ELDY 10/100

The electrodynamic testing systems in the ELDY family have been designed to run static, semi-static, dynamic and fatigue tests on a large variety of components and materials.
All the ELDY versions include an RTC Real Time Controller, command software and force transducer.

ELDY systems use motors with voice coil technology and single phase power supply; they can be installed in test laboratories, research and development divisions and product/process control centres.

Technical specifications

- Designed to run static, semi-static, dynamic and fatigue tests
- Test frequency up to 50Hz
- Temperature control with air cooling
- Lightweight and rigid test frame, made with double column and actuator assembled on the top cross strut
- No need for oil or compressed air
- High number of compatible accessories
- Test capacity from 1 to 100 N
- Stroke from 1 to 30 mm
- RTC 9000 and RTC 9000/R Controller

ELDY electrodynamic system

OIL FREE

LOW

LOW NOISE

HIGH FLEXIBILITY AND CONFIGURABILITY

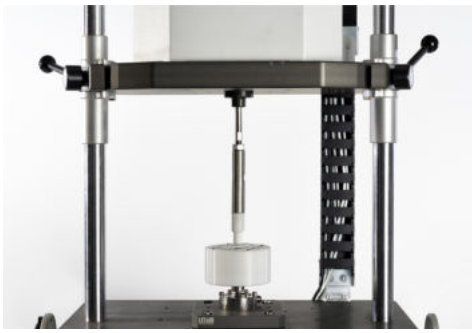
TABLE TOP

SIMPLE TO USE

Applications

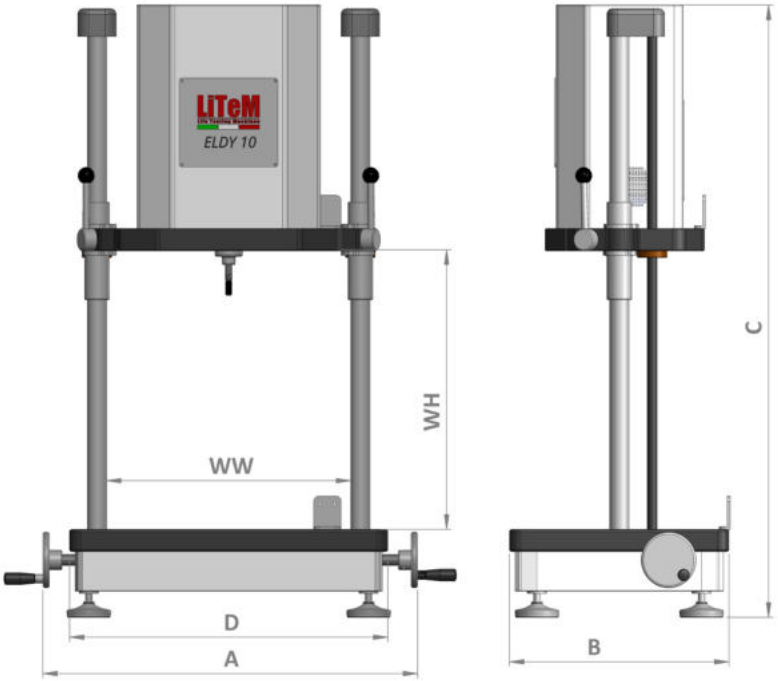
ELDY systems allow various types of configurations to be achieved in terms of actuator strokes and they use a simple and intuitive software interface, capable of guaranteeing rapid access to the software's functions.

Main sectors of application:
- Biomedical
- Plastics
- Electronic components and hardware
- Rubber
- 3D Prints
- Fabrics



ELDY 10 electrodynamic system

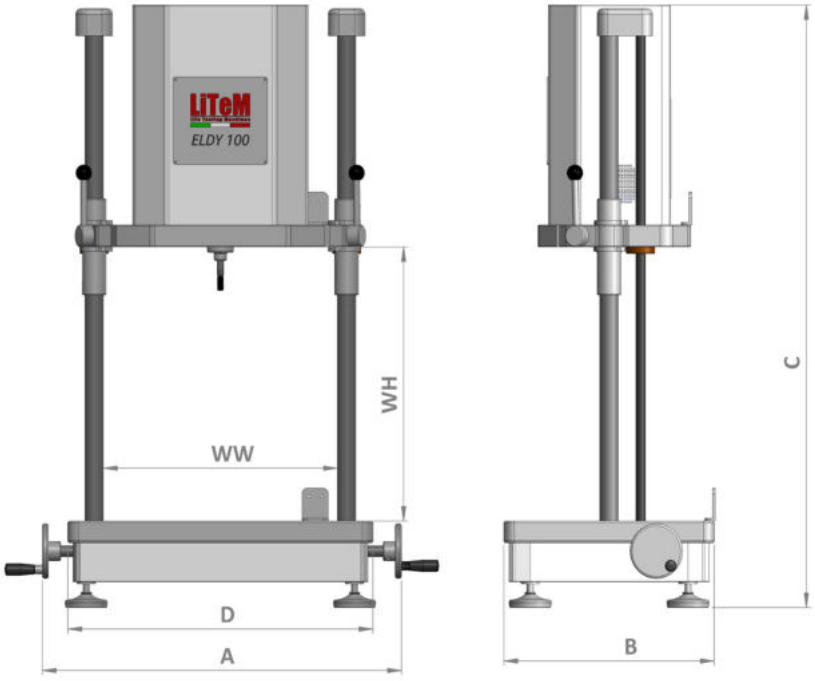
TECHNICAL SPECIFICATIONS	eu	Electrodynamic ELDY 10 N				
		S-2	S-5	S-10	S-20	S-30
Dynamic force	N	20N				
Static force	N	20 N (< 30 seconds)				
Continual static force	N	10 N (indefinite time)				
Test frequency	Hz	0.01 - 50				
Actuator stroke	mm	+/- 1	+/- 2.5	+/- 5	+/- 10	+/- 15
Force transducer	N	Available versions from 50N to 100N				
Sensor accuracy	mm	1/1000 F.S.				
Actuator		Electrodynamic with voice coil technology - oil free				
Operating temperature	°C	10-40 °C				
Dimensions	mm	[A]600 x [B]400 x [C] min 900 - max 1200				
Work area dimensions	mm	[ww] 400 x [WH] min 200 max 800				
Weight	Kg	85				
Power supply		AC 110-240V 50-60Hz				



*Specify the stroke of the actuator in the machine code
NOTA: Le prestazioni della macchina indicate in tabella possono dipendere dalle specifiche di prova e dalle caratteristiche del campione di prova.

ELDY 100 electrodynamic system

TECHNICAL SPECIFICATIONS	eu	Electrodynamic ELDY 100 N				
		S-2	S-5	S-10	S-20	S-30
Dynamic force	N	150 N				
Static force	N	150 N (< 30 seconds)				
Continual static force		100 N (indefinite time)				
Test frequency	Hz	0.01 - 50				
Actuator stroke	mm	+/- 1	+/- 2.5	+/- 5	+/- 10	+/- 15
Force transducer	N	Available versions from 250N to 500N				
Sensor accuracy		1/1000 F.S.				
Actuator		Electrodynamic with voice coil technology - oil free				
Operating temperature	°C	10 - 40 °C				
Dimensions	mm	[A]680 x [B]450 x [C] min 900 - max 1500				
Work area dimensions	mm	[ww] 480 x [WH] min 200 max 900				
Weight	Kg	105				
Power supply		AC 110-240V 50-60Hz				



*Specify the stroke of the actuator in the machine code
NOTA: Le prestazioni della macchina indicate in tabella possono dipendere dalle specifiche di prova e dalle caratteristiche del campione di prova.

Systems coding

ELDY / 10 - 5 - 50

Force	10 N	100 N

Stroke [mm]	2	5	10	20	30

Force transducer [N]	20	50	100	250	500

Kit and Accessories

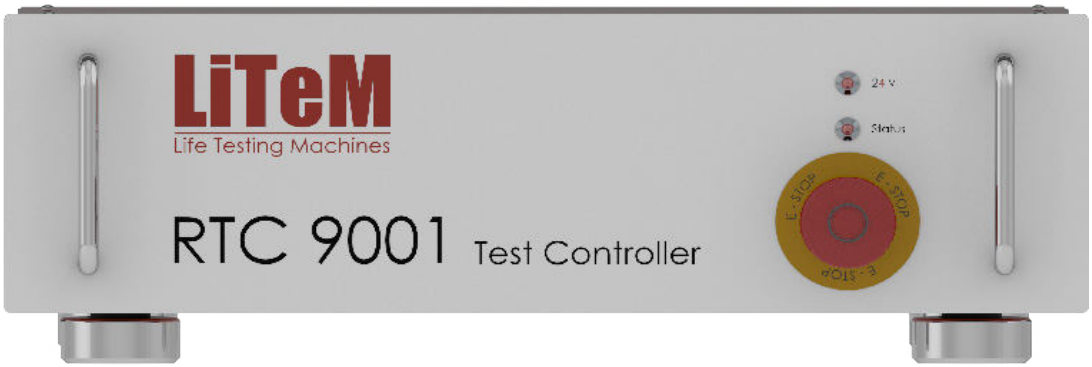
Components included in the kit

POS.	COMPONENT DESCRIPTION
1	ELDY frame with LVC actuator
2	RTC 9001 controller
3	Software RTC 9000
4	PC, monitor 27", mouse, keyboard
5	Force transducer with top mounting plate
6	Base interface plate
7	Sensor, power supply, connection cables
8	User manual, calibration reports
9	1 day of distance training or at the LiTeM site

Available accessories

CODICE	COMPONENT
A-TS-300	Base with T-Slot grooves 300x250
A-CP-10	Compression test plates
A-AV-10	Quick connection couplings
A-MG	Manual clamps
A-SC-100	Safety cage type A-SC-100

Controller & Software



RTC 9001 Controller

The RTC controllers are perfect control systems for static, dynamic and fatigue testing.
The control electronics consists of a processor with a Real Time operating system and high-speed FPGA board for acquiring signals coming from sensors and for the closure of the PID control loop for managing safety limits.
The integrated Real Time Processor generates various wave forms applied by the connected actuator.

RTC 9001 Controller - Datalogger

The RTC 9001 controller can be used as a data logger with 8 +/-10V input channels and two incremental encoders. This function requires the activation of Tool Scope software.

Wave forms that can be generated

- In load or displacement ramp with settable speed
- Cyclical tests with constant amplitude with sinusoidal/triangular/square waves
- Variable amplitude tests with profile defined by the user or importable from an external text file or excel file - Requires the activation of the Tools - Editor Profile software licence.

Types of tests and applications

1. STATIC YIELD/FAILURE TESTING
2. RIGIDITY TESTING
3. DYNAMIC TESTING
4. CONSTANT AMPLITUDE FATIGUE TESTING
5. CONSTANT AMPLITUDE BLOCK FATIGUE TESTING
6. VARIABLE AMPLITUDE FATIGUE TESTING
7. REPRODUCTION OF LOAD CURVES

Command panel window

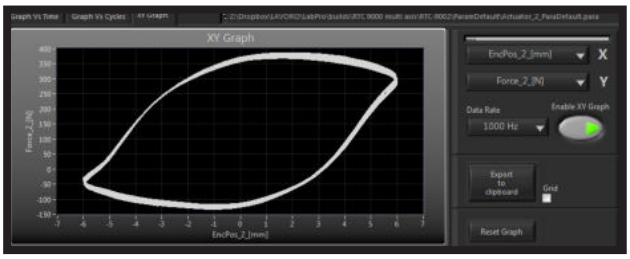
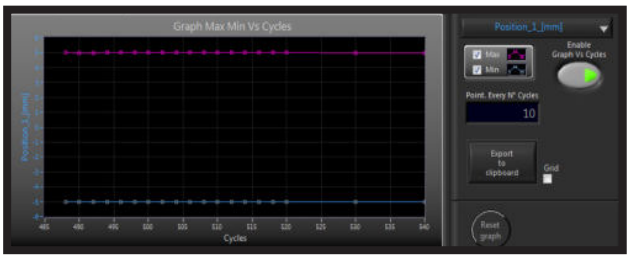


Grafico XY



Max-min vs cycles graph

TECHNICAL SPECIFICATIONS	
Description	**RTC 9001**
Real Time Controller RTC	Yes
Force Channel (control channel)	Input +/-10V, 16 bit
Displacement Channel (control channel)	Input +/-10V, 16 bit
Auxiliary Channel (control channel)	Input +/-10V, 16 bit
Incremental Encoder (control channel)	Incremental
PID output voltage	+/-10V
PID Loop Control Frequency Standard	1000 Hz
Safety limits	Settable by operator
Panel emergency stop	Yes
Remote emergency stop	Yes
4 analog channels in synchronous reading	Can be activated with ST-Scope software licence
Power supply	AC 110-240V 50-60 Hz

Software Tool - ST/Scope

The ST/Scope software tool allows you to have a further four analog channels available with reading-only function. These channels can be acquired and registered by the software synchronously with the other command channels (force, displacement, aux and encoder).

TUTORIAL VIDEO

DRC Srl
PRODUCTION AND SALES
Via Montesicuro, 58/B - 60131 Ancona (Italy)
Tel (+39) 071 80 36 077

EnginLAB Srl
RESEARCH AND DEVELOPMENT
Via Verità 3/a - 35131 Padova (Italy)
Tel (+39) 049 20 21 489

GENERAL INFORMATION
info@litem.info