

Thank you for choosing this Mecmesin instrument, with correct use it will give many years of reliable service. Upon receiving the unit please check that no obvious physical damage has been sustained by the packaging material or the instrument itself. If any damage is evident, or if any of the items in Appendix 1 are missing, please notify Mecmesin or their Authorised Agent immediately. We strongly recommend that **all** the packaging and fixings are retained for any future transit requirements. When using the VersaTest, please ensure that the ventilation holes situated on the back and the bottom of the unit are not obstructed. Attach (hand tight only) the four rubber feet to the VersaTest with the screws provided.

Safe Operation Of The VersaTest

Appendix 2 gives guidance notes on the safe use of mains powered test frames. You should read this before proceeding any further. Within the European Union (EU), a copy of this Appendix is supplied in a language appropriate for your country.

Failure to adhere to the guidelines for safe use given in these operating instructions may result in irreparable damage to the unit and personal injury to the operator.

Introduction To The VersaTest

The VersaTest is a single column ballscrew-driven test frame with a load rating of up to 2500N. It must not be used with load ratings above 2500N. Complemented by a Mecmesin loadcell or force gauge (as illustrated in the photograph), together with special fixtures and accessories, it constitutes a key component in force measurement systems suitable for accurately and reproducibly testing a wide range of products.

There is only one standard model of the VersaTest. The dimensions, speed range and capacity have been carefully optimised to cover the test procedures and specimen sizes most often needed by quality departments within many sectors of manufacturing industry.

The VersaTest has been designed and manufactured in a controlled system to ensure compliance with all relevant European Community Directives. See Appendix 3. Additional information on the VersaTest can be found in Mecmesin publication M/511291.

Operating Instructions



Speed Setting

The VersaTest has variable speed control in both upward and downward directions. Speeds can be independently set and controlled by the knobs (A, in Fig.1) on the front panel. The white pointer on the speed control knobs gives an indication of the speed setting. Some test Standards place particular requirements upon speed accuracy/reproduceability, which may exceed the normal performance of the VersaTest. Under such circumstances calibration of each individual test stand may be appropriate.



Start-up Procedure

Set the limit switches (B, in Fig.1); turn each red plastic thumbscrew anticlockwise, move to appropriately 50mm either side of the moving crosshead (C, in Fig.1) and re-tighten. Do not confuse these limit switches with the (preset) safety stop (D, in Fig.1).

Connect your VersaTest to an appropriate mains supply, turn on power switch (a, in Fig.2). If the green power bar does not illuminate, turn the red emergency stop button (E, in Fig.1) in a clockwise direction (as indicated by the arrows).

Pressing the red 'Emergency Stop' button will, at any time, stop the crosshead moving*

* Note that the green power bar fades over a period of about one second.



Manual Operation

Set the 'Mode' rocker switch (F, in Fig.1) to 'Manual Control' (centre position) and set each speed control knob to a mid-range position (with pointer close to 12 o'clock). Hold the 'Start/Stop' centre-biased toggle switch (G, in Fig.1) in either the 'Up' or 'Down' position. A red LED (H, in Fig.1) will illuminate showing that the crosshead is moving and indicating the direction of travel.

Releasing the Start/Stop switch will stop the crosshead moving.



Single Cycle Operation

Set the Mode switch (F) to 'Single Cycle', move the 'Start/Stop' switch (G) to the 'up' or 'Down' position and then release. The crosshead will move and the LED indicating direction of travel will illuminate.

When a limit switch position is reached, the crosshead will begin to travel in the opposite direction. When the position of the other limit switch is reached, the motor will stop and the crosshead will come to rest.

During the cycle, setting the Mode switch to 'Manual Control', or selecting either the 'Up' or 'Down' position will stop the crosshead moving.



Constant Cycle Operation

Set the Mode switch (F) to 'Constant Cycle', move the 'Start/Stop' switch (G) to the 'Up' or 'Down' position, and then release. The crosshead will move and the LED indicating direction of travel will illuminate. The crosshead will cycle continuously between the limit switch positions.

During the cycle, setting the Mode switch to 'Manual Control', or selecting either the 'Up' or 'Down' position will stop the crosshead moving.

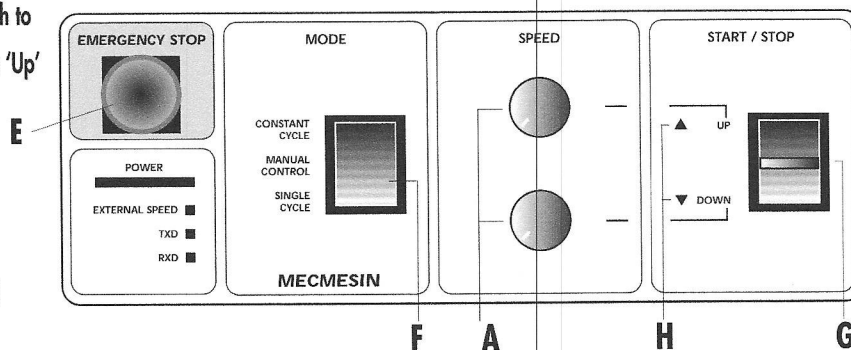


Fig 1

Force Gauges, Loadcells and your Fixturing

You will need to attach a force measuring device to your VersaTest; this will usually be an Advanced Force Gauge or an S-beam loadcell. Attach an AFG by screwing a dovetail extension bracket to the back of the AFG, slide it (with the loadcell stud pointing downwards) onto the moving crosshead dovetail (C), and tighten with the Allen key provided. Attach an S-beam loadcell by screwing it into a tension block module, then proceed as for an AFG. If you have purchased special fixturing, attach this to the gauge/loadcell and/or your VersaTest.

Loadcells and force gauges are delicate pieces of equipment and can easily be damaged irreparably. One way of doing this would be to drive the test stand downwards until the loadcell (or loadcell stud on an AFG) hits something 'solid'. This is a risk when a user is not yet familiar with operating a new test stand. Consequently the safety stop (D) has been preset to significantly limit downward travel of the crosshead. Now that the test system is assembled, use the Allen key provided to re-set the safety stop to the bottom of its intended travel range, allowing a gap of at least 10mm between the fixtures fitted. Adjust the limit switches (B) according to your sample dimensions and testing requirements.



Communicating with External Devices

There are two external control ports at the rear of the VersaTest. The Display Unit interface (b, in Fig.2) enables the VersaTest to respond, via the appropriate Mecmesin cable, to signals from an AFG. Please refer to your AFG Operating Manual for further details. Communication between the VersaTest and other external devices (e.g. a PC) is possible via the RS232 interface (c, in Fig.2) and an appropriate cable.



The VersaTest must be powered off when attaching either cable.

When the interfaces are not in use please ensure that they are covered with the supplied sheilds at all times.

For further information (on programming/protocol) contact Mecmesin or their Approved Agent and ask for Technical Datasheet M/512051.

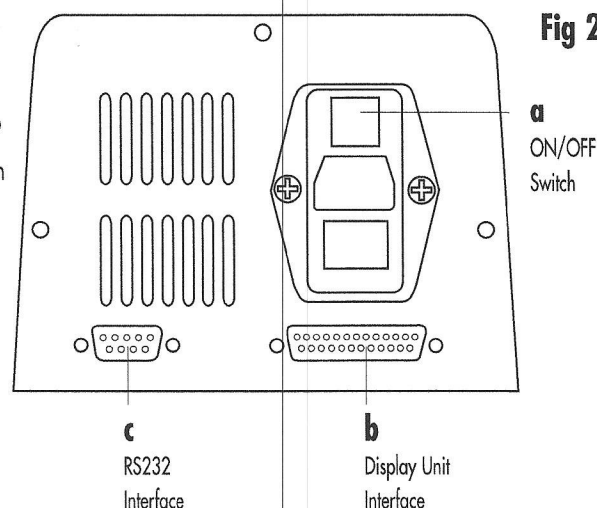


Fig 2

VersaTest Technical Specification

| MODEL | VERSATEST | | |
|--|---------------------------|---|----------------------------------|
| Load capacity: | 2500N (250kg, 550lb) | Limit switch repeatability: | <0.1mm* (0.004in) |
| Power consumption: | 150 watts (maximum) | Over-run at top speed: | <2mm (0.008in) |
| Weight (stand only): | 27kg (59.6lb) | Operating modes: | Manual, cyclic and single cycle |
| CROSSHEAD MOTION | | Reverse on alarm point: | Yes, with AFG or AFTI, and cable |
| Travel range: | 500mm (19.7in) | Reverse on sample break: | Yes, with AFG or AFTI, and cable |
| Maximum daylight: | 620mm (24.4in) | ENVIRONMENTAL OPERATING CONDITIONS: | |
| Max headroom (as in photograph) | 510mm (20.08in) | Temperature range: | 5°C - 40°C |
| Anvil plate: | 160mm (6.3in) | Humidity: | <92.5% |
| | x 100mm (3.94in) | STANDARD LOAD MEASUREMENT OPTIONS: | |
| | Female threads 10/32" UNF | Force gauge & dovetail bracket | |
| | 5/16" UNC | S-beam loadcell, tension block module & AFTI | |
| Speed range: | 12.5 - 500mm/min | SPECIAL OPTIONS (details available on request) | |
| | (0.5 - 19.7in/min) | Increased crosshead travel: | Yes |
| Speed accuracy: | ± 5% of indicated speed | Increased crosshead depth: | Yes, (load capacity is reduced) |
| Up and down settings: | Yes | Machine guard: | Yes |
| Speed indicated on stand: | Yes | Horizontal operation: | Yes |
| Direction of travel indicated on stand: | Yes | Simple logging/plotting PC software: | DataPlot (see M/501201) |
| | | Full computer control: | PCM (see M/512071) |

* At given speed (i.e and not necessarily over whole speed range)