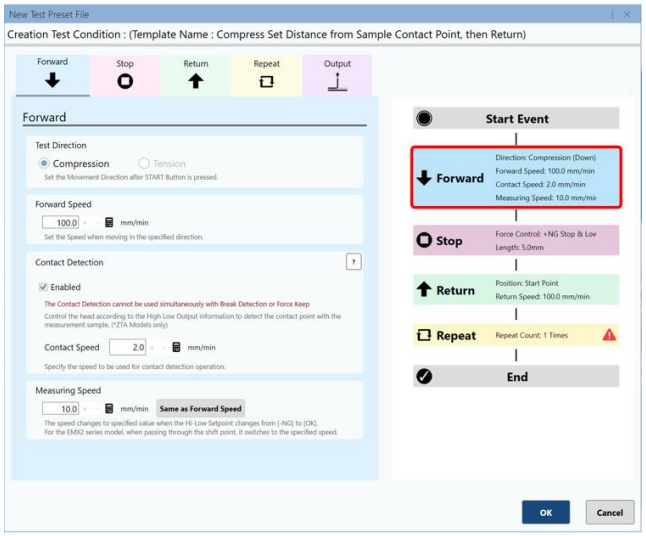
Vertical Motorized Test Stand Upgrade Guide

MX3/EMX2 Series: Improved Operational Efficiency and Reliable Test Condition Management







(Image: EMX2-500N-FA, ZTA-50N, and CB-718)

MX3/EMX2 Series, the successor to MX2/EMX Series, builds on the proven value of highly repeatable benchtop force testing with enhanced usability and improved test condition management. This guide highlights the key improvements introduced in MX3/EMX2 Series compared with MX2/EMX Series. It also includes detailed specifications comparisons and FAQs to support product selection.

Key Enhancements of MX3/EMX2 Series	
Online Firmware Updates and Future Feature Expansion	**Redesigned Control Panel for Easier Setup and Operation**
Prevent Unintended Changes to Test Conditions	**Easy Creation, Switching, and Backup of Test Conditions**

[Model Transition Guide]

Previous Model	New Model *1
MX2-500N/1000N/2500N/5000N	MX3-500N/2500N/5000N *2
EMX-500N/1000N	EMX2-500N/1000N

*1 Available options differ between MX2 and MX3 series. For details, please refer to the Specifications section on page 3.

*2 MX3 Series does not include a 1000N model.
Depending on your testing requirements, please consider the MX3-500N, MX3-2500N, or EMX2-1000N.

Point 1: Online Firmware Updates and Future Feature Expansion

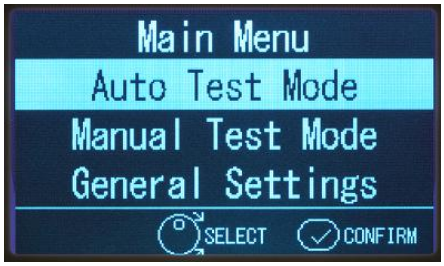
MX3/EMX2 Series has evolved into a Next Series-compatible test stand. With support for online firmware updates and future feature enhancements, users can benefit from the latest functions and services even after installation.
Firmware updates can be performed online without returning the product to IMADA, minimizing downtime and helping maintain an up-to-date testing environment.

- Support for online firmware updates (no PCB replacement required)
- Support for future online feature enhancements (additional features will be released progressively)
- Operation manuals available for download from the IMADA Connected user support site

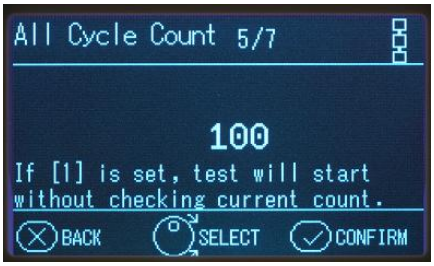
* User registration on IMADA Connected and product registration are required to access online services.

Point 2: Redesigned Control Panel for Easier Setup and Operation

The control panel has been redesigned with buttons organized by function, enabling intuitive operation and easy configuration of test conditions. The larger LCD screen provides improved visibility, making it easier to check test conditions and monitor test status.







Point 3: Prevent Unintended Changes to Test Conditions

The lock function, previously available only on EMX Series, is now included in both MX3 and EMX2 Series. Lock settings can be enabled or disabled individually for general settings, test condition settings, and test condition number selection (EMX2 only). Flexible lock settings allow operation to be tailored to specific requirements, such as permitting operators to switch test conditions while restricting changes to the settings themselves.
A 4-digit password can also be set to unlock protected settings.





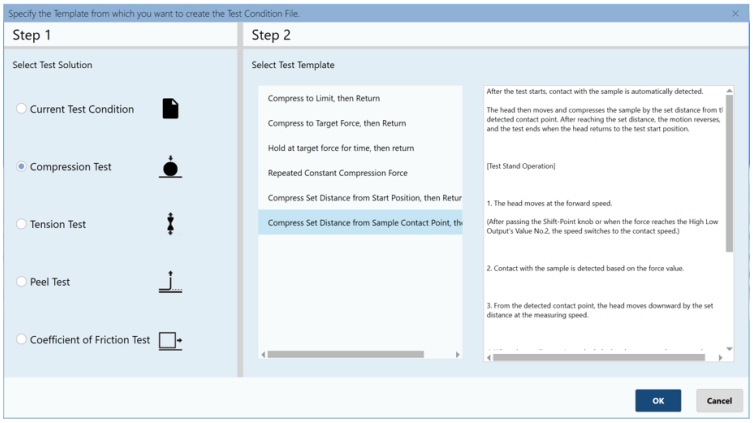


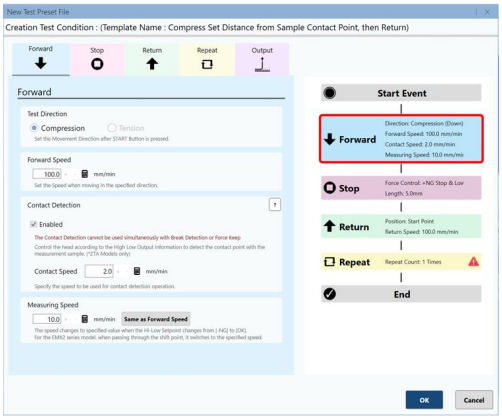
Point 4: Test Condition Setup Software Included

- **A Wide Range of Templates for Easy Test Condition Setup**
- **Save and Recall Test Conditions for Efficient Switching**
- **Store Test Condition Files on a PC for Backup and Reuse**

MX3/EMX2 Series comes with **CS Test Preset Builder**, software for creating and editing test conditions from a PC. In addition to flexible test condition settings, the software provides a wide range of templates to simplify setup. By utilizing these templates, users can not only create test conditions more easily but also reduce the risk of configuration errors.

Created test conditions can be stored on a PC with no limit on the number of files within the available storage capacity. By recalling saved setting files whenever needed, the same test conditions can be reproduced efficiently while helping prevent setup errors. Saved files can also serve as backups in the event of accidental test condition data loss or unintended changes.





* CS Test Preset Builder is provided as downloadable software. User registration on IMADA Connected and product registration are required. An internet connection is required for download and installation. Please contact us if offline installation is required.

Force-Displacement Measurement Unit FSA Series

With the launch of MX3/EMX2 Series, new FSA Series models incorporating MX3-FA and EMX2-FA have also been added.

Test Stand Model	FSA Series Model
MX3-500N-FA	FSA-0.5K3-___N
MX3-2500N-FA	FSA-2.5K3-___N
MX3-5000N-FA	FSA-5K3-___N
EMX2-500N-FA	FSA-0.5KE2-___N
EMX2-1000N-FA	FSA-1KE2-___N



* FSA Series models incorporating Next Series test stands are supplied with the downloadable version of Force Recorder Next Professional graphing software instead of the CD version. User registration with IMADA Connected and product registration are required to use Force Recorder Next Professional.

* For details, please refer to the FSA Series specifications.

[Specification for MX3/MX2 Series]

Model	MX3-500N	MX3-2500N	MX3-5000N	MX2-500N	MX2-1000N	MX2-2500N	MX2-5000N
Next Series	✓	✓	✓	-	-	-	-
Capacity	500N	2500N	5000N	500N	1000N	2500N	5000N
Max. sample height *1	Approx. 235mm	Approx. 320mm	Approx. 385mm	Approx. 235mm	Approx. 300mm	Approx. 320mm	Approx. 380mm
Weight	Approx. 17kg	Approx. 29kg	Approx. 55 kg	Approx. 18kg	Approx. 19kg	Approx. 26kg	Approx. 51kg
Speed	10 to 300 mm/min	2.5 to 300 mm/min	0.5 to 300 mm/min	10 to 300 mm/min			0.5 to 300 mm/min
Speed Unit *2	mm/min or in/min selectable			mm/min			
Rigidity	[Standard Model] 0.5 mm or less [-L / -2L / -EXT Option] 1.0 mm or less			[Standard Model] 0.5 mm or less [-L / -2L / -EXT Option] 1.0 mm or less			
Stroke Limit Setting	Limit knobs (Upper/Lower Limits)			Limit knobs (Upper/Lower Limits)			
Test Mode	Manual Test Mode (including JOG Move) Auto Test Mode (formerly Cycle Mode)			Manual Test Mode /JOG Move/Cycle Mode			
Operation Control	Force Control *3 Overload Stop *3, *4 Counter: Up to 99,999 counts Timer: Up to 99 min 59.9 s (0.1s increments) Emergency Stop			Force Control *3 Overload Stop *3, *4 Counter: Up to 65,535 counts Timer: Up to 99 min 59.9 s (0.1s increments) Emergency Stop			
Lock Setting	Password Lock Function (General Settings / Test Condition Settings)			Not Available			
Auto Test Mode Settings	Configurable from the test stand or a PC (Setup software included) *5			Configurable only from test stand			
Long Stroke Option	-L(+200mm) -2L(+400mm)	-L(+300mm)	-EXT(+200mm) *6	-L(+200mm) -2L(+400mm)	-L(+300mm)	-L(+300mm)	-EXT(+200mm) *6
Speed Change Option *7	-V45 -V90 -V450 -V600 -V900	-	-	-V45 -V90 -V450 -V600 -V900	-V75 -V150 -V750 -V1000	-V75 -V150	-
Other Options	-FA (Built-in Linear Scale) -CN (External I/O Signal)			-FA (Built-in Linear Scale) -CN (External I/O Signal) -S (Length scale)			
Mountable Force Gauge	See [Mountable Force Gauges] on page 6			See [Mountable Force Gauges] on page 6			

*1 This value is the distance between the test stand table and the tip of force gauge measuring shaft when the head is in the uppermost position. (MX3-500N/MX2-500N/1000N: When up to 1000N model of ZTS/ZTA series, MX3-2500N/5000N: When over 2500N model of ZTS/ZTA series is mounted.)

*2 The available speed units differ depending on whether the model is for the Japanese or international market.

*3 Connection to a compatible force gauge with a dedicated cable is required. Refer to the specifications of each test stand model.

*4 It does not guarantee complete prevention of failure from overloads.

*5 Setup Software: CS Test Preset Builder: Refer to Page 3 for details.

*6 The -EXT option extends the column height, increasing the maximum sample height without changing the stroke length.

*7 The speed change available as follows. (-V45=1.5 to 45 mm/min, -V75=2.5 to 75 mm/min, -V90=3 to 90 mm/min, V150=5 to 150 mm/min, -V450=15 to 450 mm/min, -V600=20 to 600 mm/min, -V750=25 to 750 mm/min, -V900=30 to 900 mm/min, -V1000=35 to 1000 mm/min) When the speed is changed, the capacity may decrease. Refer to the specifications of each test stand model for details.

[Specification for EMX2/EMX Series]

Model	EMX2-500N	EMX2-1000N	EMX-500N	EMX-1000N
Next Series	✓	✓	-	-
Capacity	500N	1000N	500N	1000N
Max. sample height *1	Approx. 280mm	Approx .310mm	Approx. 280mm	Approx. 310mm
Weight	Approx .19kg	Approx .27kg	Approx .19kg	Approx .24kg
Speed	0.5 to 600mm/min		0.5 to 600mm/min	
Speed Unit *2	mm/min or in/min selectable		mm/min	
Rigidity	[Standard Model] 0.25 mm or less [-L Option] 0.6 mm or less		[Standard Model] 0.25 mm or less [-L Option] 0.6 mm or less	
Stroke Limit Setting	Limit knobs (Upper/Lower Limits) Digital Travel Distance Limit (0.1mm increments)		Limit knobs (Upper/Lower Limits) Digital Travel Distance Limit (0.1mm increments)	
Test Mode	Manual Test Mode (including JOG Move) Auto Test Mode (formerly Cycle Mode)		Manual Test Mode /JOG Move/Cycle Mode	
Operation Control	Force Control *3 Overload Stop *3, *4 Specified Travel Distance External Signal Input/Output Contact detection / Break Detection *3, *5 Counter: Up to 99,999 counts Timer: Up to 99 min 59.9 s (0.1s increments) Emergency Stop		Force Control *3 Overload Stop *3, *4 Specified Travel Distance External Signal Input/Output Contact detection / Break Detection *3, *5 Counter: Up to 65,535 counts Timer: Up to 99 min 59.9 s (0.1s increments) Emergency Stop	
Test Condition Memory	Up to 10 test conditions		Up to 5 test conditions	
Lock Setting	Password Lock Function (General Settings / Test Condition Settings / Test Condition Number Selection) Configurable individually		Password Lock Function (General Settings / Test Condition Settings / Test Condition Number Selection) Single setting for all functions	
Auto Test Mode Settings	Configurable from the test stand or a PC (Setup software included) *6		Configurable only from test stand	
Long Stroke Option	-L(+300mm)	-L(+300mm)	-L(+300mm)	-L(+300mm)
Other Options	-FA (Built-in Linear Scale)	-FA (Built-in Linear Scale)	-FA (Built-in Linear Scale)	-FA (Built-in Linear Scale)
Mountable Force Gauge	See [Mountable Force Gauges] on page 6		See [Mountable Force Gauges] on page 6	

*1 This value is the distance between the test stand table and the tip of force gauge measuring shaft when the head is in the uppermost position. (When up to 1000N model of ZTS/ZTA series is mounted.) The maximum sample height of EMX2-1000N varies depending on the mounting position and direction of the force gauge mounting plate. Refer to the specifications of each test stand model for details.

*2 The available speed units differ depending on whether the model is for the Japanese or international market.

*3 Connection to a compatible force gauge with a dedicated cable is required. Refer to the specifications of each test stand model for details.

*4 It does not guarantee complete prevention of failure from overloads.

*5 Contact Detection, Break Detection, and Force Keep cannot be used together. Only one of these functions can be enabled at a time.

*6 Setup Software: CS Test Preset Builder: Refer to Page 3 for details.

[Mountable Force Gauges]

	MX3-500N	MX3-2500N	MX3-5000N	MX2-500N	MX2-1000N	MX2-2500N	MX2-5000N
DSV/DST-2N to 1000N	✓	✓	✓	✓	✓	✓	✓
ZTS/ZTA-2N to 1000N	✓	✓	✓	✓	✓	✓	✓
ZTS/ZTA-2500N to 5000N	N/A	✓	✓	N/A	✓	✓	✓
DPU-2N to 500N	✓	✓	✓	✓	✓	✓	✓
DPUH-1000N to 5000N	N/A	✓ *1	✓ *1	N/A	✓ *1	✓ *1	✓ *1
FB/PS/PSM series	✓	✓	✓	✓	✓	✓	✓
PSH series	N/A	✓	✓	N/A	✓	✓	✓

- Load cells not listed cannot be mounted on any of our test stands.

*1 Mounting block (sold separately) is required to mount DPUH series (1000N to 5000N)

	EMX2-500N	EMX2-1000N	EMX-500N	EMX-1000N
DSV/DST-2N to 1000N	✓	✓	✓	✓
ZTS/ZTA-2N to 1000N	✓	✓	✓	✓
ZTS/ZTA-2500N to 5000N	N/A	✓	N/A	✓
DPU-2N to 500N	✓	✓	✓	✓
DPUH-1000N to 5000N	N/A	✓ *1	N/A	✓ *1
FB/PS/PSM series	✓	✓	✓	✓
PSH series	N/A	✓	N/A	✓

- Load cells not listed cannot be mounted on any of our test stands.

*1 Mounting block (sold separately) is required to mount DPUH series (1000N to 5000N)

[FAQ]

Q: Can attachments used with MX2/EMX Series be mounted on MX3/EMX2 Series?

A: Yes. MX3 Series is compatible with MX2 Series, and EMX2 Series is compatible with EMX Series. Existing attachments can continue to be used between corresponding models with the same maximum force capacity. Please note that the following accessories are **not compatible**:

- Interlock Covers: OP-MX2EMX-IC, OP-MX250-IC
- Linear Scale: OP-MX250-FA, OP-EMX-FA, OP-EMX-FA-L

Compatibility with non-IMADA attachments cannot be guaranteed.

Q: Can connection cables used with MX2/EMX Series also be used with MX3/EMX2 Series?

A: Yes. In most cases, the connection cables used with the MX2/EMX Series can continue to be used with the MX3/EMX2 Series. However, the following cables are not compatible and must be replaced with their corresponding successor models:

- External Signal I/O Cable: CB-706 to CB-716
- Displacement Cable for EMX (Ver. earlier than 2.00)**:** CB-728 to CB-718
- Customized Cables (please contact IMADA for details)

Q: Can test conditions configured on MX2/EMX Series be reproduced on MX3/EMX2 Series?

A: Yes. Test conditions configured on MX2 and EMX Series can be reproduced on the corresponding MX3 and EMX2 models, respectively. Please note, however, that the speed range options available for MX2-2500N are not available for MX3-2500N.

Q: Which model should I choose as an equivalent to MX2-1000N?

A: Depending on your testing requirements, please consider MX3-500N, MX3-2500N, or EMX2-1000N. The most suitable model depends on factors such as sample shape, test conditions, and the expected force range. If you are unsure which model to select, please contact IMADA with details of your application.

Q: Must CS Test Preset Builder be used?

A: No. Basic testing functions are available without product registration. Test conditions can also be configured directly from the test stand control panel.

[Cautions]

- Information in this document is subject to change without prior notice.
- This document is product descriptions and handling precautions, and does not guarantee various characteristics or safety.
- This product is designed for force measurement purpose only.
- Do not copy and use this content without authorization.
- Some samples cannot be measured depending on their materials or shapes.
- Software could not work in some operating environment.

IMADA CO., LTD
99 Jinnoshinden-cho aza Kanowari Toyohashi
Japan 441-8077
Tel: +81-(0)532-33-3288
Fax: +81-(0)532-33-3866
E-mail: info@forcegauge.net
Website: https://www.forcegauge.net/en/

Visit our website for more information on a wide range of product specifications, measurement applications and videos.