

# vali.sys

swiss engineering services

## YOUR PARTNER FOR CLEANROOM MONITORING

# Welcome

**Quality is our top priority!**

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## **Thomas Christen** CEO and owner

«What sets us apart the most is our innovation and our products, which are characterized by their long service life and Swiss quality.»



I have been a passionate part of vali.sys since 2006. Back then, I was hired as the first technician and have had the privilege of calling the company my own since 2019.

From a three-person company, vali.sys has grown into a business with 35 employees and a subsidiary in Egypt with 40 employees. It fills me with pride to see that we have been able to build long-term customer relationships through high-quality work.

With the experience I have gained over the years in the cleanroom industry and at vali.sys, I know exactly what our customers' requirements are. My goal is to continuously develop vali.sys, to recognize and integrate new technologies at an early point in time in order to always offer our customers future-proof, innovative and efficient solutions.

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# Headquarters

## **Innovative Swiss company in the idyllic Zürich Oberland**

Clean air is more than just a technical challenge. Our mission is to provide you with a smoothly functioning system to monitor your air quality.

As a globally established company in industrial automation and system control, we set high standards in the cleanroom monitoring sector. Our SCADA applications and monitoring systems enable precise real-time data monitoring so that you have full control over your sensitive production processes at all times.

For over 20 years, customers have been relying on our validated, GMP- and ISO-compliant monitoring solutions, which are characterized by maximum precision, safety and reliability. Our agile and solid project management ensures that every solution is perfectly tailored to your individual requirements.

Your satisfaction is what keeps us going. By working closely with you and our trusted sales partners, we develop innovative and sustainable solutions that offer you many benefits today and in the future. Whether you need consulting, planning, installation, real-time monitoring or regular maintenance and calibration - we are at your side as a reliable partner.

# Location Egypt

## Creating new paths

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**Samuel Adib**  
general manager  
egypt

«I am thrilled to be part of this momentous occasion, as we open our doors to serve the Egyptian market and to launch our first branch office outside Switzerland.»

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This expansion marks a significant milestone for vali.sys, signifying our commitment to extending our expertise and Swiss quality beyond our borders.

Our presence in Egypt reflects our belief in the immense potential of this region. We recognize the critical role of clean room monitoring in ensuring product quality and thus patient safety.

We are proud to bring our expertise and advanced technologies to you and embark on this journey together. Fostering partnerships that will elevate the standards of clean room monitoring and contribute to the production of safe and effective products.

Welcome to vali.sys Egypt – Where Swiss quality meets Egyptian excellence.

# Where innovation meets trust

For us, our references are not just completed projects - they stand for teamwork, high-quality work and long-term partnerships.

We see ourselves not just as a supplier, but as a reliable partner who supports its customers far beyond the project.



Every successful project is the result of close collaboration in which we understand complex requirements, develop individual solutions and ensure the highest quality standards.

We see ourselves as a competent partner that supports its customers far beyond the project phase. From the first consultation to the long-term support and maintenance of the systems and their components, we are at your side with expertise and engagement. We even support you during shutdowns and ensure that everything runs smoothly.

Whether complex cleanroom solutions, high-precision monitoring systems or customized calibration concepts - we have already successfully implemented numerous major projects for leading companies.

We are proud that these projects have resulted in long-term partnerships from which both you as a customer and we as a supplier and service provider can benefit.



## Project Hospital

370 Environmental sensors  
30 Particle counter  
combined in one system over  
several buildings



## Project Biotech

140 Environmental sensors  
42 Particle counter  
Interfaces such as OPC UA or SQL  
automatic report generation



## Project Injection Molding

80 Environmental sensors  
24 Particle counter  
in a system distributed over 10  
buildings



## Project Aerospace

40 Environmental sensors  
32 Particle counter  
4 central vacuum pumps  
Europe's largest cleanrooms



## Project Scientific Research

52 Environmental sensors  
8 Particle counter  
60 External signals  
Including lock control



## Project Radio Pharmacy

290 Environmental sensors  
20 Particle counter  
180 Displays  
combined in one system

# Our services - Your added value

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We are at your side from consulting to project planning of the cleanroom, installation of the sensors, annual maintenance and calibration, right through to decommissioning.

**Our services - Your all-round carefree package for the highest quality.**



At vali.sys, we offer you a comprehensive solution for reliable cleanroom monitoring, calibration and maintenance - all from a single source. From initial planning and implementation to regular maintenance and calibration, we ensure that your systems run smoothly and meet the highest quality standards.

Our ISO 17025-accredited calibration laboratory guarantees precise measurements and standard-compliant tests, both in our laboratory and directly on your premises. With our mapping service, we ensure that climatic conditions in storage, production and transportation environments are optimally monitored to reliably protect your products. As an official distributor of Lighthouse, we supply you with high-precision particle counters and the appropriate accessories for seamless monitoring.

Whether maintenance, calibration or technical support - with vali.sys you have a reliable partner at your side who offers you an all-round carefree package for maximum safety, efficiency and quality.



## Consulting

Competent advice from experts with years of experience in the cleanroom industry.



## System planning & construction

Planning and construction of your turnkey system.



## System Qualification

Comprehensive system check during FAT and after commissioning.



## System maintenance

Complete system check at the intervals you specify.



## Sensor calibration

Calibrations on site or in the calibration laboratory.



## Mapping

Measurement of the prevailing spatial conditions.



# Your project

**Effective communication is the key to a successful project.**

Through consistent project documentation, a broad-based project team and an optimized project process based on the GAMP5 model, we guarantee the success of your project at all levels.

We are convinced that clear project management, honest and direct communication and structured meetings significantly influence and increase efficiency and success.

Transparency and honesty are particularly important to us. We stand for partnership-based cooperation in which we openly address challenges and work together to find the best solutions.

**1** The system Development (URS / FDS).

**2** The project Kick-off meeting.

**3** The milestone and project meetings.

**4** The Factory Acceptance Test (FAT).

**5** The end-of-project meeting.

# Structured development for customized solutions

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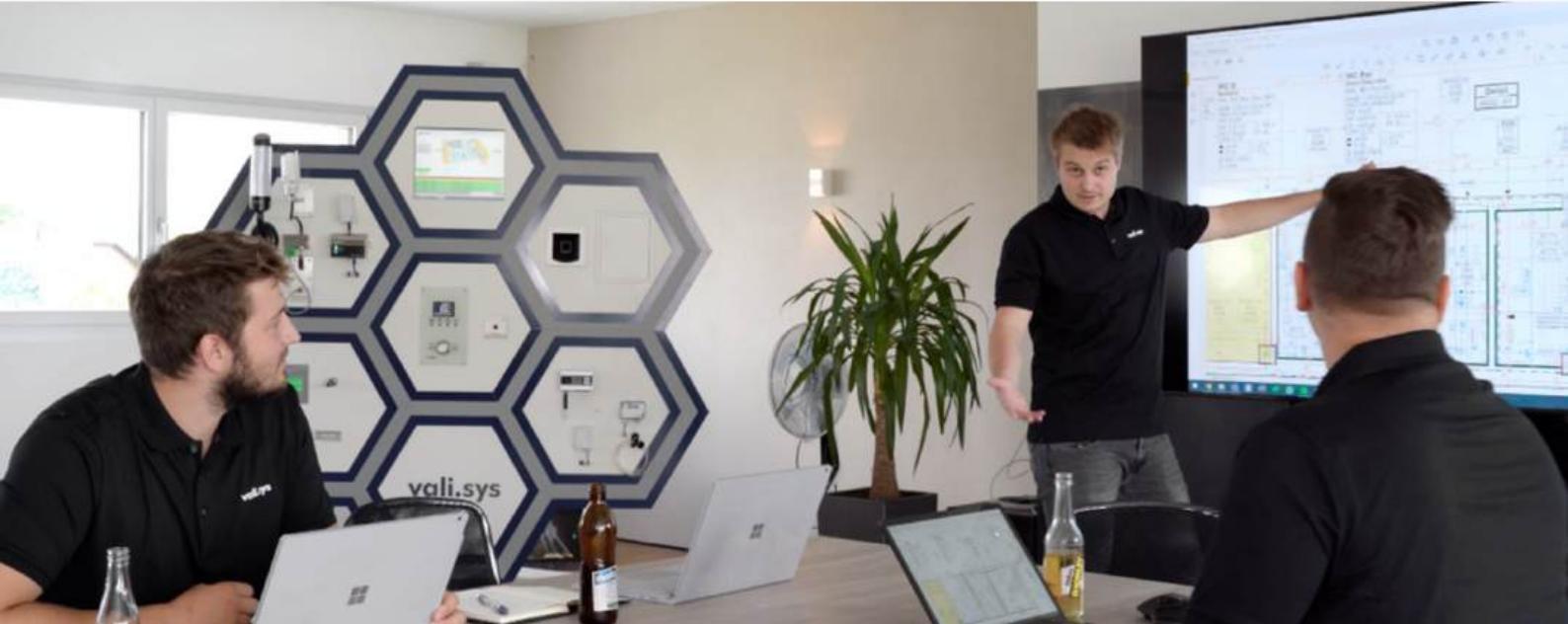
New projects at vali.sys start according to the proven stage-gate model. Interdisciplinary teams work together right from the start to minimize risks and weak points in the concept phase - especially in complex cleanroom projects.

As soon as our monitoring systems enters the realization phase, the precise implementation begins:

- Creation of electrical schematics and circuit diagrams with ePlan
- Individual software configuration in vali.mon (overviews, parameters, sensor locations)
- Construction of the switch cabinets & performance of functional tests
- Testing and programming of the alarm systems & limit values

Each of these phases is accompanied by standardized test routines and protocols. Before delivery, the comprehensive FAT (Factory Acceptance Test) is carried out to ensure that the system meets the highest requirements.

The successful FAT is followed by the next decisive phase: installation and commissioning at the customer's premises. Here too, our experts work according to clearly defined processes to ensure smooth integration of the systems into existing structures. After installation, extensive tests are carried out according to IQ / OQ protocols to ensure that all functions work reliably and that the specified limit values are precisely adhered to. Only when all tests have been successfully completed does the final acceptance take place - a further step with which we guarantee the highest quality and customer satisfaction.



# After the project is before the project

**Once your project has been successfully completed, we will continue to provide you with our full range of services.**

## **Expansion**

After the project is before the next expansion or adaptation. Requirements are constantly evolving, which is why our systems have a modular structure and can be flexibly expanded or adapted to new circumstances at any time. Whether additional sensors or extended functions, we ensure that our system always meets your needs. This ensures that your monitoring system remains future-proof, efficient and state-of-the-art.

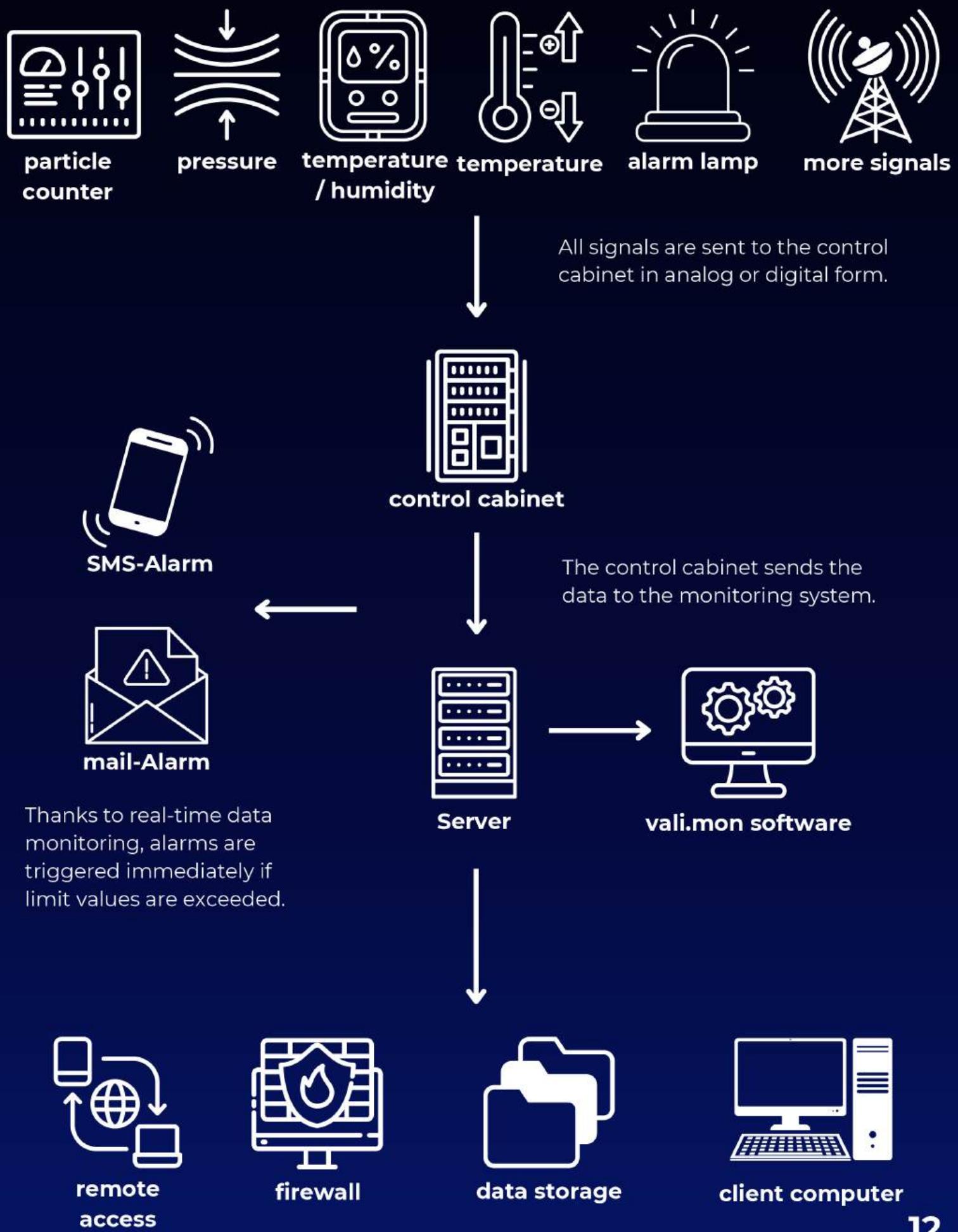
## **Audit**

Our documentation and qualification documents are structured and detailed so that they can withstand any official or customer audit. We ensure that all relevant requirements are met and that you have access to complete and standard-compliant documentation at all times. If required, we will support and accompany you before and during an audit and are available to you at any time with our expertise.

## **Training and support**

Our support team is there to help you, with every challenge with comprehensive assistance and expert advice. If you have technical questions or unexpected problems, we will work with you to find the best solution. We also offer practical training courses that are individually tailored to your needs. Our experts not only impart in-depth specialist knowledge, but also ensure that your team knows how to use our systems safely. Whether basic training, in-depth workshops or specific on-site briefings - we provide you with the knowledge you need for a smooth operation.

# Graphical structure of our system



# vali.mon

## Precise monitoring for the highest demands

### What is vali.mon?

The vali.mon is our validated monitoring system that has been specially developed to meet the high demands of the cleanroom and pharmaceutical industry. It guarantees that the recorded data is accurate and unalterable by subjecting it to strict validation processes.

### This means:

- Validation:** Validated data is verified and traceable information for which there is documented evidence that it has been recorded, processed and stored accurately, consistently and following regulatory requirements such as 21 CFR Part 11 and GAMP 5.
- Usability:** A clear display and simple navigation allows you to conveniently read out your data at any time.
- Custom alarms:** The limit values are individually adapted to your products and requirements. As soon as a limit value is exceeded, you receive an alarm notification by email, phone call, text message or visually.
- Flexibility:** Data can be recorded, displayed and processed in different ways depending on customer preferences.

## vali.mon

Real Time Report  
System Configuration  
Audit Trail

Maintenance and Calibration  
I/O Communication  
System

## vali.sys

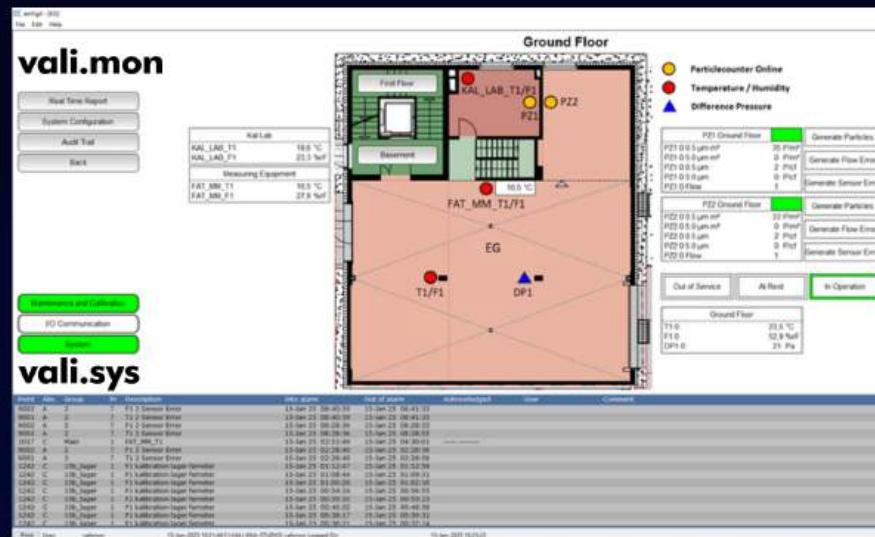
Point	Alm.	Group	Pr	Description	Into alarm	Out of alarm	Acknowledged	User	Comment
9002	A	2	7	F1 2 Sensor Error	15-Jan-23 08:40:59	15-Jan-23 08:41:35			
9001	A	2	7	F1 2 Sensor Error	15-Jan-23 08:40:59	15-Jan-23 08:41:35			
9002	A	2	7	F1 2 Sensor Error	15-Jan-23 08:28:36	15-Jan-23 08:28:55			
9001	A	2	7	F1 2 Sensor Error	15-Jan-23 08:28:36	15-Jan-23 08:28:55			
1017	C	Main	1	FAT_MM_T1	15-Jan-23 02:52:49	15-Jan-23 04:30:01			
9002	A	2	7	F1 2 Sensor Error	15-Jan-23 02:28:40	15-Jan-23 02:28:56			
9001	A	2	7	F1 2 Sensor Error	15-Jan-23 02:28:40	15-Jan-23 02:28:56			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 03:12:47	15-Jan-23 03:12:59			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 03:08:44	15-Jan-23 03:09:51			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 03:00:20	15-Jan-23 03:02:10			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 00:54:24	15-Jan-23 00:56:55			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 00:30:32	15-Jan-23 00:53:23			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 00:40:32	15-Jan-23 00:48:58			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 00:38:17	15-Jan-23 00:39:31			
3242	C	13b_lager	1	F1 kalibration lager fernstsr	15-Jan-23 00:38:21	15-Jan-23 00:37:14			



# Your benefits:

## vali.mon convinces through:

- Adaptability:** The system is completely flexible and tailored to your individual wishes.
- Quality & security:** Our software ensures reliable collection and management of validated data in accordance with 21 CFR Part 11 and GAMP5, so that the highest compliance and security standards in regulated environments are met.
- Long-term utilization:** Automated data recording and long-term storage create trust and security.
- Intuitive operation:** Clear displays make vali.mon particularly user-friendly.
- Full support:** Our support team will also provide you with competent assistance in the event of challenges or questions.



## Real Time Report - All data in one view

All relevant data from your processes can be viewed in real time. Critical parameters such as temperature, humidity or particle count are monitored and displayed live. Thanks to the real-time report, you can act proactively, minimize risks and ensure the quality of your processes at all times.

## Alarm Report - Maximum security

React quickly if necessary. Our notification system will alert you as soon as specified limit values are exceeded.



# Calibration Laboratory

## Precision for your measurements

The choice is yours: we calibrate your devices either in our own laboratory or conveniently on your premises - so the entire process remains in one hand.

If necessary, your devices and sensors will be precisely adjusted. The results of the calibration are documented transparently: From the initial calibration ("as found") to the calibration after adjustment ("as left") - all in a detailed certificate.



### Particle counters



We also offer calibrations for particle counters in our in-house laboratory as well as through our mobile calibration laboratory for fast and flexible on-site support. This is how we ensure that your particle counters have worked reliably to date.

### System

- Watchdog
- UPS function
- Alarm lamp function
- Alert function
- IO node function
- Sensor function check
- Pump maintenance
- Hose check
- Flow check
- Creating backup copies

### Calibration

- Temperature and humidity sensors (incl. combination sensors)  
Factory and ISO 17025 calibrations (-90°C - 155°C) (0%, 10% - 95%rh)
- Pressure and acceleration sensors (0 - 4 bar / 1 - 15 g)
- Voltage and current meters (VDC/mA)
- Flow sensors (e.g. for air velocity)
- Particle counters
- CO2 sensors
- Film welding tongs



## Certifications

- **Factory calibrations:** By using ISO 17025-certified reference devices, we guarantee reliable and traceable measurement accuracy.
- **Accredited calibrations:** Following SCS SN EN ISO/IEC 17025:2018 for temperature and relative humidity. Our accredited laboratory (SCS 0151) offers traceable accuracy for your measuring devices.

## What makes us special:



- **Flexibility:** We adapt to your individual requirements - whether on site or in our laboratory.
- **Accredited services:** ISO 17025 laboratory and SCS certifications guarantee the highest standards.
- **Largest measuring range:** We offer a very large measuring range (CMC) for ISO 17025 calibrations on site at the customer's premises.
- **Years of experience:** Specialist in temperature and relative humidity.



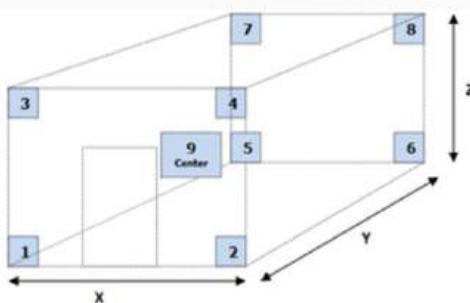
## Safety for your sensitive products - precise mapping for reliable conditions

Whether it's a climate-controlled cabinet, storage room or transport container - stable climatic conditions are crucial for protecting moisture- or temperature-sensitive products. Deviations can not only impair product quality, but also cause high costs and damage to your image.

Our mapping services help you to identify critical environmental conditions at an early stage and ensure that your processes comply with the required standards. Should unexpected deviations occur, our precise measurements allow you to react quickly.

### Mapping-Services

- Individual advice:** Definition of requirements according to IQ, OQ and PQ.
- High-precision measurements:** Mapping data loggers are ISO 17025 or factory calibrated. Range from -90°C to +100°C (temperature mapping). 0°C to 50°C / 10% to 95%rh (temperature and relative humidity mapping).
- Installation & distribution:** Optimum positioning of the sensors for exact measured values.
- Seamless monitoring:** Thanks to the use of data loggers, we enable you to continuously record the climatic conditions.
- Detailed analysis:** Evaluation and identification of the "worst case" of the cabinet or room climate.
- Standard-compliant documentation:** Creation of all required reports in PDF format, digitally signed.



Logger / Sensor-No.	Logger / Sensor-Position	Measure corner	X-Axis (cm)	Y-Axis (cm)	Z-Axis (cm)
LOG161	1	1	12	12	14
LOG162	2	2	12	13	13
LOG163	3	3	14	13	29
LOG164	4	4	11	13	28
LOG165	5	5	12	11	14
LOG166	6	6	13	15	13
LOG167	7	7	14	13	28
LOG168	8	8	13	12	28
LOG169	9 (Center)	1	63	36	77
LOG178	9 (With sand)	1	65	34	76

# Data logger - Precise measurement and reliable monitoring

## What is a data logger?



A data logger records environmental parameters using a sensor. Once the data has been collected, it can be transferred to a computer for further analysis and processing.

### Measuring ranges

- Temperature
- Relative humidity
- Light
- Acceleration
- CO<sub>2</sub>
- VOC
- Pressure

### Data transmission

- Bluetooth
- USB interface
- Radio
- WLAN

## Why are data loggers indispensable?



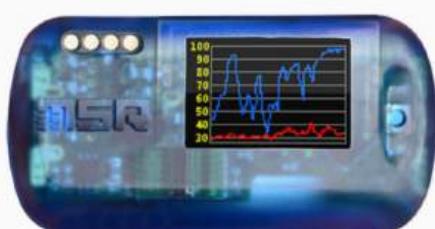
- No measurement gaps during maintenance or calibration.
- Uninterrupted recording ensures process continuity.

## Areas of application and advantages



- Flexible and easy handling.
- Low effort, high time and cost savings.

## Our top sellers:



### MSR 145W2D

- Temperature
- Humidity
- Light
- Air pressure
- Acceleration



### Tinytag Ultra 2

- Temperature
- Humidity
- -25 to +85°C
- 0 to 25% rH



### Tinytag Talk 2

- Temperature
- -40 to +85°C



# Quality without compromise

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## Reliable standards for the highest demands

At vali.sys, quality is our top priority. Our experienced quality team ensures that all processes are standardized and continuously optimized in accordance with the strict guidelines of GMP (Good Manufacturing Practice) and ISO certifications (ISO 9001 & 17025).



Our structured quality management system ensures that every activity is planned, executed and comprehensively checked. This not only guarantees consistently high quality, but has also created long-term trust for over two decades.

## Innovation and quality - hand in hand

For us, high-quality, quality management means more than just complying with standards - it is the key to innovative solutions that make the decisive difference for our customers.

- New technologies are tested on an ongoing basis and integrated into our projects once they have been successfully completed.
- Internal audits identify potential sources of error in order to continuously improve processes, assembly and commissioning.
- Efficient processes increase customer satisfaction by ensuring smooth workflows and reliable systems.

## **Reliable quality right up to the final test**

After installation and commissioning at the customer's premises, further extensive tests are carried out, which are documented in the IQ/OQ qualifications (Installation Qualification & Operation Qualification). These are mandatory in the pharmaceutical and medical industries and ensure that all processes comply with GMP guidelines.

### **Our quality department is divided into four specialized areas:**

- QA (Quality Assurance): Recording and processing of customer complaints using an 8D report
- QE (Quality Engineering): Development of new measurement methods in cooperation with our ISO 17025-accredited laboratory
- QC (Quality Control): Testing and implementation of new measurement methods in daily operations
- QM (Quality Management): Further development of systems, training, supplier qualifications & management reviews



### **Quality that you can also feel in the support**

If challenges arise when using our software or hardware, our competent support team is ready to help. Together with the quality department, we will quickly and efficiently find solutions to ensure the smooth operation of your systems.

- Our experts are highly trained and available to you at all times
- Problems are analyzed directly and solved sustainably
- Your success and satisfaction are our top priority

Put your trust in our quality management - for reliable systems, optimized processes and long-term customer satisfaction.

# Particle counter for every need

As an official distributor of Lighthouse Worldwide Solutions in Switzerland, we offer you a wide selection of high-precision particle counters, matching accessories and a customized calibration service for a wide range of applications. Thanks to our close partnership with Lighthouse, you benefit from our expert advice and first-class service.

Whether remote devices, portable particle counters for the highest cleanroom requirements or liquid particle counters for liquid measurements, we supply you with the latest measurement technologies for a wide range of applications. In addition, we offer the entire range of accessories, from isokinetic sampling probes to external vacuum pump technology and other equipment, to optimally support your measurements.



Apex Z3 & Z50



Apex R5, 3, 02, 03 & 05



Apex P3 & P5



Solair 3100 & 5100



Liquid Sampling System



Handheld 3016 & 5016

# Long-standing partnerships

Long-term and trusting partnerships are essential for us - not only with our customers, but also with our suppliers. We rely on close cooperation based on trust, quality and consistency. Only through strong and reliable partnerships can we maintain our high standards and develop individualized solutions that meet the high demands of our customers.

**vali.sys**

we prove clean air

**GreenTK**  
a vali.sys company

**MESSmatik**  
a vali.sys company

**LIGHTHOUSE**  
WORLDWIDE SOLUTIONS

**AMETEK®**  
SPECIALTY METAL PRODUCTS

**BSR** Ingenieur-Büro  
Beratung & Service im Reinraum

**ccstec**

**E+E**  
ELEKTRONIK®

**FSM**  
intelligent electronics

**INOVIS**  
Industrial Computing

**MICROMEDIA**  
INTERNATIONAL

**MSR**  
universal data loggers

**MT**  
MESSTECHNIK

**novasina**  
The Art of Precision Measurement

**PHARMAGRAPH**

**PST**  
PROCESS SENSING  
TECHNOLOGIES  
a DwyerOmega brand

**Tinytag**

**VAISALA**

**WAGO**

**WIKA**

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