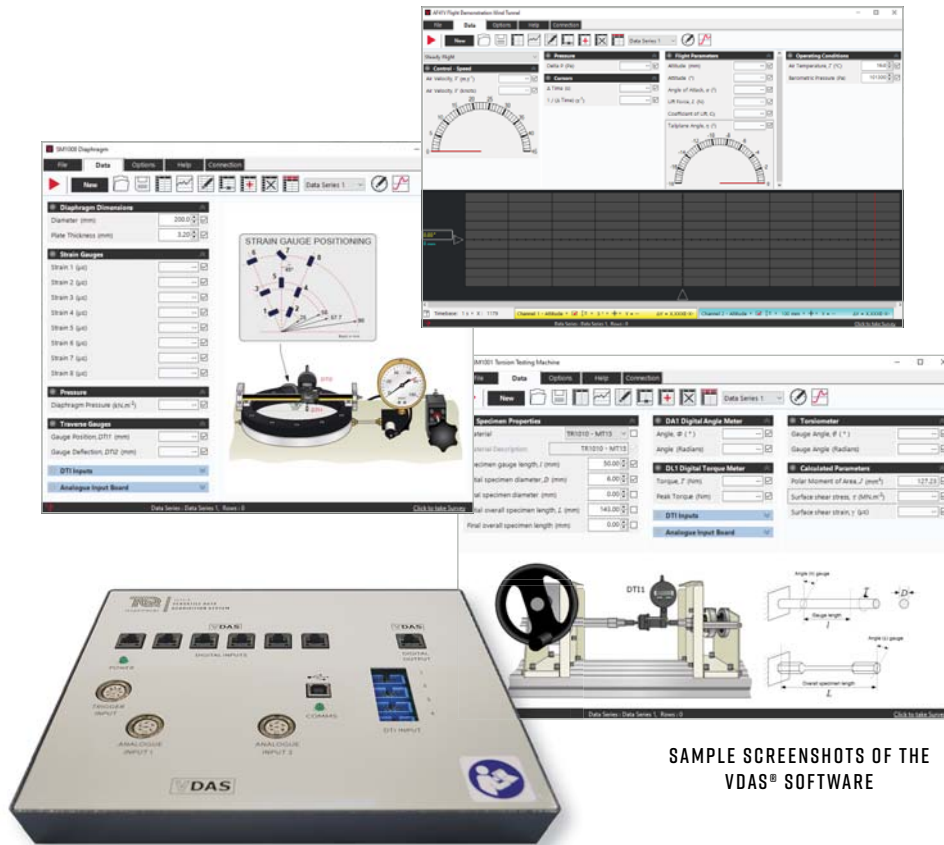




VERSATILE DATA ACQUISITION SYSTEM **VDAS®**

VDAS® (MKII) AND VDAS® ONBOARD

High-capacity, accurate, efficient and user-friendly automatic data acquisition hardware and software package for over 90 TecQuipment products.



SAMPLE SCREENSHOTS OF THE
VDAS® SOFTWARE

VERSATILE DATA ACQUISITION SYSTEM BENCH-TOP
INTERFACE (VDAS®-B MKII)



VERSATILE DATA ACQUISITION SYSTEM
FRAME-MOUNTING INTERFACE (VDAS®-F MKII)

KEY FEATURES

- Modern, cost-effective automatic data acquisition hardware, software and accessories to enhance teaching and laboratory sessions
- Real-time traces, data capture, monitoring and display of experiment readings on a computer (PC)
- Intuitive and easy to use software, with clear, customisable display and layout options
- Automatic calculation, recording, charting and data export for efficient use of students' and lecturers' time
- Available in both frame-mounting and bench-top options for convenience
- Similar software layout for all VDAS® compatible products, no need to learn new software when changing experiments

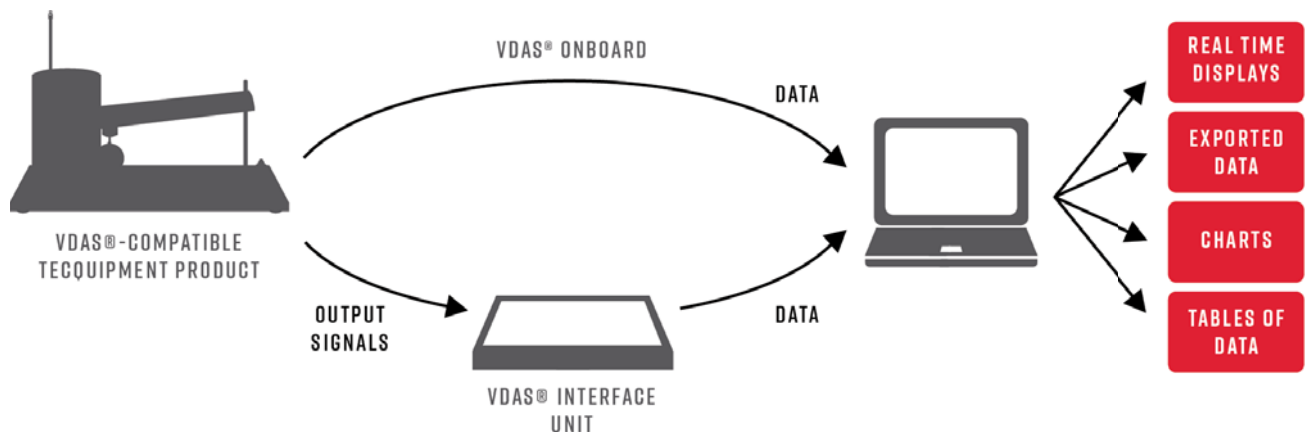
KEY SPECIFICATIONS

- All mains connectors and cables
- STP (shielded twisted pair) cables for equipment connection
- Data export:
 - XLSX file (default)
 - HTML file (optional)



VERSATILE DATA ACQUISITION SYSTEM

VDAS® (MKII) AND VDAS® ONBOARD



DESCRIPTION

TecQuipment's modern, cost-effective and accurate Versatile Data Acquisition System (VDAS®) improves laboratory teaching. It works with a growing list of over 90 TecQuipment products, enabling real-time display and capture of experiment data.

For both individual student use or for lecturers demonstrating experiments to a whole class, VDAS® gives real-time calculation, recording and charting with fast data export. This makes efficient, productive and effective use of time for both students and lecturers.

Equipment with VDAS® Onboard has the required hardware integrated into the apparatus. So, for these products it is not necessary to purchase an additional VDAS-B or VDAS-F. Simply download the free software from the TecQuipment website, fit the supplied USB cable between the apparatus and a suitable computer (not supplied), select the apparatus being used from the VDAS® options menu and the system is ready to go.

For VDAS® compatible products either VDAS-F or VDAS-B is required (see the relevant product datasheet). The hardware offers a choice of either a frame-mounting interface (VDAS-F) or a bench-top interface (VDAS-B). Both interface units work the same but the choice gives more convenience to the user. For example, some TecQuipment VDAS® compliant products have an integral instrumentation frame so the frame-mounting interface unit is the best choice. To reduce costs, order just one VDAS® hardware unit for each classroom and connect it to each product as needed. The VDAS® software is free to download from the TecQuipment website. A computer (not supplied) is also required.

The digital inputs on each interface connect directly to instrumentation on suitable TecQuipment products. These inputs are non-specific, for easy experiment setup and reduced connection errors. The mostly digital communications circuits make the equipment more resistant to electrical noise than purely analogue systems.

The MkII interface units also have two analogue inputs. These are for fast-moving (transient) signals from some TecQuipment products or for transducers and sensors. These may include displacement or pressure measuring sensors and flow meters. VDAS® software can display the analogue signals in real-time as traces on a computer screen. This allows VDAS® to work as a user-friendly alternative to an oscilloscope on selected products.

The output from the interface unit connects via USB to a computer (computer not supplied) running the VDAS® software.

The software has extra features that allow the adding of derivative traces and reference traces, based on each of the two analogue input signals. It is also possible to adjust software filtering and smoothing of each signal trace, and scale the traces to best fit the trace area.

For both VDAS® MkII and VDAS Onboard®, the software is intuitive and easy to use, with clear and convenient data display options. The software looks similar and works in a similar way for each TecQuipment VDAS® compliant product. This saves time as students do not have to learn how to use new software when changing experiments.

VDAS® software features include:

- Works with existing TecQuipment VDAS®-compatible products
- Recording data manually or automatically
- Data capture set by time or intervals
- Display of real-time data, in digital form or as an analogue meter
- Real-time traces of analogue signals
- Logging data for printing and later analysis
- Exporting data for use by other software
- Performing real-time calculations to generate user-defined data
- Creating and printing charts and data tables
- Customisable layouts

≡ VERSATILE DATA ACQUISITION SYSTEM

VDAS® (MKII) AND VDAS® ONBOARD

STANDARD FEATURES

- Supplied with comprehensive user guide
- Five-year warranty
- Manufactured in accordance with the latest European Union directives
- ISO9001 certified manufacturer

ESSENTIAL ANCILLARY

- Suitable computer (not supplied)

IDENTIFYING VDAS® COMPATIBLE PRODUCTS

TecQuipment products that are supported by VDAS® can be quickly identified by the following logos in their datasheet heading:



Products with this logo require the VDAS® hardware (either VDAS®-B or VDAS®-F) in order to gather data.

Products featuring the VDAS® Onboard logo, have TecQuipment's Versatile Data Acquisition system integrated into the hardware of the product as standard.



VDAS® RELATED SOFTWARE

See the VDAS® e-lab datasheet for further information on this software that works with TecQuipment's VDAS® enabled products that can be used remotely, allowing students to interactively engage and participate in laboratory experiments for an adaptable, blended learning approach.



HDMS is a user friendly, simple software tool for manual data entry and recording of data for many of TecQuipment's hydraulics experiments. See the HDMS datasheet for further information.



ESSENTIAL SERVICES

ELECTRICAL SUPPLY (FOR VDAS® HARDWARE):

- VDAS-B: Single Phase, 100 – 240 VAC, 50/60 Hz, 1.5A
- VDAS-F: Single Phase, 90 – 250 VAC, 50/60 Hz, 1A

MINIMUM COMPUTER HARDWARE TO RUN VDAS® SOFTWARE:

- Intel® i5 or equivalent processor. Multi-core processors give better performance.
- 1280 x 768 screen resolution
- USB 2 or USB 3 port
- 500 MB of hard disc space
- Standard two-button mouse (three-button mouse with scroll wheel is better)

MINIMUM PC OPERATING SYSTEM TO RUN VDAS® SOFTWARE:

- Microsoft® Windows 10 or later

OPERATING CONDITIONS

OPERATING ENVIRONMENT:

Laboratory environment

STORAGE TEMPERATURE RANGE:

–25°C to +55°C (when packed for transport)

OPERATING TEMPERATURE RANGE:

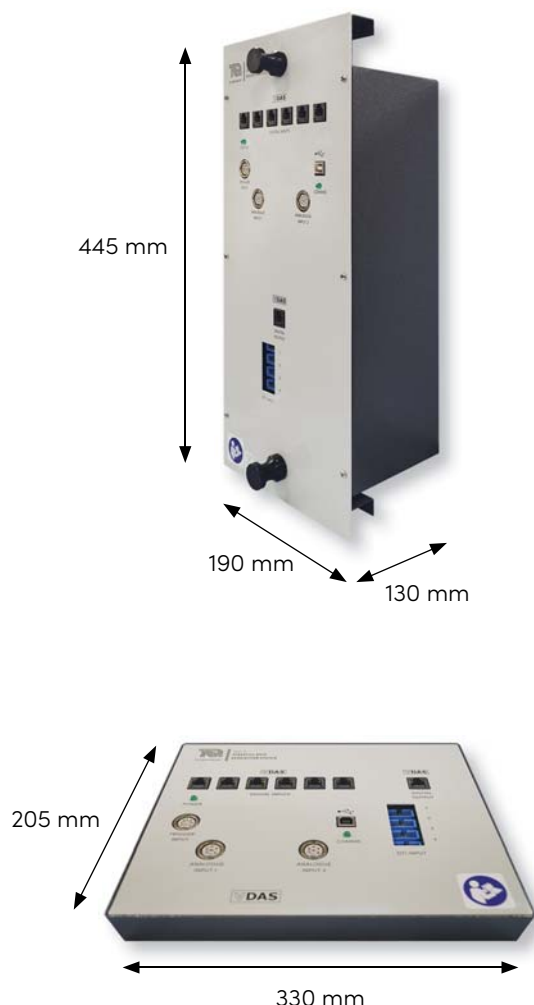
+5°C to +40°C

OPERATING RELATIVE HUMIDITY RANGE:

30% to 95% (non-condensing)

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DETAILED SPECIFICATIONS

TecEquipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

FRAME-MOUNTING INTERFACE UNIT (VDAS-F):

NETT DIMENSIONS AND WEIGHT:

Width 190 mm x depth 130 mm x height 445 mm and 3.5 kg

APPROXIMATE PACKED VOLUME AND WEIGHT:

0.07 m³ and 8 kg

BENCH TOP INTERFACE UNIT (VDAS-B):

NETT DIMENSIONS AND WEIGHT:

Width 330 mm x depth 205 mm x height 45 mm and 1.5 kg

APPROXIMATE PACKED VOLUME AND WEIGHT:

0.05 m³ and 8 kg

COMPUTER CONNECTION:

- USB (lead included)

ACCESSORIES (SUPPLIED):

- All mains connectors and cables
- STP (shielded twisted pair) cables for equipment connection

DIGITAL INPUTS:

- 6 off RJ45 connection
- 4 off SPC (DTI) inputs

ANALOGUE INPUTS:

- 1 DIN type socket for dual trigger input
- 2 DIN type sockets for signal inputs of 0 to 10 V or 4 to 20 mA
- Sample rate up to 25 kHz with 12 bit resolution
- Bandwidth/Filter cut-off 3 kHz (nominal)

DATA EXPORT:

- XLSX file (default)
- HTML file (optional)