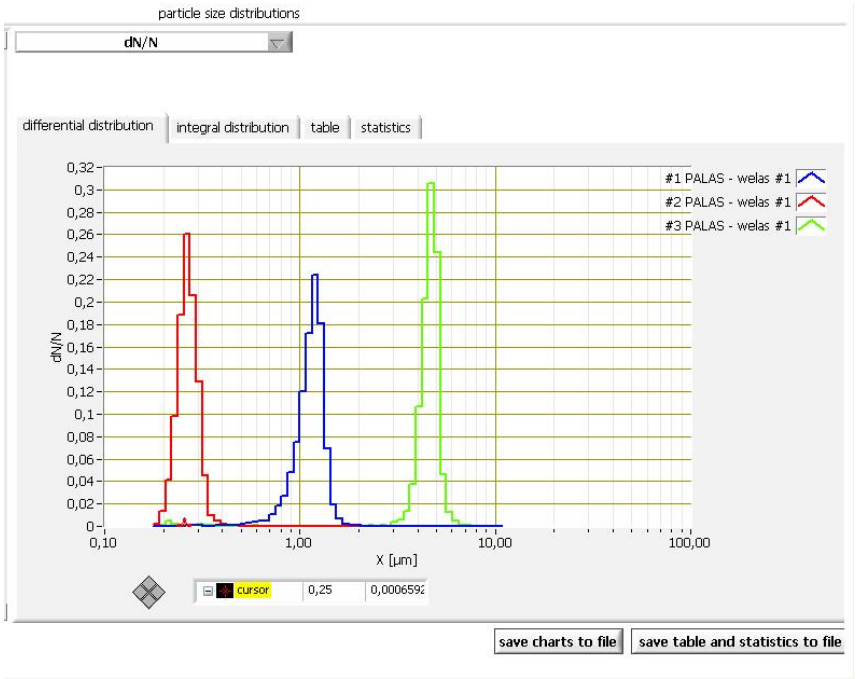
OPERATION PRINCIPLE

SOFTWARE FOR PARTICLE AND CONCENTRATION ANALYSIS

Display of cumulative and distributive size distributions in the diagram and table form



Comparison of cumulative and distributive size distributions in diagram form



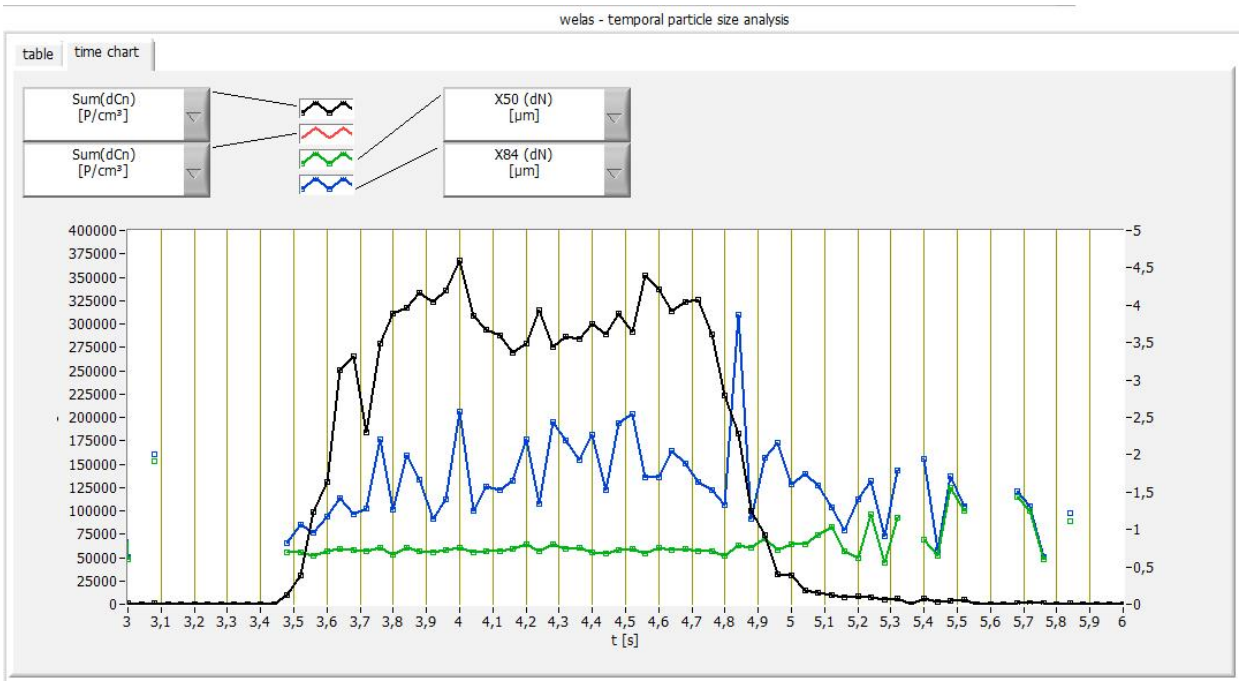
Display of all measured single particles and the corresponding statistics for distributions in table form

dN/N

differential distribution | integral distribution | table | statistics

Xu [µm]	X [µm]	Xo [µm]	dX [µm]	dN [P]	dN/N	dN/N/dX [1/µm]	dN/N/log(dX)	Sum(dN) [P]
0,178	0,184	0,191	0,013	1,0	0,00018	0,0134	0,0057	1,0
0,191	0,198	0,205	0,014	2,0	0,00035	0,0249	0,0113	3,0
0,205	0,213	0,221	0,015	6,8	0,00120	0,0782	0,0383	9,8
0,221	0,229	0,237	0,016	11,4	0,00202	0,1227	0,0646	21,1
0,237	0,246	0,255	0,018	11,0	0,00196	0,1108	0,0627	32,2
0,255	0,264	0,274	0,019	16,6	0,00294	0,1546	0,0940	48,8
0,274	0,284	0,294	0,020	16,0	0,00284	0,1392	0,0910	64,8
0,294	0,305	0,316	0,022	13,3	0,00235	0,1071	0,0753	78,1
0,316	0,328	0,340	0,024	14,2	0,00252	0,1069	0,0807	92,3

- Storage/loading of measurements
- Read-only mode for measurement files
- Data export in a text file (possible to import data into Excel)
- Acquisition and analysis in as little as 10 ms ideal for rapid, unsteady processes
- Up to four statistical values can be displayed simultaneously, e.g., number concentration, coincidence percentage, Sauter diameter, and mean diameter



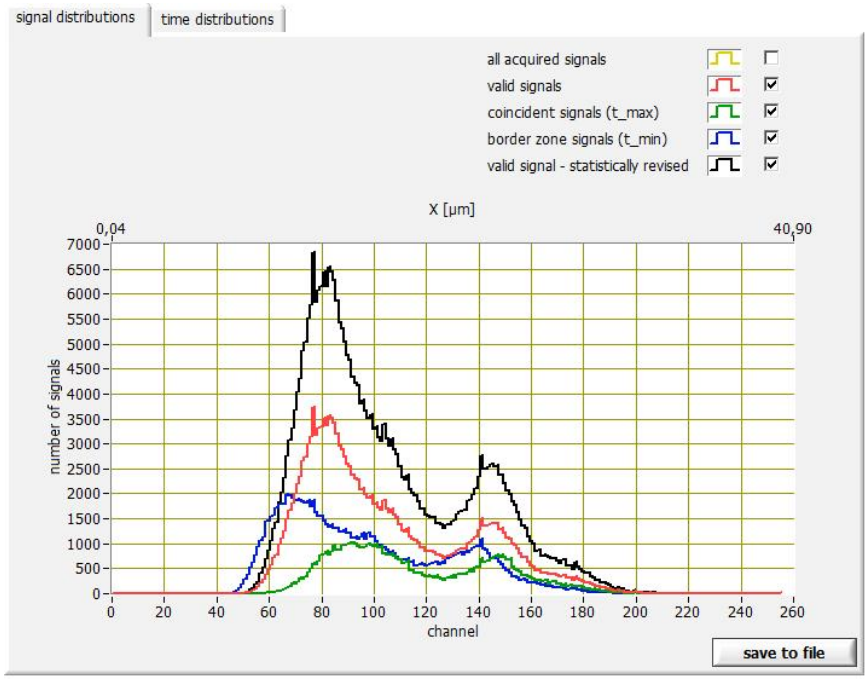
Coincidence and border zone error analysis

welas® digital and Promo® are equipped with a fast 20 MHz signal processing processor that analyzes the curve of each particle signal. This enables coincidences, i.e., more than one particle simultaneously in the measurement volume, to be detected on the individual signal and corrected (per Dr. Umhauer / Prof. Sachweh).

The PDControl software enables our customers to trace each measurement in detail, using:

- Display of measured distributions in diagram form with
  - Valid particle size distribution

– Border zone and coincidence distributions and
– Statistically corrected particle size distributions.



BENEFITS

- Optimal information content:
  - Display of distributions in the diagram and table form: Number, area, volume, concentration (number and mass)
  - Comparison of multiple distributions in one diagram
  - Display of the time sequence of statistical values
  - Analysis of 14 statistical values
- Acquisition and analysis in as little as 10 ms, ideal for rapid, unsteady processes
- Coincidence analysis
- Simultaneous measurement with multiple welas® digital or Promo® systems
- Also able to be used with other particle measuring devices
- Acquisition by four external sensor signals in parallel with particle measurement, e.g., differential pressure, temperature, relative humidity, volume flow, etc.
- Clear structure
- Easy installation on the PC
- Short processing times
- Regular updates via the Internet free of charge
- Easy to transfer data to Excel
- Unlimited copies for various workstations within a company
- Easy to operate
- Reliable function
- Reduces your operating expenses

DATASHEET

Operating system	Windows® 7, Windows® 10
Processor	Min. Pentium I5, 2000 MHz
User memory	From 4 GB
Screen resolution	15.6″ (min.1600 • 900 for Notebooks), 24″ (min. 1920 • 1080 for PCs)
Messgeräte	welas® digital System, U-SMPS System, Promo® System

Applications

- Particle measurement and particle size analysis
- Measurement of MDI/DPI inhalers and nebulizers
- Emission and immission measurements
- Analysis of rapid, unsteady processes
- Smoke detector tests
- Particle measurement for clouding processes

Mehr Informationen:
https://www.palas.de/en/product/pdcontrol