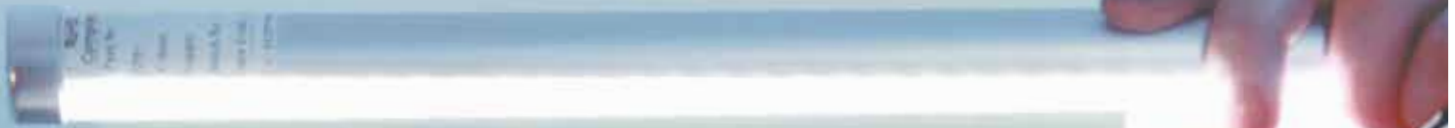




Malvern | Material relationships



PARTICLE SIZE

INSITEC VOYAGER

ON-LINE AND AT-LINE MOBILE PARTICLE SIZE ANALYZER



AWARD-WINNING MOBILE DESIGN FOR FLEXIBILITY OF USE

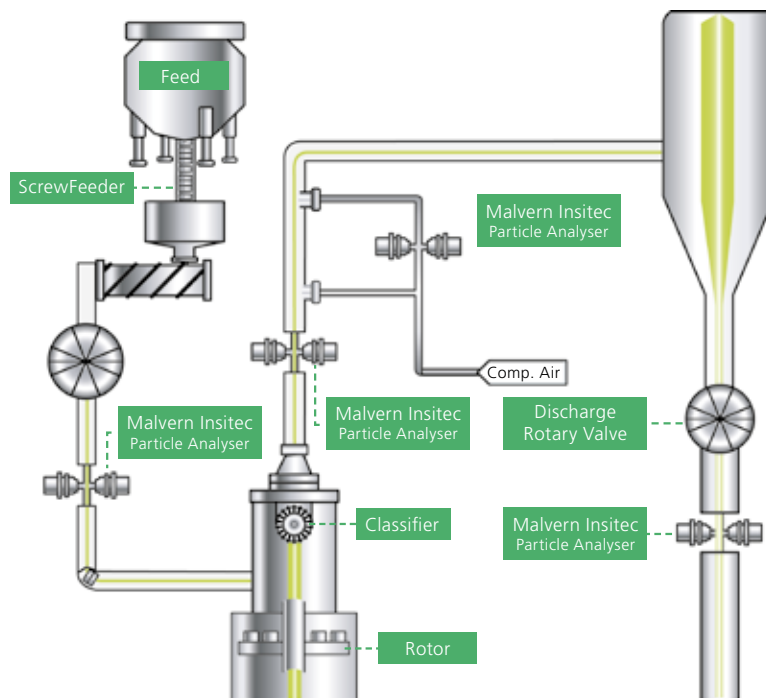
TROUBLE SHOOTING, PROCESS OPTIMIZATION OR PERFORMING CONSULTANCIES

The Insitec Voyager is a neatly packaged mobile laser diffraction particle size analyzer that can be moved easily around the plant for real-time at- or on-line use. As a fully integrated system for dry streams, Voyager is ideal for commissioning or process optimization studies on different unit operations such as mills, spray driers and classifiers.

Simple to attach to any process line with the required tappings, the Insitec Voyager delivers continuous real-time data that gives an insight into the process and allows the potential of a dedicated on-line system to be demonstrated. Analytical procedures are fully automated and results presentation is easily customized. Maintenance requirements for the instruments are low yet reliability remains extremely high.

Possible sampling locations

As a highly mobile solution, the analyzer can be moved to multiple locations in the process plant for real-time process optimization and process verification with continuous sampling.



Applications:

- Incorporates an Insitec T analyzer to measure solid or liquid particulates (0.1–2,500 μm) suspended in a gas process stream
- Automated, continuous on-line sampling in real-time
- At-line analysis - Measure different samples manually with all the analytical power of the QC laboratory available on the plant floor
- Enables samples to be reliably and immediately measured on plant, reducing the waiting time for laboratory results

EXCEPTIONAL MANOEUVRABILITY WITH EASE OF USE

The Voyager combines an Insitex T dry powder analyzer with all the necessary measurement electronics and a process interface in a single compact system. The use of tri-clamping and 316L stainless steel allows easy cleaning.

The Voyager also incorporates an embedded control PC and automation interface for connection to PLC and SCADA applications, facilitating complete stand-alone operation and automated data reporting.

- Optional data transfer to local DCS system for process control e.g. classifier speed

At-line with ALISS manual feeder

Laptop space for convenience

Automation cabinet fits within frame

Easy to adjust height of analyzer

1.5m

0.5m

Analyzer adjustable to any angle

Large wheels for effortless manoeuvrability

Anti-tip stabilizer legs

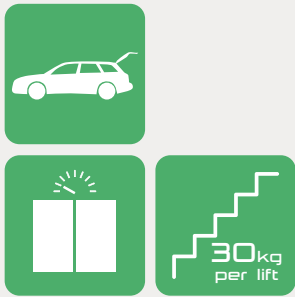
Lockable accessory case

Folds down for easy transportation

Convenient sling points for lifting

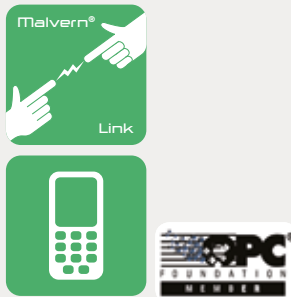
Portable work light for handy illumination

A MOBILE SOLUTION, PACKED WITH BENEFITS



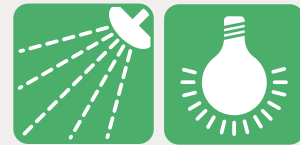
TRANSPORTATION

- Easily transported in an estate car/station wagon
- Robust enough to be shipped in advance
- Will fit in a lift (approximately 600mm by 600mm)
- Can travel over lattice flooring or checker-plate
- Incorporates slinging points
- Light enough to be taken up stairs (max 30kg per lift)



COMMUNICATION

- Fully automated, the Voyager can operate unattended, under control of our Malvern Link II interface while performing periodic self diagnostics and exchanging information with plant control systems
- OPC and Analogue outputs can interface with customers' equipment
- Local process variable display
- Optional email error reporting



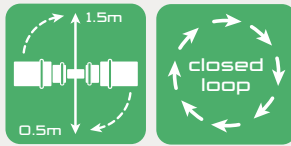
GENERAL

- Incorporates an air preparation kit to ensure clean air delivery
- Easily cleanable with the ability to wash down
- Comes with a lockable box for cables and spares
- Integral light to illuminate the working area
- IP65 rated
- Embedded PC for secure and stand-alone operation



EASE OF USE

- Can be assembled without the use of hand tools
- Simple to connect



FLEXIBILITY

- The optical head is mountable in any orientation, with variable height (0.5 to 1.5m)
- Can connect to and control a variety of unit operations
- Configurable as an 'at-line' system

EVALUATION AND CONSULTANCY

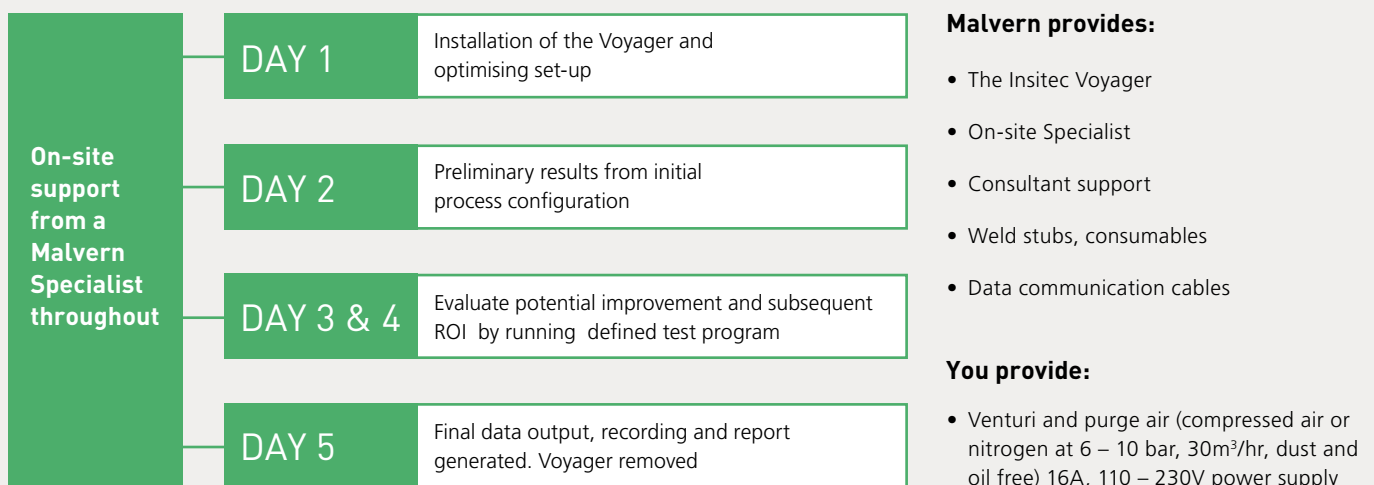


You can optimise your process and establish which data capture and analysis is most valuable to you without any commitment to purchase.

The Insitec Evaluation and Consultancy Service provides you with an award-winning Voyager instrument, installed at your site with a Malvern Specialist Consultant on-hand throughout a full 5-day evaluation period.

5 DAYS TO FIND THE ANSWERS FOR ONE SMALL FIXED FEE

Call Malvern to schedule a pre-trial meeting to discuss and agree your particular needs and to identify the goals you wish to achieve. After that, arrangements will be made for an Insitec Voyager to be delivered accompanied by a Specialist consultant from Malvern.



To check availability and to arrange your evaluation and consultancy, contact your Malvern Specialist Representative

PRODUCT SPECIFICATION



| | |
|----------------------------------------|------------------------------------------------------------------------------------------------------|
| Particle size range | 0.1 to 2,500µm |
| Transmission | 5 - 98% |
| Accuracy | +2% on Dv(50) reported |
| Maximum operating pressure | 10 bar (g) |
| Operating temperature (ambient) | -10°C to +40°C |
| Industrial protection | Dust-tight and waterproof: Optical head IP66, cabinets IP65 |
| Automation | Valve sequencing for automatic background, sample path cleaning, start/stop, OPC server to plant DCS |
| Dimensions | Measuring: H 1.6m max x W 0.66m x D 0.97m - Transport: H 0.69m x W 0.66m x D 1.22m |
| Weight (approx) | Insitec 25kg, Trolley 30kg, Automation cabinet 20kg |

Malvern Instruments has a policy of continuous product improvement and specifications may change. Further information about the optic specifications can be found at www.malvern.com/process

VALIDATION AND SUPPORT



Malvern's materials characterization technology and expertise enables scientists and engineers to understand and control properties of dispersed systems. Malvern's instruments are used to measure particle size, particle shape, zeta potential, molecular weight, size and conformation, rheology and for chemical identification. This information helps accelerate R&D, enhance product quality, optimize process efficiency.

Areas we work in:

- ACADEMIC BIOCHEMICAL RESEARCH
- BIOPHARMACEUTICALS
- FOOD AND DRINK
- ASPHALT
- PHARMACEUTICAL
- COSMETICS AND PERSONAL CARE
- CHEMICALS
- MINING AND MINERALS
- POWER GENERATION
- CEMENT
- METAL POWDERS
- PLASTICS AND POLYMERS
- SURFACE COATINGS
- ELECTRONICS
- CERAMICS
- ADHESIVES AND SEALANTS

Excellence through experience

Many Malvern systems are used in highly regulated environments and product validation and R&D traceability are priorities for our customers. Operating to ISO9001: 2008 with TickIt accreditation for software development, Malvern is a major supplier to the highly demanding pharmaceutical and chemical industries. Malvern's products play pivotal roles in high quality research and manufacturing throughout the world.

As a global supplier we believe we have responsibility to minimise the impact we have on the environment and operate to both ISO14001 and OHS18001.

Validation

To help our customers comply with the requirements of the Regulatory Authorities, such as the US Food and Drugs Administration (FDA) and the Medicines and Healthcare Products Regulatory Agency (MHRA), Malvern provides a comprehensive range of validation tools.

These aids follow a user's validation process through from Installation and Operational Qualification (IQ/OQ) to the maintenance phase with annual OQ renewals and the provision of standards for Performance Qualification (PQ). For products subject to FDA regulation, we have solutions to help with 21 CFR Part 11 compliance.

World-class service and support

Malvern offers professional support at all levels. Our intention is to increase your productivity through the creation of a working relationship for the lifetime of your instrument providing service support, training and information.

- Global network of fully trained service personnel
- World-wide co-ordination for multi-national companies
- Technical support from the Malvern Helpdesk via telephone or email
- Range of maintenance contracts and service agreements to cover all requirements
- Validation support
- Consultancy-based on site training courses
- e-Learning training courses via the internet
- Classroom training courses
- Web Seminars
- Sample and application consultancy.

No other company offers more



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Material Relationships - distributor details

