Mecmesin
testing to perfection

Assembly and Installation of MultiTest-*xt* and Vortex-*xt* System Test Stands

Important

It is essential that you familiarise yourself with the contents of this *Assembly and Installation Manual*, and the separate *Guide to Safe Use of Mains Powered Test Systems* before attempting to operate your MultiTest-*xt* or Vortex-*xt* Test System. Please note console design may vary.

Warranty

The -*xt* console is pre-configured at Mecmesin for use with the MultiTest-*xt* and Vortex-*xt* stands. With the exception of the Advanced Builder Option, which requires a configuration change to the console, any unauthorised changes to the console configuration and set-up will invalidate the warranty.

The 24-month end-user warranty for the console itself is with a third party. Please contact your local Mecmesin agent for assistance with this warranty.

The Microsoft® Windows® 10 Enterprise 2016 operating system is pre-installed and licensed by Mecmesin and supplied with an End User License Agreement, and Certificate of Authenticity.

The console is supplied for the sole purpose of operating, and collecting data from, your Mecmesin –xt system. Any use other than this is not recommended and may result in performance degradation and/or damage to your console. Although network and USB storage device connection is allowed, this is at the user's risk. No liability can be accepted by Mecmesin for virus, malware or ransomware contamination

Scope

This reference manual covers the following products and their derivatives: (example)

Force testing stands		
Single-column stands	MultiTest	0.5-*xt*
	MultiTest	1-*xt*
	MultiTest	2.5-*xt*
	MultiTest	5-*xt*
Twin-column stands	MultiTest	10-*xt*
	MultiTest	25-*xt*
	MultiTest	50-*xt*
Torque testing stand		
	Vortex-*xt*	Torque cell capacities: 0.3, 1.5, 3, 6, 10 Nm

Contents

1. Items Supplied with the Test Stand

1.1 MultiTest-*xt* test stand

1. Test stand
2. Console fitted with arm, power cable and USB cable
3. Tools to fit the console to the test stand
4. CD with software and manuals for backing up or running on a PC
5. Assembly and Installation guide (this manual)
6. Translation of 'A Guide to the Safe Use of Mains Powered Test Frames' (does not apply to English speaking countries, or countries outside European Union)
7. Adjustable handle lever to secure loadcell to crosshead
8. Appropriate mains cables for test stand and console
9. Allen keys and Torx wrenches
10. Four rubber feet, four attachment screws and Allen key (if applicable)
11. Four base anchoring brackets, (if applicable)
12. Adaptors (if applicable)

1.2 Vortex-*xt* test stand

1. Test stand
2. Console fitted with arm, power cable and USB cable
3. Intelligent Torque Cell (ITC), as an integral part of the crosshead
4. CD with software and manuals for backing up or running on a PC
5. Start-up guide
6. Translation of 'A Guide to the Safe Use of Mains Powered Test Frames' (does not apply to English speaking countries, or countries outside European Union)
7. Appropriate mains cables for test stand and console
8. Allen keys and Torx wrenches

2. Installation

2.1 Unpacking the stand

When you first receive the stand please check that there is no obvious damage to the packaging. If there is any sign that the packaging or the test stand itself has been damaged, please contact Mecmesin or your authorised distributor immediately. Do not use the stand until you have done so.

We strongly recommend that the packaging is kept, as this can be useful if the machine needs to be returned for calibration.

Section 1 lists items that should be included with your test stand. Please contact Mecmesin or your authorised distributor if any items are missing or damaged.

2.2 Lifting the test stand

The unpackaged weight of the test stand is given in the Specification table at the back of this manual. Do not try to lift heavy loads unaided. Use suitable lifting equipment if necessary.

2.3 Locating the stand

The test stand should be positioned on a suitable, level, stable work surface.

2.4 Mains power supply

Mecmesin –*xt* stands can be used on 110–120 or 220–240 V ac 50-60 Hz supplies. The rear fuse carrier will be set for your local requirement, but is reversible, so should you replace a fuse, the correct local voltage must be selected. The voltage that is selected is *the one where the arrows meet* (the power inlet is inverted for some test stands):

Fuse carrier   **Carrier removal**

3. MultiTest-*xt* Assembly and Installation

3.1 Bolting the test stand to the work surface

In order to comply with European regulation and safe use of the equipment, single column stands should be secured to the bench as follows:

Test stand	Height (mm)	Feet/fixing supplied	Bolting recommended?
0.5-*xt*	1710	Anchor brackets	Yes
1-*xt*	1510	Anchor brackets	Yes
2.5-*xt*	941	Rubber feet	No*
5-*xt*	1082	Rubber feet /locating eyes	Yes

* For MultiTest-*xt* console-controlled frames we recommend that the console is located *below* the information label on the mounting rail for stability. If the console is to be mounted above this point, please contact your authorised Mecmesin agent to purchase a set of anchor brackets.

The extended-length test stands MultiTest 0.5-*xt* and MultiTest 1-*xt* are supplied with base anchoring brackets to allow the test stands to be bolted to a bench. Screw the anchoring brackets to the four positions on the base plate of the MultiTest 0.5-*xt* or 1-*xt* using the M6 screws provided. Secure the test stand to the bench using suitable fastenings.

MultiTest 0.5-*xt* and 1-*xt* are supplied with anchoring brackets

For additional stability the MultiTest 5-*xt* is fitted with two 'locating eyes' on the base of the MultiTest 5-*xt* to allow the stand to be bolted to a bench.
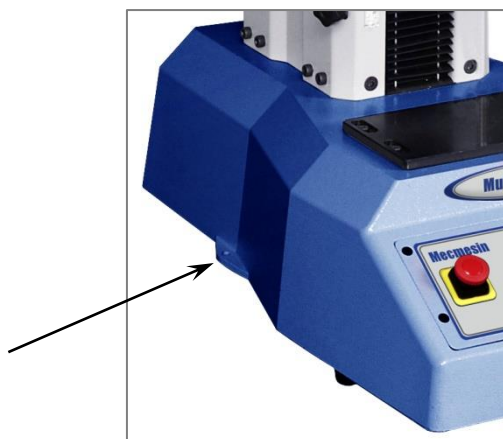
Locating eyes on MultiTest 5-*xt*

Mecmesin twin-column force testing stands and Vortex torque testing stands require no further stability fixing than a flat, secure and stable working surface.

3.2 Fitting the feet to the stand

Fitting rubber feet to the base of the test Stand

The MultiTest 2.5-*xt* and MultiTest 5-*xt* are supplied with rubber feet. Support the stand and fit the four rubber feet to the base of the stand.

3.3 Fitting the console to a single column test stand

The console is supplied assembled onto a mounting bracket. This needs to be attached to the side of the stand with the supplied tamper-resistant Torx screws, and the appropriate Torx wrench is provided. **Note:** Do not use any other tools other than those provided.

From the back of the stand, identify the short sliding bar held in place in the vertical slot that runs the length of the column. This has two screw holes for the console bracket and a central grub screw for adjusting vertical height. Then identify the two console bracket holes and fit the upper screw.

Support the console with one hand and, with the top screw held in place by the supplied Torx wrench, locate the bracket on the sliding bar and engage the screw. When almost tight, fit the lower screw. Tighten both and release the console. Height can now be adjusted by slackening the grub screw through the hole between the fixing screws whilst supporting the console, as shown, then re-tightening at the required height. The maximum recommended height is 700 mm (27.6"). **Note:** Do not exceed the recommended height as this can cause problems with the stability of the test stand.

The sliding bar with central grub screw
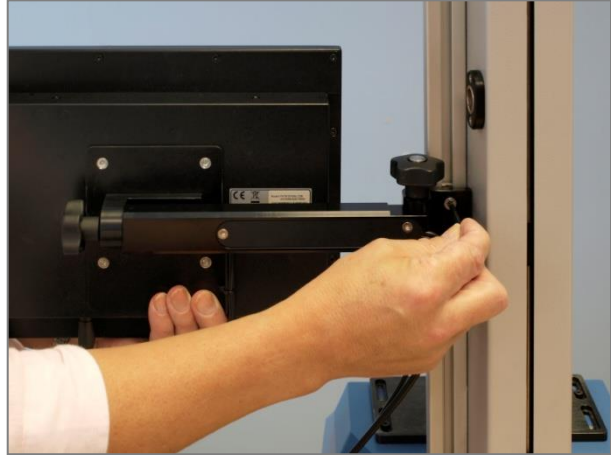
Fix the upper Torx screw first

Using the Allen (hex) key, adjust the console height
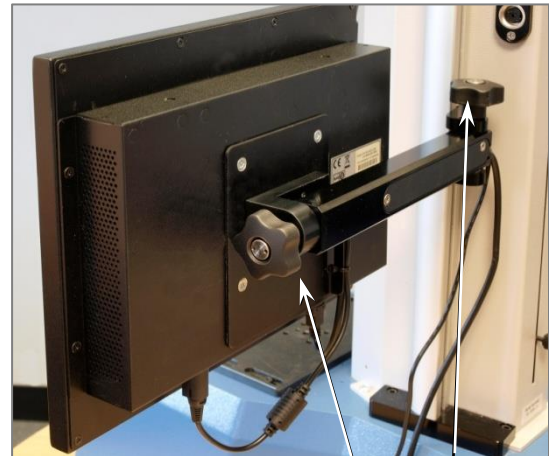
Use the two knobs to adjust tilt and swing

The angle and rotation of the console are locked into set positions by sprung pins. Slacken the appropriate knob and reposition the bracket or arm on alternative pin locations.

3.4 Fitting the console to a twin-column stand

Consoles for a twin-column stand are supplied assembled onto a mounting bracket with an extended mounting plate for attaching to the slot running down the rear of the right-hand column. The plate is fitted with two Torx screws and flat 'T'-shaped nuts, as shown below. This needs to be attached to the slot using the supplied Torx wrench. **Note:** Do no use any other tools other than those provided.

Slacken the two nuts off and align then vertically to fit into the slot. Support the console with one hand and, with the top screw held in place by the Torx wrench, locate the bracket over the slot and engage the screw. This will rotate the 'T' nut and engage in the slot. When almost tight, turn the lower screw. Tighten both and release the console. Height can now be adjusted by supporting the console and slightly slackening the nuts to move the console up or down.

Twin column mounting plate and tool

Fit the 'T' nuts into the rear slot and tighten

The angle and rotation of the console are locked into set positions by sprung pins. Slacken the appropriate knob and reposition the bracket or arm on alternative pin locations, as shown above for single column stand assembly.
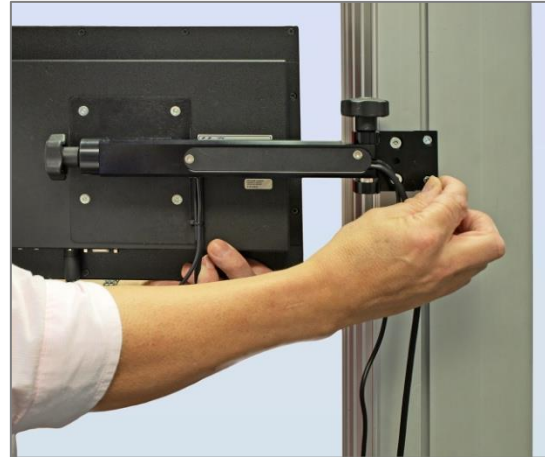
3.4.1 Twin column stands with guards

Where a twin column stand is fitted with a guard cabinet, the console may be fitted to the frame. A mounting plate will be already fitted; secure the console bracket to the rear of the plate using the two screws provided. Height may be adjusted by slackening the mounting plate screws slightly, and retightening at the appropriate height.
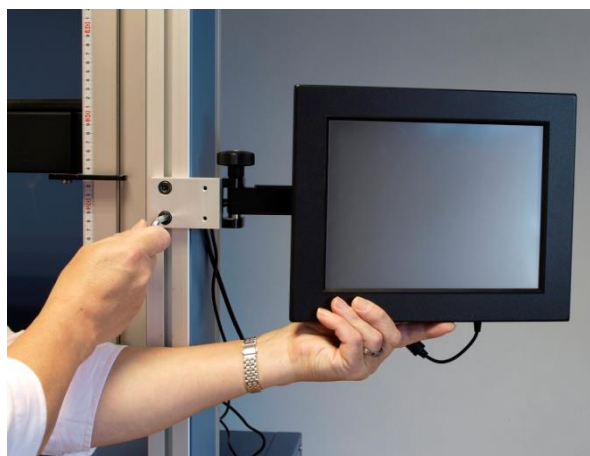
Supporting the console, slacken the screws and adjust the height.

3.5 Fitting the loadcell to the crosshead

Single-column stands

Ensure the stand is switched off.

Screw the adjustable handle lever with the red button into the crosshead dovetail. This lever is designed to tighten without full rotation. Hold the button on the top to raise and disengage the lever, and turn it away from the direction required. Release and turn, and repeat as required.

Do not tighten the lever without a loadcell attached, or the dovetail can become distorted.

Inserting the adjustable handle lever

On single-column test stands, slide the loadcell (ILC) sideways onto the dovetail bracket at the front of the crosshead. The threaded stud must always be on the underside. Secure the loadcell using the handle lever. Some lateral adjustment is available if needed to align the ILC and a sample. Slacken the lever to make the adjustment, and then re-tighten.

Note: There is some additional adjustment available by moving the anvil plate. Use a 3 mm Allen key to slacken the four retaining screws, reposition the anvil plate and re-tighten the screws.

Align the electrical connector of the ILC with the socket on the test stand. Gently push the connector to locate, then tighten the knurled locking ring in a clockwise direction.

Slide the loadcell onto the dovetail ...   **tighten securely ...**   **connect the loadcell**

Twin-column stands

The ILC is attached to a twin-column test stand using a cap-head bolt passed through the central hole in the moving crosshead, and secured using the Allen key provided.

Attaching a loadcell on a twin-column system

3.6 Swapping loadcells

You can swap loadcells by simply disconnecting one cell and fitting another. First, return to the Main Screen and switch off the stand before unplugging the loadcell. When the new loadcell has been connected, switch the stand on again, and after a few seconds the new loadcell will be automatically recognised. The MultiTest-*xt* will read in the new cell's range, serial number and calibration status.

3.7 Attaching grips and fixtures

Grips and other holding fixtures are often paired, with one being attached to the anvil plate, and the other to the underside of the loadcell. Some fixtures have the QC Quick-interchange system which allows for very rapid changing of the holding accessory.


Attaching a grip with the QC Quick Interchange fittings

With the Quick-interchange system, the grip is attached to a mounting using an 8 mm diameter pin. The grip can be fitted and removed without the need for additional tools. Be sure to fit the locking spring to secure the accessory in place.

Take extra care when fitting or removing heavy grips to the underside of the loadcell. Support the accessory while the securing device is removed so that it does not fall. Before fitting a sample, check that both grips and plates are secure.

3.8 Setting the limit stops

Limit stops are provided to prevent damage to the loadcell and grips. A dual safety system provides protection with the first stage being software controlled, followed, if necessary, by a second hardware limit that removes power from the motor. Upper and lower limit stops can be set to restrict movement of the crosshead. If the crosshead reaches a limit during a test, it will stop then reverse direction for approximately 5 mm, then stop again. A warning message is displayed on the touch screen:
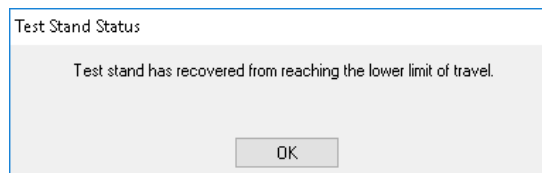
Press OK to acknowledge the warning and use the Jog buttons to move the crosshead so that you can then check the position of the limit stops and re-set if required.

If a limit stop is reached while pressing one of the Jog buttons on the front panel of the MultiTest-*i*, a different warning message is displayed.
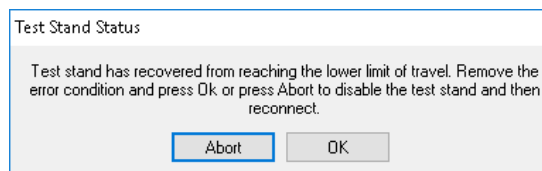
Pressing OK will allow you to correct the situation and continue.

Pressing Abort will disconnect the stand from the console, and display the following message:
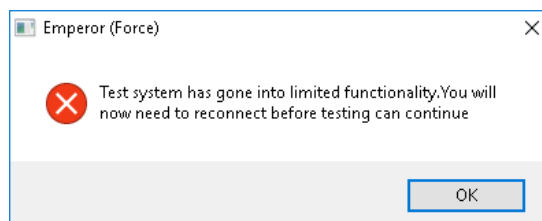
Press OK then Exit to go to the Front Screen, this will reconnect the stand again.

Limit stops should be adjusted after grips or holding accessories have been fitted so that the limit positions will prevent unwanted contact between moving and static parts. To set

either limit stop, slacken the knurled knob by turning it anti-clockwise, then slide the stop to the desired position and re-tighten the knob again.

Remember to check and, if necessary, adjust the position of the limit stops if the grips are exchanged for a different holding accessory.
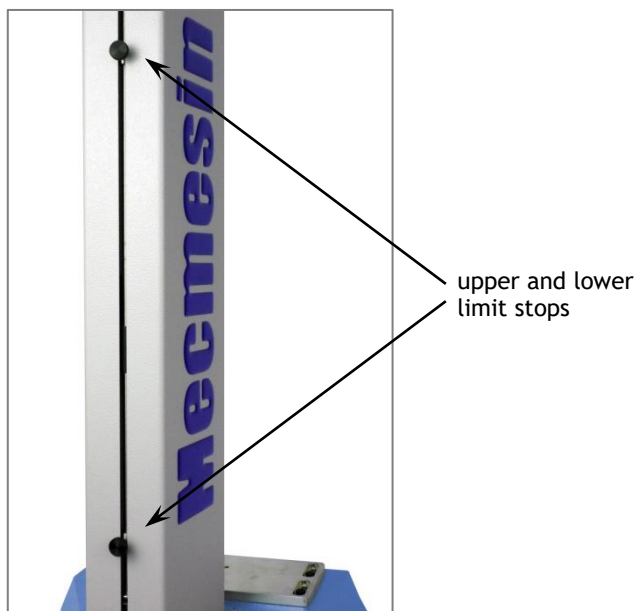
Limit stops on a MultiTest 1-xt. Stops on other stands all operate in the same way.

Twin-column stands have system limit stops as well as limit stops. **System limit stops should not be moved.** In an emergency, to release a trapped sample the system limit can be moved, but if you do so, **you must contact your Mecmesin distributor for servicing and re-setting**. These stops are designed for protection from damage, and moving them may affect your warranty on the stand.
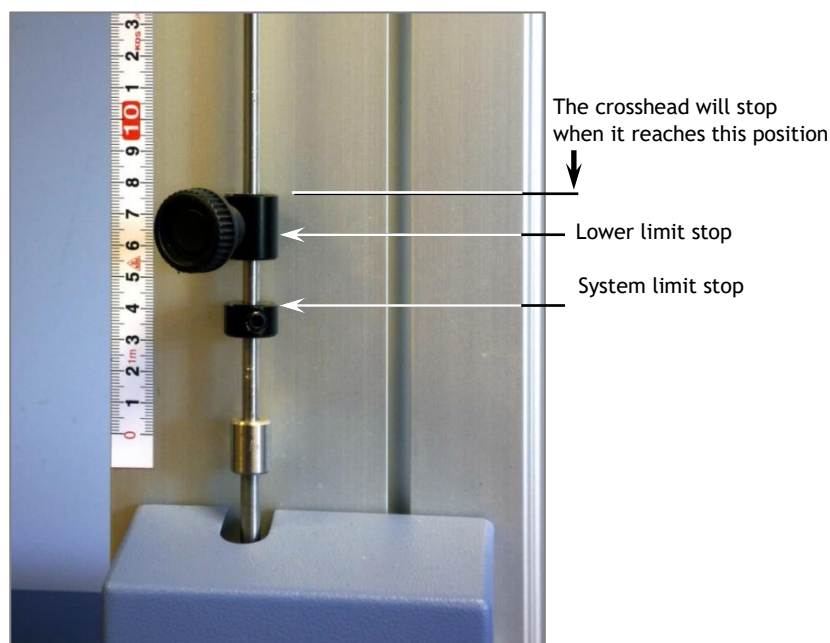
Lower limit stop and system limit stop on a twin-column stand

4. Vortex-*xt* Assembly and Installation

4.1 Fitting the console to the Vortex-*xt*

Using the Allen key supplied, fit the stand bracket to the right-hand column as shown, and adjust the height. The console is supplied assembled onto a mounting bracket. This needs to be attached to the stand bracket with the two supplied security screws, and the Torx wrench provided. **Note:** Do no use any other tools other than those provided.

Support the console with one hand and, with the top screw held in place by the supplied Torx wrench, locate the console on the stand and engage the screw. When almost tight, fit the lower screw. Tighten both and release the console.
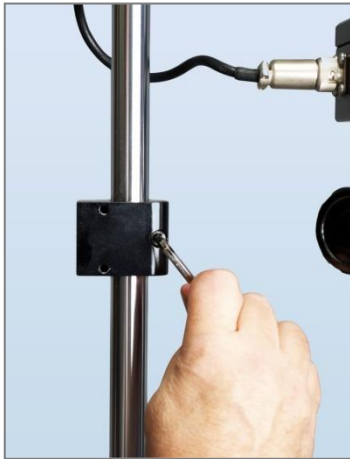
Fit and adjust height of the bracket
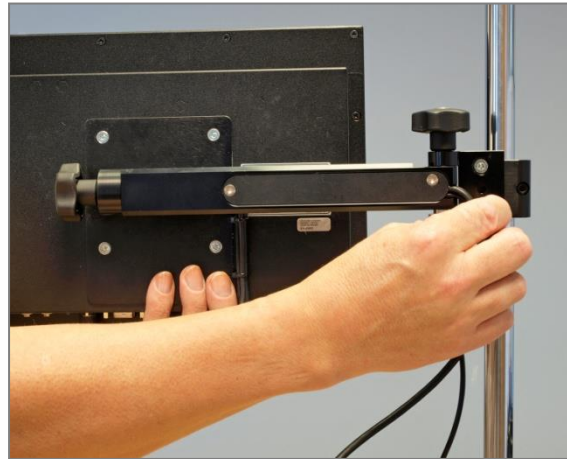
Attach the console to the bracket

The angle and rotation of the console are locked into set positions by sprung pins. Slacken the appropriate knob and reposition the bracket or arm on alternative pin locations, as shown above for single column stand assembly.

4.2 Fitting the crosshead to the Vortex-*xt*

Slide the crosshead onto the two support columns and tighten both securing thumb-screws. Different height samples can be accommodated by moving the complete crosshead up and down. Additional adjustment is available by moving the top-load carrier.
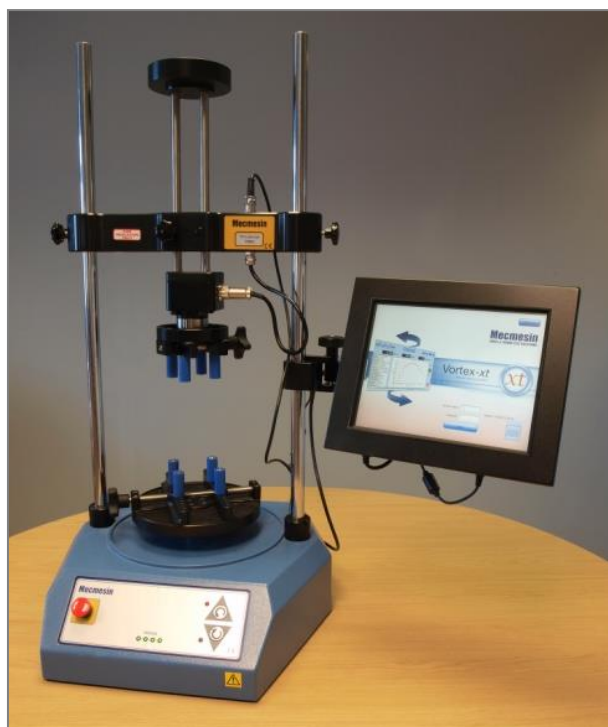
If a top-load is to be used, the securing knob is generally left undone during measurement so the carrier can slide up and down. If a top load is not to be used, securely tighten the locking knob after adjusting to the height required.

Crosshead fitted to Vortex-xt with top-load weights in the carrier

4.3 Connecting the intelligent torque cell

Align the electrical connector of the ITC with the mating socket on the test stand. Gently push the connector to locate then tighten the knurled locking ring in a clockwise direction.

ITC connector
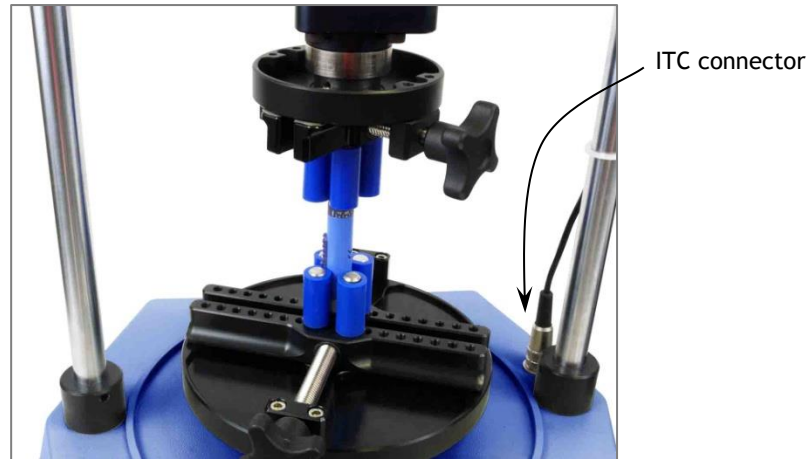
4.4 Swapping intelligent torque cells

You can swap the torque cell by simply disconnecting one cell, removing the crosshead and then fitting another. First, return to the front screen and switch off the stand before unplugging the torque cell. When the new torque cell has been connected, switch the stand on again, and after a few seconds the new torque cell will be automatically recognised. The console will read in the new cell's range, serial number and calibration status.

5. Connecting the Console
(MultiTest-*xt* and Vortex-*xt*)

5.1 Connecting the console power lead and USB lead

The console is powered from a separate universal supply plugged into a mains socket.

Caution: use only the mains adaptor supplied by Mecmesin, do not use any other type.

The power lead and USB lead will already be connected—check that they are firmly fitted to the console. Plug the power adaptor into a suitable socket. Plug the USB cable into the 9-way socket labelled 'PC' on the rear of the Vortex or single-column MultiTest stand, or the right hand side of a twin-column MultiTest stand. Normally it will not be necessary to remove the USB cable, but should this be required, return the console to the front screen display before removing the USB connector.

Rear panels of a Vortex-xt (left) and MultiTest-*xt* (right). Plug the USB cable into the circled PC socket.

5.2 Switching on the system

Switch on the test stand using the main switch located on the rear on Vortex or single-column MultiTest stands, or on the right hand side of twin-column MultiTest stands. On all systems, four green power lights (LEDs) on the front panel will illuminate.

Switch the touch screen console on by pressing the small button switch located on the underside of the console (shown below) to the right of the power lead. After a few seconds the splash screen will be displayed.

Comms   Power in   Network   USB sockets   HDMI   Audio out   On/off switch
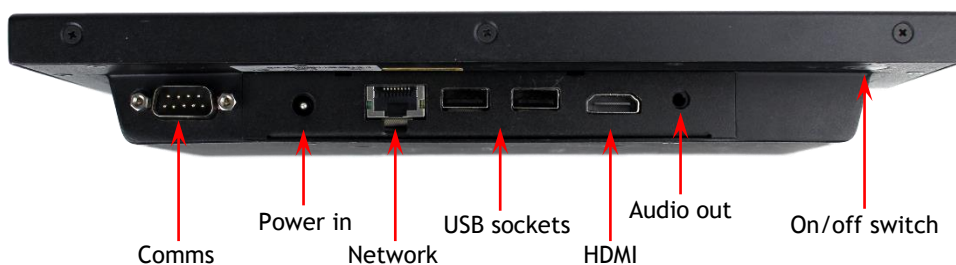
5.3 Connecting other devices

Connect printers or other device using the spare USB sockets on the console underside.

5.4 Emergency stop button

The emergency stop button will stop all movement of the crosshead. Pushing the button will override all other controls. When pressed, the button stays latched down, preventing any movement of the MultiTest crosshead or the Vortex platen. To re-set the button, rotate it about 30 degrees clockwise.

The front panel of the MultiTest 1-xt. Vortex-xt has a similar emergency stop button and clockwise and anticlockwise jog buttons.

5.5 Jog buttons

Jog buttons are used to position the crosshead so that samples can be attached to the grips. *-xt* Test Stands have a pair of jog buttons on the stand, and another pair on the Live Test Run screen. The two sets of buttons function in different ways.

	Stand jog buttons speed	Touch screen jog buttons speed
Quick Test	Factory set fixed rate	Jog speed increments or decrements each time the jog button is pressed
Program Test	Factory set fixed rate	Rate set in *Program test set-up > Test Settings*
Advanced Test	Factory set fixed rate	Rate as set in *Set-up > Preferences*

5.6 The touch screen console

The touch screen is used to control the *-xt* system. Please note that this Windows computer does not contain an internal battery. If power to the system is interrupted, unsaved data will be lost.

You can select operations and options by pressing or tapping on the relevant button on the touch screen with a finger or a stylus. In the bottom right of any screen layout requiring typed entry, there is a keyboard icon. Touch this, and a floating keyboard appears so you can type in numbers or text. If this obscures an entry field, just drag it out of the way. Where a layout has no data entry, the keyboard will automatically slide out of sight to the left, but it does not appear automatically when data may be required. Simply tap the keyboard icon whenever you need it.
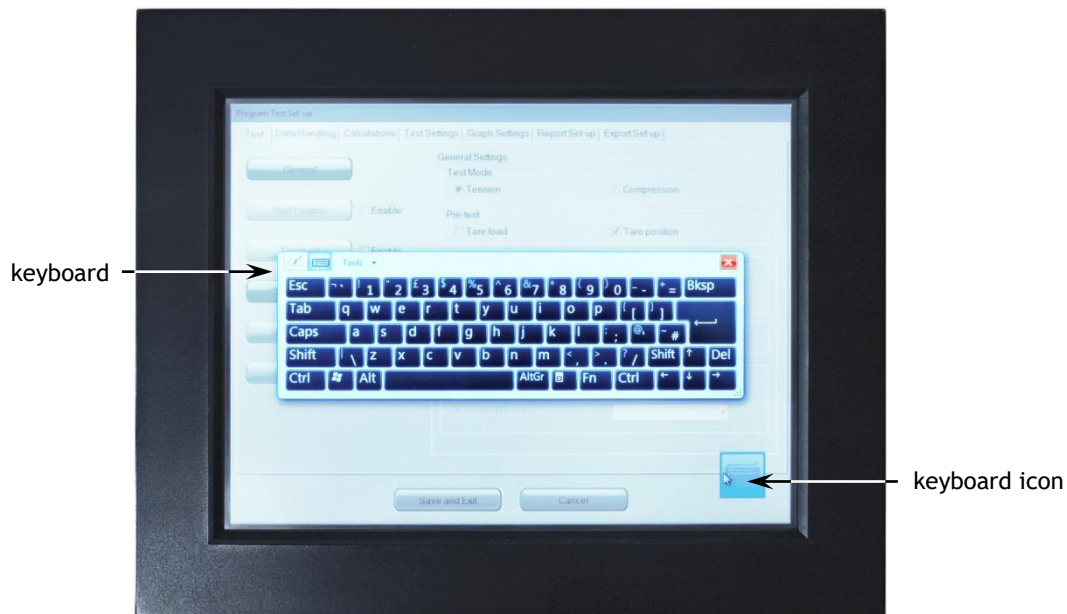
The -*xt* console showing the floating keyboard icon bottom right, and keyboard

- a single tap or press is the same as a left mouse button

- press-and-hold is the same as a right mouse button

- a double-tap is a double-click

- touch and drag a finger to select text

- combination keys such as Shift+ and Ctrl+ are used sequentially. For example, to select contents of a field, press Ctrl and then A. To copy, press Ctrl and then C. To paste, press Ctrl and then V.

- touch and drag a window element by its title bar—such as the floating keyboard itself.

5.7 Operators and Master users

Both the MultiTest-*xt* and Vortex-*xt* have been designed to be very simple to use. There are two levels of user, and a password is used to restrict access to either a simple choice of pre-defined tests or some limited functions, or access to the full capabilities of the -*xt* system.

Operators can select from tests that are pre-defined, and for which reports have already been written, and some functions that can be assigned to each user account. For more details see your manual: *Emperor Programming for Mecmesin xt Test Systems*.

Masters have full access to all the functions of the *-xt* system. A master can create and save tests, define which calculations are performed, and create report templates ready to be filled in with data from the samples tested. The master user has control over which users are operators and masters.

For details of access levels and how to create user accounts, see *Emperor Programming for Mecmesin –xt Test Systems*.

Appendix A
System Specifications

MultiTest-xt		0.5	1	2.5	5	10	25	50
Rated capacity	N	500	1,000	2,500	5,000	10,000	25,000	50,000
	kg.f	50	100	250	500	1,000	2,500	5,000
	lbf	110	220	550	1,100	2,200	5,500	11,000
Number of ballscrews		1	1	1	1	2	2	2
Load measurement								
Available loadcell ranges	N kg.f lbf	2 to 50,000 (14 models) 0.2 to 5,000 (14 models) 0.45 to 11,000 (14 models)						
Loadcell accuracy		±0.1% of full scale for loadcells from 2 to 2,500 N ±0.2% of full scale for loadcells from 5,000 to 50,000 N						
Loadcell resolution		1:6,500						
Speed								
Speed range	mm/min (in/min)	1 – 1000 (0.04 – 40)	1 – 1000 (0.04 – 40)	1 – 1000* (0.04 – 40)	1 – 500 (0.04 – 20)	1 – 1000 (0.04 – 40)	1 – 1000** (0.04 –40)	1 – 400*** (0.04 – 15)
Crosshead speed accuracy		±0.2% of indicated speed						
Displacement								
Crosshead travel††		1200 mm (47.3")	1000 mm (39.4")	500 mm (19.7")	590 mm (23.2")	950 mm (37.4")	950 mm (37.4")	1100 mm (43.3")
Positional accuracy per 300 mm (11.81") of travel		±130 µm (±0.005")				±100 µm (±0.004")		
Displayed resolution		±0.01 mm (±0.0004")						
Dimensions								
Distance between columns		—	—	—	—	400 mm (15.7")	400 mm (15.7")	420 mm (16.5")
Throat depth†		67 mm (2.6")	67 mm (2.6")	67 mm (2.6")	95 mm (3.7")	—	—	—
Vertical daylight††		1359 mm (53.5")	1159 mm (45.6")	580 mm (23.2")	675 mm (26.6")	1140 mm (44.9")	1140 mm (44.9")	1330 mm (52.4")
Height		1710 mm (67.3")	1510 mm (59.4")	941 mm (37")	1082 mm (42.6")	1500 mm (59.1")	1500 mm (59.1")	1931 mm (76")
Width - test frame only		290 mm (11.4")	290 mm (11.4")	290 mm (11.4")	328 mm (12.9")	826 mm (32.5")	826 mm (32.5")	864 mm (34")
Width with console fitted		546 mm (21.5")	546 mm (21.5")	546 mm (21.5")	615 mm (24.2")	1,073 mm (42.2")	1,073 mm (42.2")	1,099 mm (48.4")
Depth		414 mm (16.3")	414 mm (16.3")	414 mm (16.3")	526 mm (20.7")	542 mm (21.3")	542 mm (21.3")	572 mm (22.5")
Weight		43 kg (95 lbs)	41 kg (90 lbs)	27 kg (60 lbs)	43 kg (95 lbs)	145 kg (320 lbs)	145 kg (320 lbs)	290 kg (639 lbs)
Max power requirement		120 W	200 W	250 W	150 W	450 W	450 W	450 W
Voltage		230 V AC 50 Hz or 110 V AC 60 Hz						

*   2.5 kN - recommended maximum speed = 750mm/min (30in/min) above 2 kN
** 25 kN - recommended maximum speed = 500mm/min (20in/min) above 10 kN
*** 50 kN – recommended maximum speed = 250mm/min (10in/min) above 25 kN
†   Measured on centreline of loadcell
†† Measured without loadcell or grips

Note: See Technical Datasheet 431-390 for dimension drawings.

Common specifications

Operating temperature	10ºC - 35ºC (50ºF - 95ºF)
Humidity range	Normal industry and laboratory conditions
Sampling rate (Hz)	Selectable from 1000, 500, 100, 50, 10
Compensation for system movement	Yes
Loadholding	Yes
Digital display of Load/Position/Speed	Yes
Output of test results to PC/Printer/Datalogger	Yes, via USB/network ports RS232 via USB/network converter in ASCII format
Communication with PLC/Digital Control Interface	Yes, via programmable digital ports 6 inputs + 6 outputs

Options available on request:

Column gaiter

Safety guard

Vortex-*xt*		0.3 N m	1.5 N m	3 N m	6 N m	10 N m
Measurement range	N m kg f lbf in	0-0.3 0-3 0-2.7	0-1.5 0-15 0-13	0-3 0-30 0-26	0-6 0-60 0-52	0-10 0-100 0-90
Load Measurement						
Load accuracy		±0.5% of full scale				
Load resolution		1:6500				
Load units		mN m, N cm, N m, kg.f cm, gf cm, oz fin, lbf ft, lbf in				
Speed						
Speed range		0.1-20 rev/min (clockwise or anticlockwise)				
Speed accuracy		±1% of indicated speed				
Speed resolution		±0.1 rev/min				
Displacement						
Maximum displacement		2440 revs				
Displacement accuracy		0.2° per 36,000°				
Displayed resolution		0.001 revs (±0.2°)				
Dimensions						
Max travel of adjustable transducer carriage		182 mm (7.2")				
Maximum headroom		505 mm (19.9") [448 mm (17.6")]*				
Width between columns		208 mm (11.02")				
Weight		24.5 kg (54 lbs)				
Capacity of lower mounting table		10-190 mm (0.39-7.5")				
Capacity of upper mounting table		10-78 mm (0.39-3.07")				
Miscellaneous						
Max power requirements		100 W				
Voltage		230 V AC 50 Hz or 110 V AC 60 Hz				
Loadcell calibration temperature		20±2˚C				

* With upper and lower mounting tables fitted

Common specifications

Operating temperature	10ºC - 35ºC (50ºF - 95ºF)
Humidity range	Normal industry and laboratory conditions
Sampling rate (Hz)	Selectable from 1,000, 500, 100, 50, 10
Compensation for system movement	Yes
Loadholding	Yes
Digital display of Load/Position/Speed	Yes
Output of test results to PC/Printer/Datalogger	Yes, via USB/network ports RS232 via USB/network converter in ASCII format
Communication with PLC/Digital Control Interface	Yes, via programmable digital ports 6 inputs + 6 outputs

Options available on request:

Safety guard

Mecmesin reserves the right to alter equipment specifications without prior notice.

E&OE

Appendix B
EC Declarations of Conformance

Mecmesin Ltd
Newton House
Spring Copse Business Park
Slinfold
West Sussex, RH13 0SZ
GB

Mecmesin
FORCE & TORQUE TEST SOLUTIONS

Date of Issue 13th December 2017

EC DECLARATION OF CONFORMITY

We confirm that the Technical Construction Files for the product(s) identified on this certificate comply with the essential safety requirements of the following EU Council directives,

- Machineries Directive 2006/42/EU
- EMC Directive 2014/30/EU

and that they were tested to the following standards and other normative documents:

- EN 61000-6-1:2007 Electromagnetic compatibility (EMC). Generic standards.

- EN 61000-4-3:2006 +A2:2010 Electromagnetic compatibility (EMC). Testing and measurement techniques.

- EN 60204-1:2006 +A1:2009 Safety of machinery. Electrical equipment of machines. General requirements

- EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements

- EN 60950-1:2006 +A2:2013 Information technology equipment. Safety. General requirements

Primary Product Name(s):   Vortex-i

Derivative Product(s):   Vortex-xt

Signed on behalf of Mecmesin Ltd

Technical Director: Patrick Collins

Place: Slinfold, GB.

CE

Registered in England No. 1302639   431-DoC17-01

Mecmesin
FORCE & TORQUE TEST SOLUTIONS

Date of Issue 13th December 2017

EC DECLARATION OF CONFORMITY

We confirm that the Technical Construction Files for the product(s) identified on this certificate comply with the essential safety requirements of the following EU Council directives,

- Machineries Directive 2006/42/EU
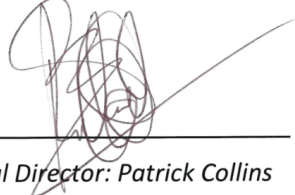- EMC Directive 2014/30/EU

and that they were tested to the following standards and other normative documents:

- EN 61000-6-1:2007 Electromagnetic compatibility (EMC). Generic standards.

- EN 61000-4-3:2006 +A2:2010 Electromagnetic compatibility (EMC). Testing and measurement techniques.

- EN 60204-1:2006 +A1:2009 Safety of machinery. Electrical equipment of machines. General requirements

- EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements

- EN 60950-1:2006 +A2:2013 Information technology equipment. Safety. General requirements

Primary Product Name(s):	MultiTest-0.5i, MultiTest-1.0i, MultiTest-2.5i, MultiTest-5i
Derivative Product(s):	MultiTest-0.5xt, MultiTest-1.0xt, MultiTest-2.5xt, MultiTest-5xt, FPT-H1i, FPT-H1xt

Signed on behalf of Mecmesin Ltd

Technical Director: Patrick Collins

Place: Slinfold, GB.

Registered in England No. 1302639

CE

431-DoC18-01

CE CERTIFICATE OF COMPLIANCE

BTL

This is to certify that the product listed in follows was (were) tested in the BTL EMC Laboratory to comply with the required criteria levels of the follow-mentioned ETSI harmonized standard according to the essential conformity requirements of the R&TTE Directive of 1999/5/EC and related directives .

Equipment	Panel PC
Model Name	SID-10W9; SID-10W9XXXXXXXXXX(Where "X" may be any alphanumeric character,or blank or "-")
Brand Name	Avalue
Applicant	Avalue Technology Inc.
Address	7F,228,Lian-cheng Road,Zhonghe Dist.,New Taipei City 235,Taiwan
Standard(s)	EN 301 489-1 V1.9.2 (2011-09)
	EN 301 489-17 V2.2.1 (2012-09)
	EN 61000-3-2: 2014 Class D
	EN 61000-3-3: 2013
	EN 300 328 V1.9.1 (2015-02)
Report(s)	BTL-ETSE-1-1611051
	BTL-ETSP-1-1611051

The test data, data evaluation, and equipment configuration contained in our test report(s) above was (were) obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s). The test data contained in the referenced test report relate only to the EUT sample and item(s) tested.

Andy Chiu
Authorized Signatory

BTL INC.
B1, No. 37, Lane 365, Yang-Guang St.,
Nei-Hu District, Taipei City 114, Taiwan.
TEL:+886-2-2657-3299
FAX:+886-2-2657-3331

ilac-MRA

TAF
Testing Laboratory
0659

Appendix C
Microsoft® Windows® 10 Enterprise 2016 LTSB Licensing

Each *-xt* system supplied with a console controller has Microsoft® Windows® 10 Enterprise 2016 Operating System pre-installed and licensed by Mecmesin. Each console is supplied with the following as proof of licensing:

- End User License Agreement (EULA)
- Certificate of Authentication (COA)

End User License Agreement (EULA)

A multi-language EULA is enclosed with each system.

Certificate of Authentication (COA)

The COA is supplied as a sticker located on the rear of each console supplied with a system, as proof of licensing.

This COA sticker lists the following:

- Microsoft® product title
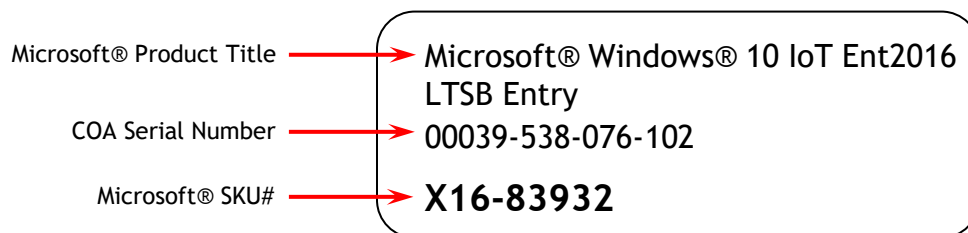- COA serial number
- Microsoft® SKU (stock keeping unit) number

Microsoft® Product Title → Microsoft® Windows® 10 IoT Ent2016 LTSB Entry
COA Serial Number → 00039-538-076-102
Microsoft® SKU# → **X16-83932**

Figure 1: Certificate of Authentication

Mecmesin
testing to perfection

Mecmesin : a world leader in affordable force and torque testing solutions

Since 1977, Mecmesin has assisted thousands of companies achieve enhanced quality control in design and production. The Mecmesin brand represents excellence in accuracy, build, service, and value. In production centres and research labs worldwide, designers, engineers, operators, and quality managers endorse Mecmesin force and torque testing systems for their high performance across countless applications.

www.mecmesin.com

Algeria	Estonia	Lithuania	Slovakia
Argentina	Finland	Macedonia	Slovenia
Australia	France	Malaysia	South Africa
Austria	Germany	Mexico	Spain
Bangladesh	Greece	Morocco	Sri Lanka
Belgium	Hungary	Myanmar (Burma)	Sweden
Brazil	India	Netherlands	Switzerland
Bulgaria	Indonesia	New Zealand	Syria
Cambodia	Iran	Norway	Taiwan
Canada	Ireland	Paraguay	Thailand
Chile	Israel	Peru	Tunisia
China	Italy	Philippines	Turkey
Colombia	Japan	Poland	UK
Costa Rica	Korea South	Portugal	United Arab Emirates
Croatia	Kosovo	Romania	Uruguay
Czech Republic	Kuwait	Russia	USA
Denmark	Laos	Saudi Arabia	Vietnam
Ecuador	Latvia	Serbia	
Egypt	Lebanon	Singapore	

The Mecmesin global distribution network guarantees your testing solution is rapidly delivered and efficiently serviced, wherever you are.

FS 58553

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