Mecmesin

testing to perfection

Operating Manual

A Guide to Safe Use of Mecmesin Mains Powered Test Systems

June 2019

431-398-05

Scope of this document

This document covers all Mecmesin Force and Torque test systems that are mains powered.

MECMESIN TEST FRAMES HAVE BEEN DESIGNED AND MANUFACTURED IN A CONTROLLED SYSTEM TO ENSURE COMPLIANCE WITH ALL RELEVANT EUROPEAN COMMUNITY DIRECTIVES.

DECLARATION OF CONFORMITY: A copy of the relevant Declaration of Conformity can be found in the rear of this manual (see section 7.0). Alternatively, electronic copies are available at the help section of the Mecmesin website: help.mecmesin.com

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Part no. 431-398-05

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1. Icons Used In Manual

WARNING

The raised hand icon highlights a situation or condition that may lead to injury or worse. Do not proceed until the warning is read and thoroughly understood.

Warning messages will be displayed in bold type.

CAUTION

The exclamation point icon indicates a situation or condition that could cause equipment malfunction or damage. Do not proceed until the caution message is read and thoroughly understood.

Caution messages will be displayed bold type.

INFORMATION

This icon indicates additional or supplementary information about the action, activity or application.

Information messages will be displayed in bold type.

2. Installing Your Test System

2.1 Receiving and Unpacking

Before installing or operating your Mecmesin test system please ensure that no visible damaged has occurred during the shipping process.

If any damage is present, contact your local supplier immediately who will decide the most appropriate action and rectify the situation as quickly as possible.

Important! If any damage is discovered do not proceed with the installation and do not connect to the mains supply under any circumstances

Use safe handling procedures to remove heavy items from the packaging, if you are unsure how to safely move the test system, consult your organisation's health and safety representative or contact your local Mecmesin agent for assistance.

Once the test system is safely removed from the packaging, place it onto a stable and level surface. Ensure this surface can safely carry the weight of the test system.

We strongly recommend that you retain the packaging for the test system as this can be re-used when the frame needs to be returned to your authorised Mecmesin distributor for servicing and calibration. Instructions for re-packing the test system are given in your relevant *Assembly and Installation* manual.

2.2 Placing and securing the machine

See your test system *Installation or Operational* manual for details of assembly and fixing. This may require the mounting of anchor brackets, rubber feet, or bolting down using suitable fixings. Note that for test frames with a height greater than 1 metre, customers in Europe are required to ensure that for a force of 20 per cent of machine weight, or 250 Newtons (whichever is less) applied to the top of the test system shall not be capable of toppling it, or the test system and bench together. Suitable work surfaces to support weight of test systems should also be ensured.

2.3 Emergency stop button (E-stop)

Ensure that access to the Emergency Stop button is never obstructed. The E-stop button will stop all movement of the crosshead or rotating platen. Pushing the E-stop button will override all other controls. When pressed, the E-stop button will stay latched down,

preventing any movement of the crosshead or rotating platen. To re-set the E-stop button, rotate it about 30 degrees clockwise.

2.4 Ventilation

To prevent overheating, ensure that all the air ventilation vents on the test system are not obstructed. Where a console is fitted and if it is cooled by an internal fan, ensure the console air vents are not obstructed.

Mecmesin test systems should only ever be installed in suitable environmental conditions. The operating temperature and humidity should be within the range given in the specification.

2.5 Electrical Supply and Earthing

Connecting a mains powered test frame to the wrong voltage supply will almost certainly cause extensive damage to the equipment. Mecmesin test systems must only ever be connected to a mains power installation that has a fully installed earthing system.

Connection of a mains powered test system to an electrical power outlet without an earth connection is extremely dangerous and could lead to a risk of electrocution. Consult your organisation's qualified electrician if unsure.

The combined mains input socket and voltage selector can be found on the rear panel of the test system (or on the right-hand side of twin-column force systems). Check that the voltage selector is set correctly for your supply. The voltage that is selected is *the one where the arrows meet* (the power inlet is inverted for some test systems):

▲ Selector set to 220-240 V

The voltage selection can be changed by switching off the power and removing the power lead. The fuse cartridge can now be withdrawn. Rotate the fuse carrier and re-fit it so the desired voltage marking is the correct way up.

See section 5.1 'Replacing fuses' for how to remove the fuse carrier and replace a fuse.

3. Using Your Test System

3.1 Interlocked Enabled Test Systems

All MultiTest-i and *-xt* single column systems supplied from June 2019 onward will be interlock enabled from the factory as standard. All single column systems will eventually be interlock enabled from factory. An interlock override plug (351-102) will be supplied in the accessories packaging of these test systems.

MultiTest single column systems being used without an interlock guard fitted, must have the interlock override plug (351-102) fitted to the rear interlock connection in order to operate the test system.

▲ Interlock Override Plug (351-102)

▲ Single Column Interlock Connection

If the MultiTest system is being used with an interlock enabled guard, then the interlock override plug is not required to be fitted, as the interlock guard wiring should be connected instead. Refer to *Installation and Operation of Mecmesin Interlocked Guarding* manual (part number 431-971)

▲ Interlock Guard Cable Connected on MultiTest Single Column

3.2 Switching on

After all the above points have been checked and confirmed to be correct, you may connect the machine to the mains outlet only with the supplied mains leads.

When the power is applied with the ON/OFF switch in the ON position, the front panel will illuminate with led lighting and information messages (on some models), to indicate the test system is ready for use.

3.3 Computer-controlled test frames

If the test frame is controlled by an external computer running a Microsoft® Windows operating system, then we strongly recommend that no other programs are used while Mecmesin Software is running. Commands and inputs to other software programs could cause problems with Mecmesin software and result in unpredictable behaviour. Extra consideration should be given to systems that are connected to networks and the possibility of unexpected actions as a result of external commands.

Care should be taken with computer-controlled devices such as the mouse and keyboard, such that they are not inadvertently activated, possibly causing the machine or grips to move unexpectedly.

3.3.1 Remote control software and applications

We specifically advise against the use of remote control software including tablet 'apps' that can be used to operate the system remotely from a separate device. With this type of software it is possible to reproduce the function of the controlling computer or *-xt* system touch screen from another device. This could lead to an unsafe situation where the movement of the stand is controlled remotely—possibly with the operator in another location and not able to see the stand or any potential hazard.

3.3.2 Program 'Hold' or 'Pause'

'Hold' and 'Pause' functions are available in some programs. While a 'Hold' or 'Pause' is in progress, the system may appear to be inactive, but then may start moving again without warning. Do not attempt to adjust the grips or remove the sample until a test is completed.

An operating test system should never be left unattended. Always disconnect the machine from the mains power supply when not in use to avoid inadvertent actuation of the machine by untrained personnel.

3.3.3 Console or computer failure and operation of the front panel jog buttons

If the console or controlling computer fails or becomes inactive, it is still possible to control the movement of the crosshead (MultiTest or OmniTest) or rotary platen (Vortex) by using the jog buttons or wheel, on the front panel of the test system. Operate the jog buttons to recover a trapped sample. Once the sample has been removed, switch off the

test system and contact your local Mecmesin distributor for advice before using the test system again.

3.4 In the event of a mains power failure

If the mains power should fail, the test system will stop moving, and the external *-xt* console or touch screen controller may shut down with the loss of unsaved sample test data.

It is possible that when the power fails, the sample could be under compression or tension in a force testing system, or under torsion in the case of torque systems. Care should be exercised when attempting to release a trapped sample from the grips. It is preferable to wait until the power is restored and then relieve the strain using the jog buttons before removing the sample.

3.5 Finishing a test

At the end of testing it is good practice to remove the last sample from the grips. Do not leave a sample under tension or compression in a force testing system, or under torsion in a torque testing system, when the power is turned off. This could present a hazard should an attempt be made to recover the sample either before or after power is re-applied to the test system.

3.6 Using computer-controlled or console-controlled systems with other equipment

3.6.1 Digital inputs and outputs

MultiTest-i, FPT-H1i, Vortex-i, Helixa-i and their *–xt* variants test systems are provided with digital input and output connections that can be used with other devices, e.g. Programmable Logic Controllers (PLC). If the system has been connected to such an external device, it is possible for the PLC to have control over the system. Particular attention should be paid when configuring the 'START" and 'HOME' commands, as these can cause the crosshead or rotary platen to move without warning and without any input to the computer, console or front panel jog buttons.

3.6.2 Assemblies of machines and machinery directive

Where a Mecmesin test frame is used in conjunction with other machinery, it is the responsibility of the designer to ensure that all relevant directives and standards are complied with. A Mecmesin designed system will always conform to all relevant standards and Directives. For more info on Mecmesin system operation, please refer to the relevant *installation or operational* manual.

3.6.3 Interlocking guards general information

A standard Mecmesin guard is designed to prevent object ingress and operator access to moving parts, and load bearing surfaces, while the machine is in use.

For materials or test methods where there is a potential for high energy impacts with the guarding, Mecmesin recommend consultation with their design team, (directly or through a local agent) to correctly specify application and safety requirements.

Before use, it is recommended that all operators of the machinery are given comprehensive training covering both the test system and interlock guarding's functionality. Preventative safety measures prior to operation, in accordance with all relevant operator manuals, should also be considered.

Risk assessment of the guarding and associated test system is recommended and should be carried out where appropriate. Internal company operating procedures should also be generated where necessary.

Mecmesin supplied interlocked guarding systems should only be serviced by a trained Mecmesin employee or approved agent. Any attempt by non-approved personnel may invalidate any warranty claim and could lead to damage of equipment or injury. Always ensure correct PPE procedures are in-place and followed where stated.

IMPORTANT: Where a guard with interlock is fitted, it is the equipment owner's responsibility to ensure that the keys for the interlock facility are controlled in such a way that unauthorised de-activation of the safety guard interlock is prevented.

3.6.4 Interlocking guards (OmniTest-5 and Twin Column Force Systems)

All OmniTest-5 and OmniTest Twin Column systems are interlock enabled from factory. This means that although a guard may or may not be fitted and used, the capability and function is present.

A retro-fit for these systems is available on request, but it can only be installed by Mecmesin personnel, or an authorised distributor.

The OmniTest systems use a key-switch to enable and disable (override) the interlock function. This allows for maintenance, calibration or authorised setting of internal test area. In some cases it also allows interaction with a sample under test in a controlled manner.

▲ OmniTest-5 Interlock "inactive" "active"

▲ OmniTest-5 Interlock

The OmniTest-5 system has a socket for connecting the interlock guard cable connection. Below this is the key-switch, with removable key. This has two positions marked '0' and '1'. Position '1' (interlock enabled) is shown circled in red, in the above right-hand image.

Interlock Position	Interlocked Guard Fitted	No Interlocked Guard Fitted
'0' (inactive)	interlock bypassed	normal system operation
'1' (active)	interlock system operational	system locked - cannot drive

▲ OmniTest-5 Interlock Operation

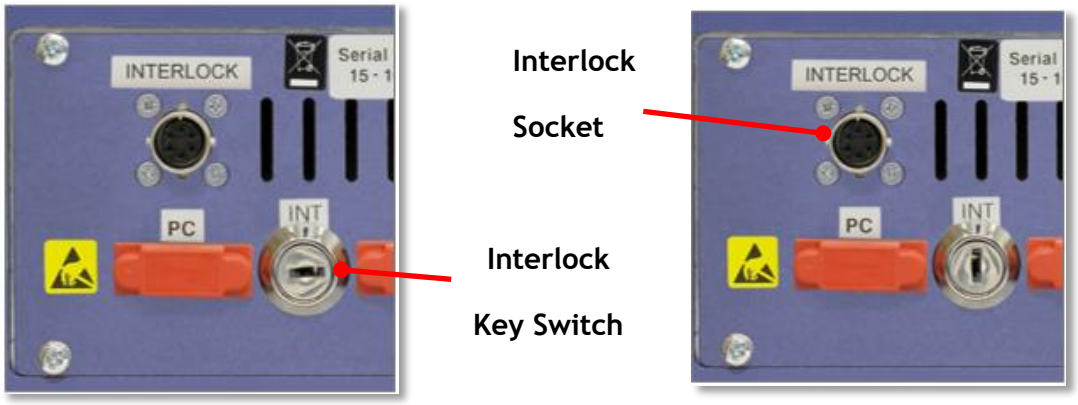
The OmniTest Twin Column test system (not shown), has the same interlock connector and the same key switch and removable key.

Access to these are on the rear right-hand side of the twin column system on the top facing surface.

For full functional description and operational use guidance, please refer to the *Installation and Operation of Mecmesin Interlocked Guarding* manual (part number 431-971)

3.6.5 Interlocking guards (MultiTest Twin-column Force Systems)

All MultiTest Twin-column systems released since May 2015 have, as standard, a facility for an interlocked guard. Guards for twin column systems will be supplied pre-fitted from factory. Where a safety guard is not fitted, there is no interlock guard switch to close the circuit. Instead there is a key switch on the control panel the key switch in 'active' position will effectively lock the system.



▲ Twin-column Interlock "inactive" ▲ Twin-column Interlock "active"

Interlock Position	Interlocked Guard Fitted	No Interlocked Guard Fitted
<blank> (inactive)	interlock bypassed	normal system operation
INT (active)	interlock system operational	system locked - cannot drive

▲ MultiTest Twin-column Interlock Operation

See also instruction sheet *Twin-column MultiTest-i / -xt guard interlock connections*, (part no. 431-463).

For full functional description and operational use guidance, please refer to the *Installation and Operation of Mecmesin Interlocked Guarding* manual (part number 431-971)

3.6.6 Interlocking guards (MultiTest Single column Force Systems)

All MultiTest-i single column systems supplied from June 2019 onward will be interlock enabled from the factory as standard. All single column systems will eventually be supplied interlock enabled from factory. An interlock override plug (351-102) will be supplied in the accessories packaging of these test systems. Please keep in a safe location during installation.

MultiTest single column systems being used without an interlock guard fitted, must have the interlock override plug (351-102) fitted to the rear interlock connection in order to operate the test system.

▲ Interlock Override Plug (351-102)

▲ Rear Panel Interlock Connection

Interlock Override Plug	Interlocked Guard Fitted	No Interlocked Guard Fitted
Not Fitted	interlock system operational	system locked - cannot drive
Fitted	interlock bypassed	normal system operation

▲ MultiTest Single column Interlock Operation

For full functional description and operational use guidance, please refer to the *Installation and Operation of Mecmesin Interlocked Guarding* manual (part number 431-971)

4. Removing or Relocating Your Test System

The test system must be powered down before attaching or removing cables. When the connectors are not in use, please ensure that they are covered with the connector covers all the time. No cable should exceed 3 metres in length.

Note: in the case of *-xt* systems, or if using a touch screen controller, it is advisable to remove the touch screen console from the test system before moving the machine.

4.1 Lifting the test system

Use safe handling procedures to remove heavy items from the packaging, if you are unsure how to safely move the test system, consult your organisation's health and safety representative or contact your local Mecmesin agent for assistance.

The specification in your relevant operation manual gives the weight of the test system. Use suitable lifting equipment if required. The preferred method of lifting all twin-column systems is by use of the supplied lifting eye-bolts fitted to the top of both columns. If in doubt, consult your local supplier to ensure continued safe use.

4.2 Disabling and scrapping

When the test system has reached the end of its useful life, it should be decommissioned. Remove the electricity supply cable to the test frame and, if appropriate, the console power adaptor.

Dispose of the test system in accordance with all local and national safety and environmental requirements.

5. Servicing, Calibration, Maintenance and Repair

Once the test system is installed it should provide a reliable long-term resource for specified testing.

Mecmesin test systems contain no user-serviceable parts other than fuses within the mains inlet socket.

5.1 Replacing fuses

To replace a fuse, first switch off the mains power at the back of the test system and disconnect the power lead.

Insert the tip of a screwdriver into the fuse carrier slot as shown below, and gently lever the carrier out:

Removing the fuse carrier

Carrier removed to replace fuse

Selector set to 220-240 V

The carrier contains two fuses. These should both be replaced with fuses of the same rating and size as those removed. Refit the fuse carrier with the selector matched to the mains voltage being used, as shown above.

Reconnect the mains power lead and switch on.

5.2 Servicing and calibration

To ensure optimal safe performance, your test system must be regularly serviced and the Force or Torque transducers calibrated by Mecmesin Ltd or an authorised distributor.

If the system is damaged in use, advise your local supplier and have the machine repaired to a safe working condition. Do not use the machine until it has been repaired.

5.3 Cleaning

You may need to clean the outside of your test system from time to time. This can be done by disconnecting the mains electricity supply, removing loose debris with a soft brush, then wiping with a damp cloth.

Note: when cleaning the membrane keypad, care must be taken to avoid liquids, especially alcohols, seeping around the edge of the membrane. Therefore, we recommend the use of a lightly dampened cloth to avoid liquid spillage onto the membrane. Under no circumstances should organic solvents or any other cleaning fluid be used.

5.4 Repair

If the test system fails, or incorrect operation is suspected, contact your local supplier for support.

Do not continue use of the test system until it has been fully checked by a Mecmesin authorised party. This may if necessary, include return and repair to a Mecmesin approved facility. It will then be returned to you in safe working condition. Do not attempt to open any system or attempt repair without consulting Mecmesin or your local supplier.

Unauthorised servicing or repair may invalidate any resulting warranty claim.

6. Operator Safety

6.1 Training

Before using either the test system or guarding, it is essential that each person operating the equipment is fully trained in the safe use of motorised testing systems and the guarding's functionality. Training can be arranged by contacting Mecmesin Ltd or an authorised distributor.

Mecmesin test systems have the ability to generate forces large enough to cause permanent injury to human limbs, when placed between the crosshead and the base. Fingers, hands and other parts of the body should be kept away from the moving crosshead and shroud opening.

Interlocked machine guards should be considered in all test methods as they provide additional ingress protection to the end user. This helps to reduce the risk of injuries occurring due to contact between the test system and the operator.

All tests systems contain dust preventative moving blinds (bellows). These conceal a potential mechanical hazard and should not be tampered with, especially when the machine is running.

6.2 Avoid prolonged use of the console or keyboard and mouse

Prolonged use of devices with a touch screen or a keyboard and mouse may lead to repetitive strain injury. Users should be made aware that excessive use of the keyboard and mouse or the touch screen should be avoided, and frequent rest breaks are recommended.

6.3 Eye protection and protective clothing

Although a standard Mecmesin interlocked guard will provide some protection against projectiles that may be ejected when a brittle sample fails, the device has primarily been designed to provide ingress protection to prevent the operator and other items from coming into contact with the moving test system.

For materials or test methods where there is a potential for high energy impacts with the guarding, Mecmesin recommend consultation with their design team, (directly or through a local agent) to correctly specify application and safety requirements.

Eye protection should always be used. Ensure an approved pair of safety spectacles are warn at all times.

Additional personal protection may be necessary if destructive testing or volatile failure of a test piece is likely. Consideration needs to be given to the likely behaviour of the samples being tested and the use of any appropriate personal protective equipment that may be needed.

A risk assessment should be carried out prior to using the test system to ensure that all necessary safety measures have been considered and carried out. It is important to review the risk assessment if new tests or new samples are introduced.

7. EC Declaration of Conformity

7.1 Document Listing

EC Declaration of Conformity documents included are as follows:

- **431-DoC22-02 – MultiTest-0.5i to MultiTest-5i and FPT-H1i and *xt* derivatives**
- **431-DoC23-02 – MultiTest-10i to MultiTest-50i and *xt* derivatives**
- **431-DoC25-01 – Vortex-i to and *xt* derivative**
- **431-DoC26-01 – Vortex-*dV***
- **431-DoC27-01 – OmniTest-5.0**
- **431-DoC28-01 – OmniTest-10 to OmniTest-50**
- **431-DoC30-01 – Crimptest-1.0**
- **431-DoC31-01 – Helixa-i and *xt* derivative**

7.1.1 431-DoC22-02 – MultiTest-0.5i to MultiTest-5i and FPT-H1i and *xt* derivatives

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Mecmesin
FORCE & TORQUE TEST SOLUTIONS

Date of Issue 14th June 2019

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. Technical documentation to support this is available from the above address.

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

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

If fitted with Mecmesin supplied machine guarding, the following additional standards apply:

- BS EN ISO 12100:2010 Safety of machinery - General principles for design - Risk assessment and risk reduction
- BS EN ISO 14120:2015 Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards
- BS EN ISO 14119:2013 Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
- BS EN ISO 13855:2010 Safety of machinery - Positioning of safeguards with respect to the approach speeds of parts of the human body
- BS EN ISO 13857:2008 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs
- BS EN ISO 13849-1:2015 Safety of machinery - Safety related parts of control systems - Part 1: General principles of design
- BS EN ISO 13849-2:2012 Safety of machinery - Safety related parts of control systems - Part 2: Validation

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
	MultiTest-0.5i + 0.5 Standard Guard, MultiTest-1.0i + 1.0 Standard Guard, MultiTest-2.5i + 2.5 Standard Guard
	MultiTest-0.5xt + 0.5 Standard Guard, MultiTest-1.0xt + 1.0 Standard Guard, MultiTest-2.5xt + 2.5 Standard Guard

Signed on behalf of Mecmesin Ltd

Technical Director: Patrick Collins
Place: Slinfold, GB

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Registered in England No. 1302639

431-DoC22-02_L00

7.1.2 431-DoC23-02 – MultiTest-10i to MultiTest-50i and *xt* derivatives

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Mecmesin
FORCE & TORQUE TEST SOLUTIONS

Date of Issue 14th June 2019

EC DECLARATION OF CONFORMITY

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- BS EN ISO 14119:2013 Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
- BS EN ISO 13855:2010 Safety of machinery - Positioning of safeguards with respect to the approach speeds of parts of the human body
- BS EN ISO 13857:2008 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs
- BS EN ISO 13849-1:2015 Safety of machinery - Safety related parts of control systems - Part 1: General principles of design
- BS EN ISO 13849-2:2012 Safety of machinery - Safety related parts of control systems - Part 2: Validation

Primary Product Name(s):	MultiTest-10i, MultiTest-25i, MultiTest-50i
Derivative Product(s):	MultiTest-10xt, MultiTest-25xt, MultiTest-50xt
	MultiTest-10i + 10-25 Standard Guard, MultiTest-25i + 10-25 Standard Guard, MultiTest-50i + 50 Standard Guard
	MultiTest-10xt + 10-25 Standard Guard, MultiTest-25xt + 10-25 Standard Guard, MultiTest-50xt + 50 Standard Guard

Signed on behalf of Mecmesin Ltd

Technical Director: Patrick Collins
Place: Slinfold, GB

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Registered in England No. 1302639

431-DoC23-02_L00

7.1.3 431-DoC25-01 – Vortex-i to and *xt* derivative

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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. Technical documentation to support this is available from the above address.

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

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.

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Registered in England No. 1302639

431-DoC25-01_L00

7.1.4 431-DoC26-01 - Vortex-*dV*

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Mecmesin
FORCE & TORQUE TEST SOLUTIONS

Date of Issue 2nd August 2016

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. Technical documentation to support this is available from the above address.

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

They were tested to the following standards and other normative documents:

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- 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 dV
Derivative Product(s):	n/a

Signed on behalf of Mecmesin Ltd

CE

Technical Director: Patrick Collins

Registered in England No. 1302639

431-DoC26-01 L00

7.1.5 431-DoC27-01 – OmniTest-5.0

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FORCE & TORQUE TEST SOLUTIONS

Date of Issue 30th March 2018

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. Technical documentation to support this is available from the above address.

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

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): OmniTest 5.0,

Derivative Product(s): n/a

Signed on behalf of Mecmesin Ltd

CE

Technical Director: Patrick Collins

Registered in England No. 1302639

431-DoC27-01_L00

7.1.6 431-DoC28-01 - OmniTest-10 to OmniTest-50

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Mecmesin
FORCE & TORQUE TEST SOLUTIONS

Date of Issue April 30th 2018

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. Technical documentation to support this is available from the above address.

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

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): Omnitest 10, OmniTest 25, OmniTest 50

Derivative Product(s):

Signed on behalf of Mecmesin Ltd

CE

Technical Director: Patrick Collins

Registered in England No. 1302639

431-DoC28-01_L00

7.1.7 431-DoC30-01 – Crimptest-1.0

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Mecmesin
FORCE & TORQUE TEST SOLUTIONS

Date of Issue 2nd August 2016

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

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): CrimpTest 1.0

Derivative Product(s): n/a

Signed on behalf of Mecmesin Ltd

CE

Technical Director: Patrick Collins

Registered in England No. 1302639

431-DoC30-01 L00

7.1.8 431-DoC31-01 - Helixa-i and *xt* derivative

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FORCE & TORQUE TEST SOLUTIONS

Date of Issue 13th February 2014

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

They were tested to the following standards and other normative documents:

- **EN 61000-6-1:2007** Electromagnetic compatibility (EMC). Generic standards. Immunity for residential, commercial and light-industrial environments.
- **EN 61000-6-3:2007 +A1:2011** Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments.
- **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): Helixa-i

Derivative Product(s): Helixa-xt

Signed on behalf of Mecmesin Ltd

Technical Director: Patrick Collins

Place: Slinfold, GB.

CE

Registered in England No. 1302639

431-DoC31-01_L00

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