EDITION NO. 4

COMTEN INDUSTRIES

Force and Torque testing equipments

*Measuring force from **A**pple to **Z**ipper since 1960*

FORCE & TORQUE

COM-TEN INDUSTRIES

*Measuring force from **A**pple to **Z**ipper since 1960*

COM-TEN INDUSTRIES PROVIDES:

- **Over 45 years of experience** in systems and instruments to measure force and torque in industrial surroundings. A new test? Don't hesitate to contact us, we can help you to define your test method.
- **Constant innovation:** The first graphic force gauge, and software tools for faster, easier measurement work. Run through the catalog to find out more about our new products.
- **A customer-oriented approach:** We use our flexibility as a manufacturer to adapt our products to our clients' requirements.
- **A laboratory** containing all our available products to carry out tests on your samples.
- **An after-sales service** that can provide you with a unique set of services that only a manufacturer is able to set up:
  - on receipt, we carry out a full 12-point test on each device and we provide an estimate within 24 hours; you know the exact cost of repairs.
  - "Express Service": We can make urgent repairs and calibrate your equipment within 24hs following receipt of your order (subject to acceptance).

A FULL RANGE OF ASTM TESTS:

ASTM	DESCRIPTION	MODEL #	PAGE
C1161	Flexural Strength of Advanced Ceramics at Ambient Temperature	CTAPC1161	13
C203	Breaking Load and Flexural Properties of Block-Type Thermal Insulation	CTAPC203	13
D1621	Compressive Properties of Rigid Cellular Plastics	CTAPD1621	13
D1894	Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting	CTAPD1894	13
D2256	Tensile Properties of Yarns by the Single-Strand Method	CTAPD2256	13
D4034	Resistance to Yarn Slippage at the Sewn Seam in Woven Upholstery Fabrics	CTAPD4034	13
D6272	Flexural Properties Plastics and Electrical Insulating Materials by Four-point Bending	CTAPD6272	13
D790	Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials	CTAPD790	13
D882	Tensile Properties of Thin Plastic Sheeting	CTAPD882	13
F1575	Determining Bending Yield Moment of Nails	CTAPF1575	13
F88	Seal Strength of Flexible Barrier Materials	CTAPF88	13
D3167	Floating roller peel resistance of adhesives	RPF3137	17
D2095	Tensile strength of adhesives by means of bar and rod specimens	BRA2095	17
C297	Flatwise tensile strength of sandwich constructions	BTF2020	17
B533	Peel strength of metal electroplated plastics	PSC533B	17
E8	Tension testing of metallic materials	TRH2075	17
A497	Steel welded wire fabric, deformed, for concrete reinforcement	WWFA497	17
D695	Compressive properties of rigid plastics	CFRPD695	17
D395	Rubber property in compression	CFRD395	17
D3787	Bursting strength of knitted goods: constant rate of traverse, ball burst test	BBT0405	17
D4833	Index puncture resistance of geotextiles, geomembranes, and related products	PRF4833	17
F1342	Protective clothing material resistance to puncture	PRF1342	17
F1306	Slow rate penetration resistance of flexible barrier films and laminate	PRF1306	17
D4541	Pull-Off Strength of Coatings using portable adhesion palters	ADHOR	29

6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Our range of force gauges

Our CENTOR series is today the most complete and versatile range of gauges in force and torque instruments. Depending on the desired use, the CENTOR series can be supplied with internal or external sensors, hand held casing, table casing or read two sensors in the same time.

FEATURES	FIRST	EASY	STAR	DUAL
Tension & compression	✓	✓	✓	✓
Accuracy	0.25%	0.1%	0.1%	0.1%
Resolution	0.1	1/10000	1/10000	1/10000
Sampling rate	1000 Hz	1000 Hz	1000 Hz	1000 Hz
Peak in tension and compression	✓	✓	✓	✓
Auto-off	✓	✓	✓	✓
Reversible display by software	✓	✓	✓	✓
Overload protection 200%	✓	✓	✓	✓
Calibration certificate included	✓	✓	✓	✓
Metal casing and protective elastomere overmould	✓	✓	✓	✓
Bargraph	✓	✓	✓	✓
Units N, kg, lbs	✓	✓	✓	✓
Units g, oz		✓	✓	✓
Display Peak & current in the same time		✓	✓	✓
Foot pedal		✓	✓	✓
Programmable set point		✓	✓	✓
Average / standard deviation on 100 memorized datas		✓	✓	✓
RS232 output	Option	✓	✓	✓
Digimatic and Analog output		✓	✓	✓
Backlit display		✓	✓	✓
Display curve (Force/time)			✓	✓
Automatic calculations (Breaking force…)			✓	✓
Memory card reader			✓	✓
Automatic recognition of addtionnal sensors			✓	✓
Simultaneous reading of two chanels				✓
Recognition of displacement sensors				✓

Standard version
Hand held force gauge internal sensor




Capacities: 20 lbs, 50 lbs, 100 lbs | 2 lbs to 200 lbs | 1 lbs to 200 lbs | 1 lbs to 200 lbs

R version
Hand held force gauge external force sensor
List of external force sensors available p5
Capacities from 5 lbs up to 10,000 lbs



Torque version
Hand held force gauge external Torque sensor
List of torque sensors available p19
Capacities from 0.5 Nm up to 1200 Nm



T version
Tabletop version with external force or torque sensor
Compatible with all the force sensors p5 and torque sensors p19



SPIP Interchangeable sensor plug and play
All above version with a SPIP connection for additionnal sensor
Compatible with all the force sensors p5 and torque sensors p19


Dual version - Simultaneous reading of:
– Force and torque
– Torque and angle
– Force and deflection

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Force measurement

CENTOR First

Simple and yet complete, **the CENTOR First** uses efficient technology to simplify force measurements, in tension and compression.

A big display shows the force measured in tension or compression in the unit selected by the operator: newtons, kilograms or pounds. The bar graph completes the measurement.

The 3 keys make it very easy to use this force gauge and access the essential functions: measurement of the peak tension or compression value, resetting to zero, and changing the measuring units. It is an ideal tool for basic tests during production. Its metal casing, protected by an elastomer overmould, gives it exceptional strength.
The internal sensor stands up to an overload of 200% of its maximum capacity.

Simple, precise, robust, supplied with its own carrying case, mains adaptor and certificate, ready for use, it is the basic tool for force measurement.

Technical characteristics

- Operates in tension and compression
- Accuracy 0.25% FS
- Resolution: 0.01% FS
- Peak function for tension and compression
- Bar graph
- 3 units available: N, kg, lbs
- Sampling rate 1,000 Hertz
- Tare function
- Auto-off 15 min
- Reversible display
- Sensor protected from overloads up to 200% of its capacity
- Operates on rechargeable batteries
- Low battery indicator
- Memorizes its configuration
- 8 hours of operation without recharging
- Metal casing and protective elastomer overmould
- Threaded fixing holes on the back for use on test stand
- Calibration certificate included
- Supplied in carrying case with mains adaptor and accessories (hook, 0.75 in plate, extension rod)

MODELS	CAPACITIES	RESOLUTIONS
CNR FT 100	20 lb	0.01 lb
CNR FT 250	50 lb	0.01 lb
CNR FT 500	100 lb	0.1 lb
CNR FT 100 XZ	20 lb	0.01 lb
CNR FT 250 XZ	50 lb	0.01 lb
CNR FT 500 XZ	100 lb	0.1 lb

CENTOR First XZ, new model with RS232 output.

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Force gauges

CENTOR Easy

The **CENTOR Easy** force gauges are designed to meet the production needs of its users. This group offers several features which are indispensable today for Quality Control, for example: ease of reading with its large backlit graphical display, RS232 output, memory of the last 100 values and ability to set thresholds with visual and sound alarms. Its highly efficient measurement chain enables it to use a sampling rate of 1,000 Hertz with a resolution of 1/10,000 FS and a total error of less than 0.1% FS.

A new STATISTICS feature is available on the new Centor EASY models: the average and standard deviation of the current batch are calculated and displayed after each measurement. All the values of the production batch are kept in the memory and can be sent to a computer by RS232. The operator is spared any data entry, knows his results in real time and saves everything at the end of the tests.

The entirely configurable RS232 output sends the data to a PC. A digimatic output can be used with a printer for statistics.

Designed for use in an industrial environment, it is an ideal tool for tests during production.

MODELS	CAPACITIES	RESOLUTIONS
CNR EA 10	2 lb	0.0002 lb
CNR EA 25	5 lb	0.0005 lb
CNR EA 50	10 lb	0.001 lb
CNR EA 100	20 lb	0.002 lb
CNR EA 250	50 lb	0.005 lb
CNR EA 500	100 lb	0.01 lb
CNR EA 1000	200 lb	0.01 lb

Technical characteristics

- Operates in tension and compression
- Accuracy 0.1% FS
- Resolution 1/10,000 FS
- Peak function for tension and compression
- Simultaneous display of the peak and the current reading
- Bar graph
- 5 units available: N, kg, lbs, g, oz
- Sampling rate 1,000 Hertz
- Can be used with a pedal
- Tare function
- Auto-off adjustable from 5 to 15 min, can be deactivated
- Programmable set point function
- Average and standard deviation functions
- Two-way RS232 output: transmission of current reading, minimum, or maximum, as desired
- Digimatic output
- 8 hours of operation without recharging
- Fast charge
- Reversible display
- Backlit display
- Sensor protected from overloads up to 200% of its capacity
- Operates on rechargeable batteries
- Low battery indicator
- Memorizes its configuration
- Metal casing and protective elastomer overmould
- Threaded fixing holes on the back for use on test stand
- Calibration certificate included
- Supplied in a carrying case with a mains adaptor and a set of accessories (hook, Ø 0.75 in plate, extension rod)

New Statistics feature with calculations of the average and standard deviation

MES / ECH	3
OPER	01
Unit	N
STATS	MXI
Nbech	002
Average	12.33
001	12.334
001	12.332
001	12.331
002	12.335
002	12.334
002	12.330

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Force measurement

CENTOR Star

CENTOR Star is the most advanced force gauge currently available, **it has become the benchmark tool for force measurement**. Besides having all the functionalities of the CENTOR Easy, it also provides additional handy possibilities: with its graphic capabilities, it can calculate and display in real time, not only the maximum, but also the values of the particular points of the curve, such as the rupture force, force on a trigger, force at a given time, first peak, etc.
The new features:
– Maximum within a time window: makes it possible to define a particular time period for a test and to calculate the maximum force during that period while keeping the test maximum in memory
– Calculation of the time necessary to reach the maximum force in tension or compression
– Average force over the duration of the test

All these results are stored in memory (up to 100 tests) which allows statistics to be calculated on the maximum values and on configurable calculations, then sent to a PC along with the dates and times of the measurements.

Furthermore, it is possible to freeze its configuration to avoid handling errors.
It is the most versatile instrument designed for all tests in industrial surroundings.

SUPPLIED WITH CERTIFICATE

Technical characteristics

– Accuracy 0.1% FS
– Resolution 1/10,000 FS
– Peak function for tension and compression
– Simultaneous display of the peak and the current reading
– Display of the Force/Time graph
– Calculation of specific points of the graph:
  • Maxima
  • Maxima in a time window
  • Time necessary to reach maximum effort
  • Average over the duration of the test
  • Force at time T
  • Break point
  • Derivative
  • First peak
  • Force on opening/closing of contact
  • Average force
– Memorization of the last graph curve measured
– Bar graph
– 5 units available: N, kg, lbs, g, oz
– Sampling rate 1,000 Hertz
– Can be used with a pedal
– Tare function
– Auto-off adjustable from 5 to 15 min, can be deactivated
– Programmable set point functions
– Two-way RS232 output, transmission of the current reading, minimum, peak, or calculation
– Running transmission of 50 values per second
– Possibility of transmitting the graph curve memorized
– Digimatic output
– Memorization of 2 configurations
– Protection function (blocking) for the current configuration
– Automatic recognition of additional sensors
– Reversible display
– Backlit display
– Sensor protected from overloads up to 200% of its capacity
– Operates on rechargeable batteries
– 8 hours of operation without recharging
– Fast charge
– Low battery indicator
– Metal casing and protective elastomer overmould
– Threaded fixing holes on the back for use on test stand
– Calibration certificate included
– Supplied in a carrying case with a mains adaptor and a set of accessories (hook, Ø 0.75 in plate, extension rod)

MODELS	CAPACITIES	RESOLUTIONS
CNR ST 5	1 lb	0.0001 lb
CNR ST 10	2 lb	0.0002 lb
CNR ST 25	5 lb	0.0005 lb
CNR ST 50	10 lb	0.001 lb
CNR ST 100	20 lb	0.002 lb
CNR ST 250	50 lb	0.005 lb
CNR ST 500	100 lb	0.01 lb
CNR ST 1000	200 lb	0.02 lb

DATASTICK
memory card reader for transferring data

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Force measurement

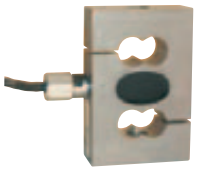
Additional force sensors

The additional force sensors are recognized by all the CENTOR Star and/or Dual force gauges and torque gauges, and they can complete a set of force/torque measurements at a very reasonable price.
The sensor characteristics are stored in the memory of an electronic circuit located inside the sensor connector. When the CENTOR Star or Dual instrument is switched on, the information is collected from the central memory and the instrument is automatically configured: it takes into account the type of sensor, its maximum capacity and its calibration data without the operator having to make any calibration adjustments.

STANDARD sensors, general purpose, tension and compression

MODELS	ACCURACY	CAPACITIES	RESOLUTIONS	INFORMATION
SPIP S2-20	0.1% FS	4 lb	0.0004 lb	Height: 2.4 in
SPIP S2-50	0.1% FS	10 lb	0.001 lb	Width: 3.1 in
SPIP S2-100	0.1% FS	20 lb	0.002 lb	Thickness: 1 in
SPIP S2-200	0.1% FS	40 lb	0.004 lb	Thread: M 8
SPIP S2-500	0.1% FS	100 lb	0.01 lb	Protection IP65
SPIP S2-1000	0.1% FS	200 lb	0.02 lb	Protection from overloads

SPIP S2



SPIP S9

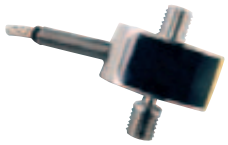
STANDARD sensors, heavy loads, tension and compression

MODELS	ACCURACY	CAPACITIES	RESOLUTIONS	H	W	THICKNESS	THREAD
SPIP S9-2	0.1% FS	400 lb	0.04 lb	3.46 in	2.28 in	0.94 in	M 12
SPIP S9-5	0.1% FS	1000 lb	0.1 lb	3.46 in	2.28 in	0.94 in	M 12
SPIP S9-10	0.1% FS	2000 lb	0.2 lb	3.46 in	2.28 in	0.94 in	M 12
SPIP S9-20	0.1% FS	4000 lb	0.4 lb	3.93 in	2.75 in	1.22 in	M 24 x 2
SPIP S9-50	0.1% FS	10000 lb	1 lb	3.93 in	3.03 in	1.46 in	M 24 x 2

MINIATURE sensors, tension and compression

MODELS	ACCURACY	CAPACITIES	DIAMETER	HEIGHT	THICKNESS
SPIP L165-100	0.5% FS	0–20 lb	1 in	0.34 in x 2	0.5 in
SPIP L165-250	0.5% FS	0–50 lb	1 in	0.34 in x 2	0.5 in
SPIP L165-500	0.5% FS	0–100 lb	1 in	0.34 in x 2	0.5 in
SPIP L165-1000	0.5% FS	0–200 lb	1 in	0.34 in x 2	0.5 in
SPIP L165-2500	0.5% FS	0–500 lb	1 in	0.34 in x 2	0.5 in
SPIP L165-5000	0.5% FS	0–1000 lb	1 in	0.34 in x 2	0.5 in
SPIP L165-10K	0.5% FS	0–2000 lb	1 in	0.4 in x 2	0.75 in

High capacities: on request



SPIP L165

SPIP L161

SUB MINIATURE sensors, compression only

MODELS	ACCURACY	CAPACITIES	DIAMETER	HEIGHT
SPIP L161-50	0.5% FS	0–10 lb	0.38 in	0.18 in
SPIP L161-100	0.5% FS	0–20 lb	0.38 in	0.18 in
SPIP L161-250	0.5% FS	0–50 lb	0.38 in	0.18 in

MINIATURE sensors, compression only

MODELS	ACCURACY	CAPACITIES	DIAMETER	HEIGHT
SPIP L163-50	0.5% FS	0–10 lb	0.75 in	0.25 in
SPIP L163-100	0.5% FS	0–20 lb	0.75 in	0.25 in
SPIP L163-250	0.5% FS	0–50 lb	0.75 in	0.25 in
SPIP L163-500	0.5% FS	0–100 lb	0.75 in	0.25 in
SPIP L163-1K	0.5% FS	0–200 lb	0.75 in	0.25 in
SPIP L163-2,5K	0.5% FS	0–500 lb	0.75 in	0.25 in
SPIP L163-5K	0.5% FS	0–1000 lb	0.75 in	0.25 in

SPIP L163

SPIP L160

MINIATURE HIGH CAPACITY sensors, compression only

MODELS	ACCURACY	CAPACITIES	DIAMETER	HEIGHT
SPIP L160-5K	0.5% FS	0–1000 lb	1.23 in	0.39 in
SPIP L160-10K	0.5% FS	0–2000 lb	1.23 in	0.39 in
SPIP L160-25K	0.5% FS	0–5000 lb	1.48 in	0.63 in
SPIP L160-50K	0.5% FS	0–10000 lb	1.48 in	0.63 in

Special sensors on request

HIGH CAPACITY pancake-type sensors, tension and compression

MODELS	ACCURACY	CAPACITIES	RESOLUTIONS	INFORMATION
SPIP L290-1K	0.1% FS	0–200 lb	0.02 lb	Diameter: 4.12 in Thickness: 1.37 in Thread: 2 x M16
SPIP L290-2K	0.1% FS	0–500 lb	0.05 lb	
SPIP L290-5K	0.1% FS	0–1000 lb	0.1 lb	
SPIP L290-10K	0.1% FS	0–2000 lb	0.2 lb	
SPIP L290-25K	0.1% FS	0–5000 lb	0.5 lb	
SPIP L290-50K	0.1% FS	0–10000 lb	1 lb	

SPIP L290

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Software

RSIC

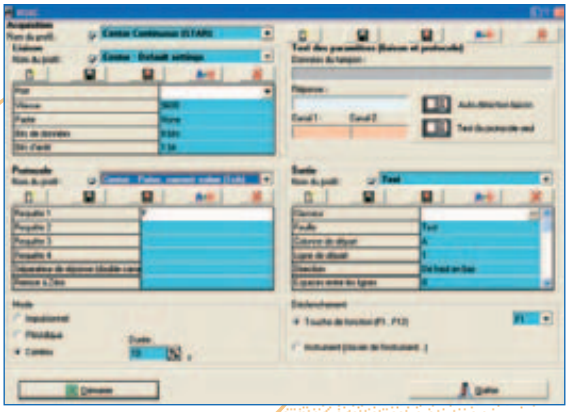
With **the RSIC data acquisition software**, you can record your measurements directly using MS Excel. It makes it easier to record results and ensure traceability and processing; these are the main advantages for using this simple yet powerful software. Based on the modularity principle, RSIC is a gateway between any type of instrument equipped with an RS232 output and an MS Excel file. The values measured by the instrument are inserted into the spreadsheet cells. The operator can process the data as desired, using the spreadsheet functionalities.

Several modules are available and can be combined:

– **Port programming module: speed, parity, etc.**
Special function: RSIC instantly recognizes the ports available on your PC, and it automatically detects parameters.

– **Instrument programming module: transmission of the command needed to trigger a response from the instrument.**
Special function: RSIC can carry out a sequence of several requests to receive values of different types, if the instrument is able to supply them, possibility of use with twin-channel instruments.

– **MS Excel file definition module: file name, direction of cursor movement during data capture.**
Special function: The Excel cursor can be repositioned during data capture.



SD card reader

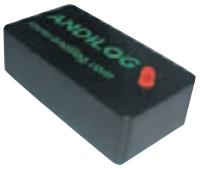
SD memory card reader for the Centor Star and Centor Dual digital graphic force gauges. This new device makes it possible to save the values measured by the force gauge and then read them over on a computer for further processing. The number of values or graphs which can be stored depends only on the card's capacity. For example, a 16 MB card will store over 200 graphs. Also, a software utility provided with the card reader can help prepare test configurations: The values for the limits, the types of calculations, the values sent via RS232, and the statistical settings for the test to be prepared can be set… When the card is placed in the reader, the new settings are read, recognized and applied directly to the force gauge, without any action from the operator.

DATASTICK

Circuit breaker

EMERGENCY BOX

Developed for the design and construction of test benches, this box uses the capabilities of CENTOR force gauges and torque gauges in order to ensure the safety of the equipment.
When the set point function is activated, the box will immediately turn off the 220 V power supply upon reaching a preset force or torque.
For ease of use, a pilot light indicates the status of the box.
It is a simple accessory that increases the possibilities of CENTOR instruments.



Pedals

Pedals
Pedal for CENTOR Easy, Star and Dual:
This simulates a keystroke and can perform one of the following functions: RAZ, TDX, etc.

CNR CBPDL

Combined cable
RS232 cable and pedal for CENTOR Easy, Star and Dual
Enables simultaneous use of the pedal and the RS232 output.

CNR CBPDY

Statistical printer

A small thermal printer to record the main statistical calculations and keep a print-out of batch measurements. Sold with a mains power adaptor and a roll of paper.

MTT DP1HS

Requires a CNR CB DG connecting cable.

DIGIMATIC cable for CENTOR Easy, Star and Dual:
link between the instrument and a Mitutoyo statistical printer.

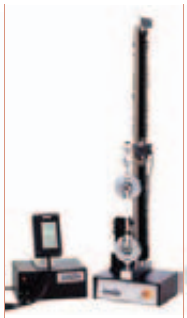
CNR CBDG

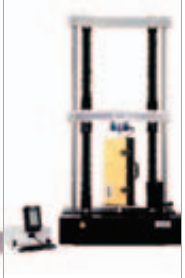
COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Test stands

Our range of test stands

Today to be competitive each product has its own unique specifications, that's why everyone needs to setup their own test. Based on this observation, Com-Ten has designed a full range of universal test stands to be the most versatile possible. Whether you choose to build your own system based on our well known force gauge and STENTOR series or supposing that you choose our high capacity integrated universal test stand, you'll find a solution which suits the needs of your laboratory or production.





		STENTOR + CENTOR GAUGE	ANTOR	701 SERIES	702 & 705 SERIES
FEATURES	Tensile	✓	✓	✓	✓
	Compression	✓	✓	✓	✓
	Limit switch	✓	✓	✓	✓
	Maximum capacity	1000 lbs	5000 lbs	500 lbs	5000 lbs
	Displacement resolution (in)	0.01 in	0.01 in	0.01 in	0.01 in
	Speed resolution (in/min)	1	1	0.01	0.01
	Auto return on limit switch	✓	✓	✓	✓
	Auto return on displacement value	✓	✓	✓	✓
	Auto return on force value	Option	Option		✓
	Cycles	✓	✓	✓	✓
	high speed return	✓	✓	✓	✓
	Peak force	✓	✓	✓	✓
	RS232 output	✓	✓	✓	✓
	Additionnal load cell	Star/Dual	✓	✓	✓
	Automatic calculation (Break force…)	Star/Dual	✓	✓	✓
	Display the curve	Star/Dual	✓	CTAP	CTAP
	Force/displacement	Dual		✓	✓
	Force regulation			✓	✓
	Setup protected by a password			✓	✓
	Computer drived			CTAP	CTAP
	Saved & load different test setup			CTAP	CTAP
	Illimited datas and curve storage			CTAP	CTAP
	Pre-programmed complex ASTM test			CTAP	CTAP
	Safety guard	Option	Option	Option	Option
	Force and stand controller	Separate	Separate	Integrated	Integrated
	Working area	Table	Fixture	Fixture	Fixture
CAPACITIES & SPEED	1 lb	Star/Dual			
	2 lb				
	5 lb				
	10 lb				
	20 lb				
	50 lb				
	100 lb				
	200 lb				
	500 lb				
	1000 lb				
	2000 lb				
	5000 lb				
TRAVEL WITHOUT FIXTURES	8 in	Stentor 1000			
	12 in	Stentor 2500	ANTOR S		
	14 in			701SN	
	18 in	Stentor 5000			
	20 in		ANTOR M		
	24 in		ANTOR L		
	28 in				702SN & 705SN

0.5–12 in/min

0.5–12 in/min

0.5–5.5 in/min

0.8–40 in/min

0.6–30 in/min

0.3–15 in/min

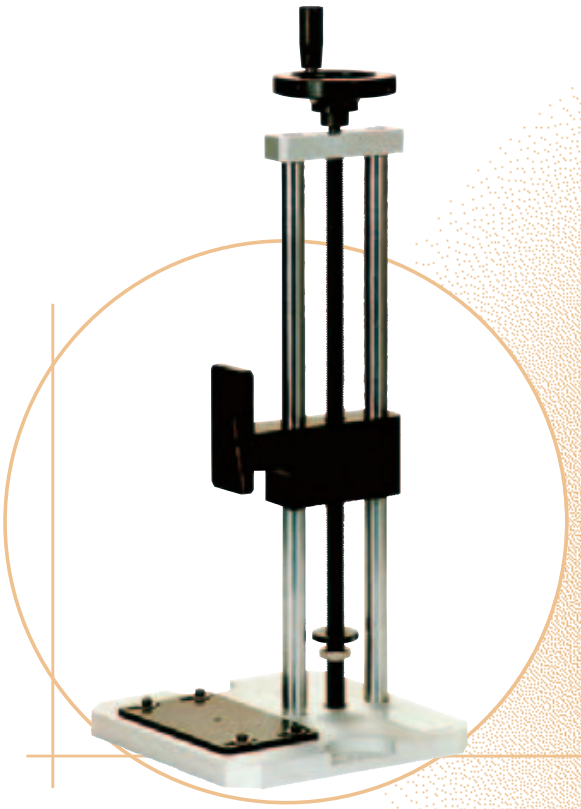
COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Test stands

BAT 750

To ensure correct positioning of the force gauge as compared with the sample tested, **the BAT 750 basic manual test stand** provides a solution that is easy to apply. It can be used in tension or compression, for tests requiring forces of up to 150 lb.

The base is made up of a flat plate on which the sample to be tested is placed, and it holds two columns on which the sliding crosshead moves:
– The force gauge is fitted on the crosshead, which is free of play and has a travel distance of 12 in.
– The crosshead is moved by hand, using a hand wheel at the top and a worm screw system.
– At the end of travel (lower end), the crosshead movement can be limited by an adjustable limit stop.
– The test stand can be used in a vertical or horizontal position.



MODEL	BAT 750
Capacity: maximum force in tension and compression	150 lb
Travel	12 in
Screw pitch	0.08 in/revolution
Workable dimensions	3.5 in x 4.7 in
Maximum clearance below the crosshead	11 in
Weight	17 lbs
Overall dimensions without force gauge	Height: 23 in Width: 9 in Depth: 9 in

Option: displacement sensor

The BAT 750 R basic manual test stand is fitted with a displacement sensor. The BAT 750 can be modified for more thorough tests. When the test conditions require measurement of displacement a digital sensor is fitted on the columns to enable the two measurements to be combined.

E-Z BASIC TEST STAND

Our E-Z test stand is an economical solution for performing tests in tension with force levels up to 500 lb. The stand is moved using a worm screw system with a side handle:
– Optional high and low limit stops.

MODEL	E-Z
Capacity: Maximum force in tension	500 lb
Travel	6 in
Thread of the worm screw	0.2 in
Workable dimensions	3.5 x 5 in
Weight	17 lbs

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Test stands

STENTOR 1000 / 2500 / 5000

The STENTOR 1000, 2500 and 5000 are designed to carry out tests for all applications in which the displacement speed is specified by a standard, together with all applications in which the speed can have an influence on the measurement itself.
The base supports a large worktable, 12 x 18 in, with easy access. Furthermore, fixing holes are provided to enable easy assembly of fixing tools.

The force gauge is fitted on the mobile crosshead, actuated by a ball screw system. Displacement is carried out using a linear guidance system inside the test stand body.
A system of adjustable mechanical or digital limit switches can be used to limit the crosshead travel to suit test requirements and protect the tools. Each limit switch has 2 functions: stop or reversal of direction for cyclical tests.

The control console can be used to start the test, control fast upward and downward movement, and set the test parameters:

– speed setting between 0.5 and 13 in/min, upwards and downwards,
– stopping or reversal of movement when the crosshead reaches the limit switches,
– stopping or reversal of movement based on a displacement value (digital limit switches),
– stopping or reversal of movement based on the force value (optional),
– number of working cycles.

The speed and displacement values are shown continuously on the console display.

MODELS	STENTOR 1000	STENTOR 2500	STENTOR 5000
Maximum capacity	200 lb	500 lb	5,000 N
Crosshead travel	8 in	12 in	18 in
Displacement resolution	0.01 in	0.01 in	0.01 in
Accuracy	0.002 in	0.002 in	0.002 in
Height between table and crosshead	15 in	19 in	25 in
Adjustable speed	0.5 to 12 in /min	0.5 to 12 in /min	0.5 to 12 in /min
Speed resolution	0.1 in/min	0.1 in/min	0.1 in/min
Accuracy	5%	5%	5%
Fast displacement speed	14 in/min	14 in/min	14 in/min
Workable dimensions	12 x 18 in	12 x 18 in	12 x 18 in
Overall dimensions in mm	33 x 20 x 19	37 x 20 x 19	45 x 20 x 19
Weight	90 lb	110 lb	130 lb
Mains power supply	110V	110V	110V

Safety: internal protections from overloads, protection using limit stops, emergency stop.

The STENTOR can be placed in a closed cabinet if sample rupture presents a risk for the operator. In that case, the motor stops as soon as the cabinet door is opened.

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Test stands

ANTOR SERIES

Our high capacity test system ANTOR provides general purpose testing to tensile and compression ASTM standards. An all-in-one system, the force is shown on a digital display which is able to draw the real-time curve of the test.
A separate controller is used to setup the speed, travel limits or high speed return of the stand.

Thanks to his SPIP plug-n-play technology, the ANTOR recognises automatically a wide range of removable load cells from 10lbs to 5000lbs with an accuracy of 0.5% of the full scale. It is also possible to test the smallest sheet of paper or a large wire or spring.
Complete but simple to use, it is the ideal tool for high force repeatable testing in production, quality or laboratory.

Technical characteristics

– Maximum capacity 5000 lbs
– A wide range of load cells available from 10 lbs to 5000 lbs
– Tensile and compression testing
– Digital force readout in lb, kg, N, g, oz
– Display curve of the test
– **Accuracy 0.5% full scale**
– **Resolution 1/10000 full scale**
– **Fast & Easy fastener and SPIP Plug & Play sytem for cells**
– Sample rate: 1,000 / second
– **Overload protection**
– Peak hold feature on force
– Automatic calculation (Break force, first peak, ...)
– Deflection readout: digital (in, mm)
– **High speed return**
– Digital test stand control: deflection, speed, setup...
– **Speed readout: digital (in/min, mm/min)**
– Speed accuracy: +/- 2.0% of reading
– **Data output: RS232 standard serial force output**
– Working cycles
– Travel limits manually adjustable upper & lower magnetic limit switch
– Power requirement: 110 V, 50-60 Hz (220 V, 50-60 Hz optional)

Options:
– Mini thermal report printer
– Safety guard to protect from breaking sample

AVAILABLE LOAD CELLS SSB FOR 95D SERIES

Part number	Capacity	Resolution	System accuracy
SPIP-10	10 lb	0.001 lb	0.05 lb
SPIP-20	20 lb	0.001 lb	0.1 lb
SPIP-50	50 lb	0.001 lb	0.25 lb
SPIP-100	100 lb	0.01 lb	0.5 lb
SPIP-200	200 lb	0.01 lb	1 lb
SPIP-500	500 lb	0.01 lb	2 lb
SPIP-1000	1000 lb	0.1 lb	5 lb
SPIP-2000	2000 lb	0.2 lb	10 lb
SPIP-5000	5000 lb	0.5 lb	25 lb

AVAILABLE CAPACITIES, SPEEDS AND DIMENSIONS FOR STENTMAX SERIES

Test stand capacity	Test stand speed range	SMALL	MEDIUM	LARGE
Pounds	Inches per min			
1000	20.0-0.4	ANTOR S1000	ANTOR M1000	ANTOR L1000
2000	10.0-0.2	ANTOR S2000	ANTOR M2000	ANTOR L2000
5000	3.0-.06	ANTOR S5000	ANTOR M5000	ANTOR L5000
	Working width	10"	10"	10"
	Travel w/o Fixtures	20"	30"	40"
	W x D x H	14"x12"x45"	14"x12"x48"	14"x12"x56"

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Test stands

701 TESTER

The advanced 701 Universal Test System is ball screw driven test stands, excellent for affordable, precision tensile and compression testing of a wide variety of materials or products up to 500 pounds. This variable speed tester has increased speed ranges and include adjustable travel limit switches. With the unique dual testing area, users can setup for two tests, tensile and/or compression, without having to switch out fixtures.

Sturdy ball screw drives allow for smoother operation and precise positioning. Stand include the touchscreen ComTouch Total Control system. These systems benefit from supporting our universal test software CTAP.

Technical characteristics

– Variable speeds up to 40 in/min
– Large testing area for wide samples
– Precision linear bearing guided ball screw drive for accurate crosshead positioning
– Accuracy 0.5% of the full scale
– Sampling rate – 100/sec
– 0.1% speed ratio on all testers
– All control for ball screw through touch screen menus on the ComTouch Total Control
– Can perform both tensile and compression testing without the need of a compression cage
– Peak hold feature
– Drive control with Dynamic brake
– Push button emergency stop switch
– Adjustable magnetic limit stops
– One easy-to-use connection out to controller
– Rugged and durable construction includes a one year quality guarantee
– Setup protected by password
– Force regulation

Options:
– Test report printer
– Safety guard to protect from breaking sample
– C-TAP testing software for advanced test stand control, graphing and reporting

Touchscreen ComTouch controller

PART NUMBER	701SN
Capacity	500 lb
Travel	24”
Working depth	4”
Speed range	0.8 to 40 in/min
Test stand dimension W x H x D (in)	12 x 40 x 12

AVAILABLE LOAD CELLS USB & ULP FOR 700 SERIES

USB Part number	ULP Part number	Capacity	Resolution	System accuracy
USB 0001	ULP 0001	1 lb	0.001 lb	0.005 lb
USB 0002	ULP 0002	2 lb	0.001 lb	0.010 lb
USB 0005	ULP 0005	5 lb	0.001 lb	0.025 lb
USB 0010	ULP 0010	10 lb	0.01 lb	0.05 lb
USB 0020	ULP 0020	20 lb	0.01 lb	0.10 lb
USB 0050	ULP 0050	50 lb	0.01 lb	0.25 lb
USB 0100	ULP 0100	100 lb	0.1 lb	0.5 lb
USB 0200	ULP 0200	200 lb	0.1 lb	1 lb
USB 0500	ULP 0500	500 lb	0.1 lb	2.5 lb

USB Series S-Block Load Cell

ULP Series S-Block Load Cell

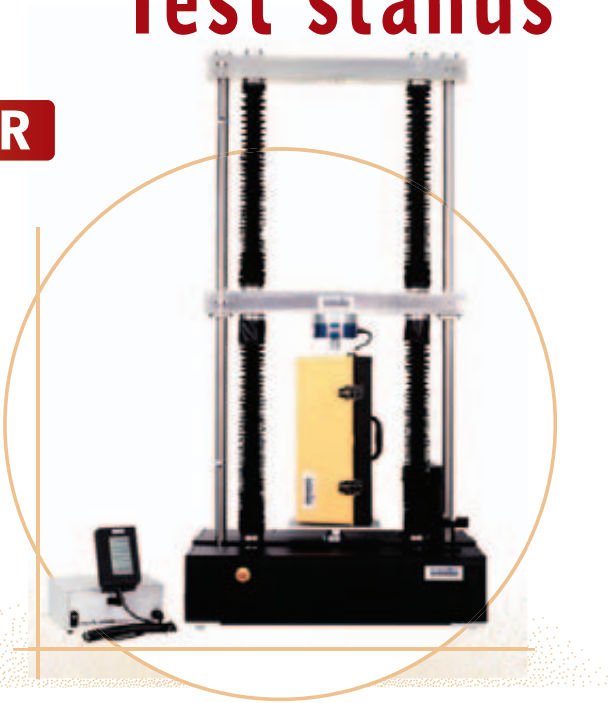
COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Test stands

702 & 705 TESTER

The advanced 700 Series Universal Test Systems are ball screw driven test stands, excellent for affordable, precision tensile and compression testing of a wide variety of materials, products or ASTM standards. These variable speed testers have increased speed ranges and include adjustable travel limit switches. With the unique dual testing area, users can setup for two tests, tensile and/or compression, without having to switch out fixtures.

Sturdy ball screw drives allow for smoother operation and precise positioning. Stands include the touchscreen ComTouch Total Control system. These systems benefit from supporting our universal test software CTAP.



Technical characteristics

- Variable speeds up to 30 in/min
- Large testing area for wide samples
- Precision linear bearing guided ball screw drive for accurate crosshead positioning
- Accuracy 0.5% of the full scale
- Sampling rate – 100/sec
- 0.1% speed ratio on all testers
- All control for ball screw through touch screen menus on the ComTouch Total Control
- Can perform both tensile and compression testing without the need of a compression cage
- Twin screw systems can perform testing above or below crosshead
- Push button emergency stop switch
- Adjustable magnetic limit stops
- One easy-to-use connection out to controller
- Rugged and durable construction includes a one year quality guarantee
- Force regulation

Options:

- Test report printer
- Safety guard to protect from breaking sample
- C-TAP testing software for advanced test stand control, graphing and reporting

Touchscreen ComTouch controller

PART NUMBER	702SN	705SN
Capacity	2000 lb	5000 lb
Travel	36"	36"
Working depth	18"	18"
Speed range in (mm) per min	0.6 to 30 in/min	0.3 to 15 in/min
Test stand dimension W x H x D (in)	37 x 61 x 25	37 x 61 x 25

AVAILABLE LOAD CELLS USB & ULP FOR 700 SERIES

USB Part number	ULP Part number	Capacity lb	Resolution lb	System accuracy lb
USB 0010	ULP 0010	10 lb	0.01	0.05
USB 0020	ULP 0020	20 lb	0.01	0.10
USB 0050	ULP 0050	50 lb	0.01	0.25
USB 0100	ULP 0100	100 lb	0.1	0.5
USB 0200	ULP 0200	200 lb	0.1	1
USB 0500	ULP 0500	500 lb	0.1	2
USB 1000	ULP 01000	1000 lb	1	5
USB 2000	ULP 2000	2000 lb	1	10
USB 5000	ULP 5000	5000 lb	1	25

USB Series S-Block Load Cell

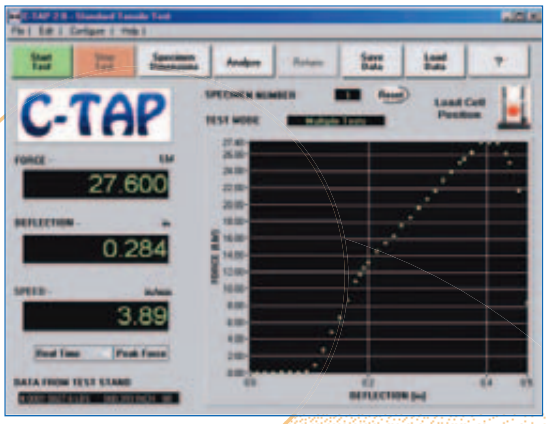
ULP Series S-Block Load Cell

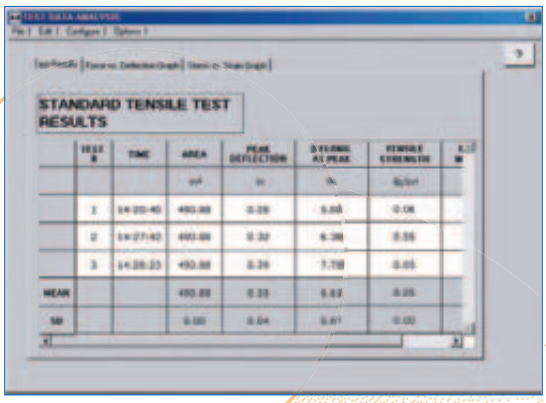
COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Universal test control software

CTAP 3.0

Our incredibly popular test-control software package has just gotten better! Introducing C-TAP™ 3.0, the next level in material testing. This powerful software now is packed with improved features and a redesigned layout that make it more powerful and easier to use than ever.
Through the use of a personal computer, the **COM-TEN – Test Acquisition Package (C-TAP™)** will allow the user to control the COM-TEN Test Stand with ease. The graphical interface provides all the tools necessary for data acquisition and control, data analysis, and data presentation of mechanical testing. In this Windows™ environment the user can perform most ASTM, ISO, DIN, and other standard or custom tests with just a click of the mouse. **C-TAP™** creates intuitive, fully integrated, front-panel controls on the PC. Data, charts, and specific ASTM test results are displayed in easy to understand graphics and tables to the screen or printer.





Technical specifications

- Choose from over 20 built-in formulas and report items to be displayed on the results screen
- Save and load test data on the fly as well as export data to ASCII files to import into Microsoft Excel or other spreadsheets
- Custom report generator wizard steps you through setting up printable reports complete with titles and data
- Results displayed in simple spreadsheet format with the ability to include or exclude tests from sample lot
- Extensive graphing capability, including multiple test plotting with overlaid tests indicated in various colors
- Security feature allows manager to lock various test parameters so they cannot be changed during testing
- Error log reports, extensive help menus, and an online manual make troubleshooting quick and easy
- Test notes entry keeps annotations on each test performed and attaches these to the test report
- Selectable TOE compensation on force / deflection and stress / strain graph

Optional additional ASTM module:

Pre-programmed ASTM complex custom test procedures are available as optional modules

ASTM	DESCRIPTION	MODEL #
C1161	Flexural Strength of Advanced Ceramics at Ambient Temperature	CTAPC1161
C203	Breaking Load and Flexural Properties of Block-Type Thermal Insulation	CTAPC203
D1621	Compressive Properties of Rigid Cellular Plastics	CTAPD1621
D1894	Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting	CTAPD1894
D2256	Tensile Properties of Yarns by the Single-Strand Method	CTAPD2256
D4034	Resistance to Yarn Slippage at the Sewn Seam in Woven Upholstery Fabrics	CTAPD4034
D6272	Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials by Four-point Bending	CTAPD6272
D790	Standard Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials	CTAPD790
D882	Tensile Properties of Thin Plastic Sheeting	CTAPD882
F1575	Determining Bending Yield Moment of Nails	CTAPF1575
F88	Seal Strength of Flexible Barrier Materials	CTAPF88

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Holders, Fixtures and clamps

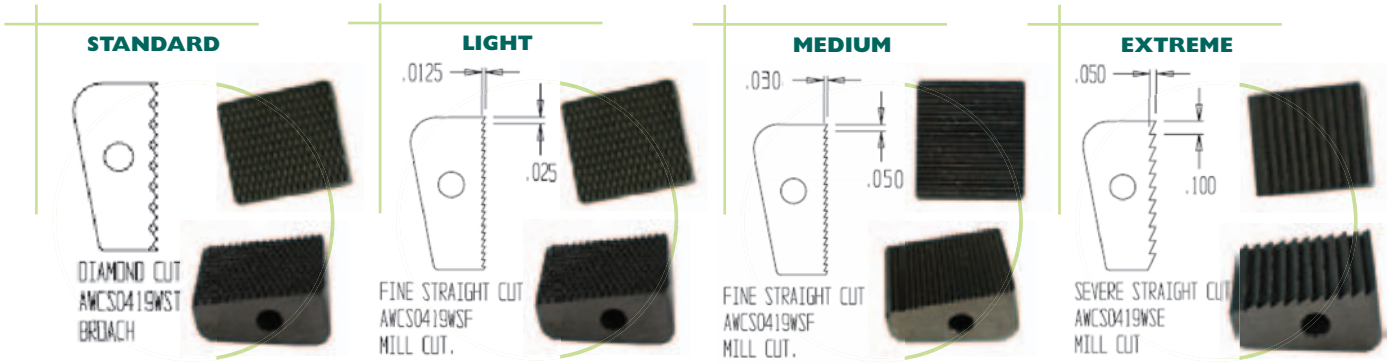
WEDGE CLAMPS

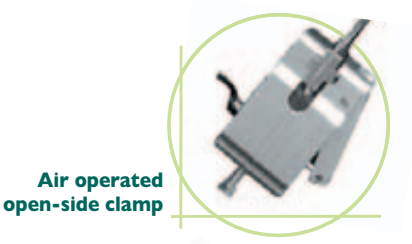
Extra strong self closing sliding wedges, fast clamping action on metal, plastic, rubber, wires and many other materials. Samples up to 1" wide

MODEL	DESCRIPTION	CAPACITY	SAMPLE THICKNESS
AC MAC 500	Mini wedge	100 lb	0.19 in
AC MAC 5KN	Mini wedge	1000 lb	0.39 in
WCN0518	Needle nose wedge clamp	500 lb	0.19 in
WCS0525	Wedge clamp 5 000lbs	5000 lb	0.25 in
WCS0550	Wedge clamp 5 000lbs	5000 lb	0.5 in
WCS0575	Wedge clamp 5 000lbs	5000 lb	0.75 in
WCS0588	Wedge clamp 5 000lbs	5000 lb	0.88 in
WCW0525	Wedge clamp 5 000lbs 1.5" wide	5000 lb	0.25 in
WCS1050	Wedge clamp 10 000lbs	10000 lb	0.5 in
WCS1075	Wedge clamp 10 000lbs	10000 lb	0.75 in
WCS1088	Wedge clamp 10 000lbs	10000 lb	0.88 in
WCS2050	Wedge clamp 20 000lbs	20000 lb	0.5 in
WCS2075	Wedge clamp 20 000lbs	20000 lb	0.75 in
WCS2088	Wedge clamp 20 000lbs	20000 lb	0.88 in

SPECIALS JAWS

All wedge are provided with standard jaws, for specific applications, we can provide special jaws




Air operated open-side clamp


Air operated wedge clamp

AIR OPERATED CLAMPS

Extra strong self closing sliding wedges, fast clamping action on metal, plastic, rubber, wires and many other materials. Samples up to 1" wide

MODEL	DESCRIPTION	CAPACITY	SAMPLE THICKNESS
FCA2025	Air operated open-side anvil clamp 2" wide	1200 lb	0.25 in
FCA3019	Air operated open-side anvil clamp 3" wide	3000 lb	0.19 in
WCA0525	Air operated wedge clamp self closing 1" wide	5000 lb	0.25 in
WCA0550	Air operated wedge clamp self closing 1" wide	5000 lb	0.5 in
WCA0575	Air operated wedge clamp self closing 1" wide	5000 lb	0.75 in
WCA0588	Air operated wedge clamp self closing 1" wide	5000 lb	0.88 in
ACV1010	Air control pedal for operating one pair of clamps		

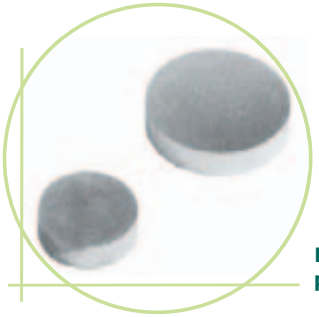
COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Holders, Fixtures and clamps

ROUND PLATENS

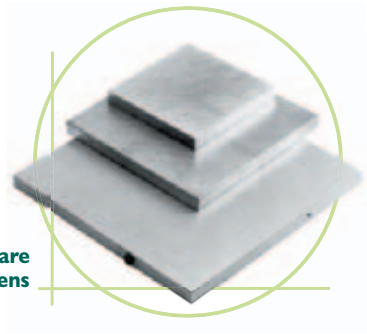
Compression platens constructed of aluminium or steel

MODEL	DESCRIPTION	CAPACITY	DIAMETER
CFB0150	Steel round platen 1.5" diameter	20000 lb	1.5 in
CFB0250	Steel round platen 2.5" diameter	20000 lb	2.5 in
CFB0300	Steel round platen 3.0" diameter	20000 lb	3 in
CFB0400	Steel round platen 4.0" diameter	20000 lb	4 in
CFB0600	Steel round platen 6.0" diameter	20000 lb	6 in



Round plattens

SQUARE PLATENS



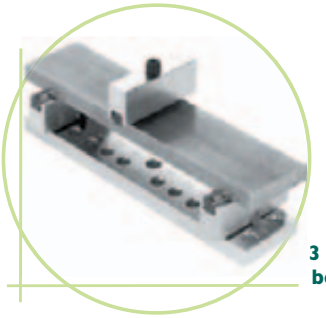
Square plattens

MODEL	DESCRIPTION	CAPACITY	DIMENSIONS
PMA0812	Aluminium square platen 400 lbs	400 lb	08x12 in
PMA01212	Aluminium square platen 400 lbs	400 lb	12x12 in
PMA0808	Aluminium square platen 1000 lbs	1000 lb	8x8 in
PMA0606	Aluminium square platen 2000 lbs	2000 lb	6x6 in
PMS1212	Steel square platen 2000 lbs	2000 lb	12x12 in
PMS1616	Steel square platen 2000 lbs	2000 lb	16x16 in
PMA0404	Aluminium square platen 5000 lbs	5000 lb	4x4 in
PMS0606	Steel square platen 5000 lbs	5000 lb	6x6 in
PMS0808	Steel square platen 5000 lbs	5000 lb	8x8 in
PMS0404	Steel square platen 10000 lbs	10000 lb	4x4 in

MODULUS OF RUPTURE

3 point bending or rocking anvil fixture for modulus of rupture Adjustable in 1 inch intervals

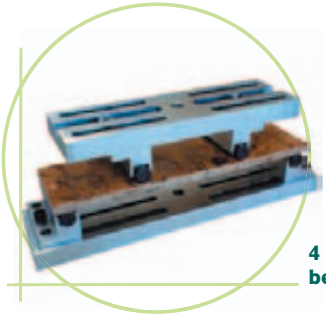
MODEL	DESCRIPTION	CAPACITY	SAMPLE LENGTH
MOR0150	3 point bending for ASTM C203. Anvil width 4"	50 lb	10 in
MOR0100	3 point bending anvil width 2"	100 lb	1 - 6 in
MOR0400	3 point bending anvil width 4"	400 lb	2 - 8 in
MOR1000	3 point bending anvil width 4"	1000 lb	2 - 8 in
MOR2000	3 point bending anvil width 4"	2000 lb	2 - 8 in
MOR5000	3 point bending anvil width 4"	5000 lb	2 - 8 in
MOR10K0	3 point bending anvil width 4.5"	10000 lb	2 - 8 in
MOR20K0	3 point bending anvil width 4.5"	20000 lb	2 - 8 in



3 point bending

4 point bending or orcking anvil fixture for modulus of rupture Adjustable in 1 inch intervals

MODEL	DESCRIPTION	CAPACITY	SAMPLE LENGTH
MOR0150	4 points	50 lb	10 in
MOR0100	3 point bending anvil width 2"	100 lb	1 - 6 in
MOR0400	3 point bending anvil width 4"	400 lb	2 - 8 in
MOR1000	3 point bending anvil width 4"	1000 lb	2 - 8 in
MOR2000	3 point bending anvil width 4"	2000 lb	2 - 8 in
MOR5000	3 point bending anvil width 4"	5000 lb	2 - 8 in



4 point bending

QDR0100

QDS0100

QDS0050

QUICK DISCONNECT

Quick disconnect fixtures are recommanded for quick changing of clamps or load cell.

MODEL	DESCRIPTION	CAPACITY
QDS0100	Top self alignement quick disconnect	5000 lb
QDR0100	Bottom fixed quick disconnect	5000 lb
QDS0050	Fixture end of quick disconnect	5000 lb

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Holders, Fixtures and clamps

VISE GRIP

MODEL	DESCRIPTION	CAPACITY	SAMPLE WIDTH	SAMPLE THICKNESS
VAG0102	MINIATURE VISE GRIP	50 lb	0,5 in	0.28 in
VAG0240	VISE ACTION GRIP 1000 lbs	225 lb	4 in	0.31 in
VAG0101	VISE ACTION GRIP 1000 lbs	1000 lb	1 in	0.75 in
VAG2020	VISE ACTION GRIP 2250 lbs	2250 lb	2 in	0.5 in
VAG0410	VISE ACTION GRIP 4500 lbs	4500 lb	4 in	0.5 in

VAG series

FCM series

SCA series

SCT series

SCF series

SWC series

FLAT ANVILS CLAMPS

Flat anvils clamps ideal for fabric, plastic, films, membranes, sheet…

MODEL	DESCRIPTION	CAPACITY	SAMPLE WIDTH	SAMPLE THICKNESS
SCA2212	Adjustable hardened anvils clamps	400 lb	2,25 in	1.12 in
SCA1037	Adjustable hardened anvils clamps	600 lb	1 in	0.38 in
FCM2025SA	Flat rubber faced anvils clamps	500 lb	2 in	0.25 in
SCT3012	Two bolts flat anvils clamp	1000 lb	3 in	0.13 in
FCM3037	Wide flat rubber faced anvils clamps	2000 lb	2 in	0.38 in
SCF1031	Four bolts flat anvils clamp	2000 lb	1 in	0.31 in
SWC	Self closing single wedge clamp	5000 lb	3 in	0.31 in

FLH series

YSF series

PTH series

PEG TYPE GRIPS

MODEL	DESCRIPTION	CAPACITY	SAMPLE WIDTH	SAMPLE DIAMETER
YSF1311	Peg-type grips	200 lb	1.12 in	1.25 in
FLH0300	Large peg-type grips for large loops	500 lb	3 in	1 in
PHB0235	Rotating peg type holder	2000 lb	0.5 in	0.5 in
PTH0XXX	Fixed peg type holder	2000 lb	0.5 in	0.5 in

Single spool flat clamp

SPOOL TYPE HOLDER

Ideal for strapping, belting and flexible strp materials

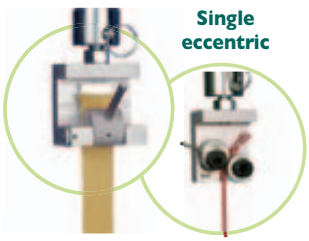
MODEL	DESCRIPTION	CAPACITY	SAMPLE WIDTH	SAMPLE THICKNESS
SFC3010	Single spool flat clamp 1000lbs	1000 lb	3 in	0.1 in
SFC8010	Single spool flat clamp 1000lbs	1000 lb	3 in	0.25 in
SFC1040	Single spool flat clamp 4000lbs	4000 lb	1 in	0.1 in
SFC3050	Single spool flat clamp 5000lbs	5000 lb	3 in	0.25 in
SFC3020K	Single spool flat clamp 20000lbs	20 000 lb	3 in	0.25 in

ECCENTRIC SELF CLOSING CLAMP

MODEL	DESCRIPTION	CAPACITY	SAMPLE WIDTH	SAMPLE THICKNESS
SCC1037	Single eccentric self closing clamp 500 lbs	500 lb	1 in	0.38 in
SCC3037	Wide single eccentric self closing clamp 500lbs	500 lb	3 in	0.38 in
CCO3719	Wire single eccentric self closing clamp 1000lbs	1000 lb	0.38 in	0.19 in
SCC3075	Wide single eccentric self closing clamp 2000lbs	2000 lb	3 in	0.75 in

Wide single eccentric

Single eccentric

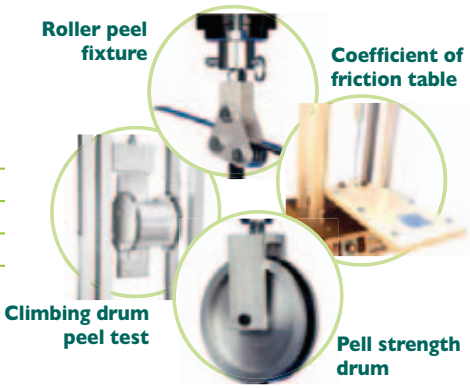


COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Holders, Fixtures and clamps

PEELING FIXTURES

MODEL	DESCRIPTION	CAPACITY	SAMPLE WIDTH
RPF3167	Roller peel fixture for ASTM D3167	200 lb	1 in
COF1894	Coefficient of friction table ASTM D1894		Samples 2.5"x2.5"
CDP0435	Climbing drum peel test ASTM D1781	400 lb	3.5 in
PSD1060	Peel strength drum for test IPC650	100 lb	1 in wide by 18 in long



WIRE FIXTURES

MODEL	DESCRIPTION	CAPACITY	DIAMETER
LCF0093	Locking cam fixture	50 lb	0.09 in
FTH0062	Filament and thread holder	200 lb	0.06 in
SFO0187	Single spool grooved clamp	1000 lb	0.19 in
SFS4438	Spool flat split clamp 1000 lbs	1000 lb	0.38 in
SGO0125	Double spool grooved clamp	2000 lb	0.13 in
CWC1050	Single spool cord and wire clamp	2000 lb	0.25 in
SFS0550	Spool flat split clamp 5000 lbs	5000 lb	0.5 in

WIRE TERMINAL CLAMPS

MODEL	DESCRIPTION	CAPACITY	DIAMETER
WTC0XXX	Single wire terminal clamp	600 lb	Custom
WTC0331	Self aligning terminal carrouse	1000 lb	.031 to .312 in

SPECIAL FIXTURES

SBB0200

SBH0100

MODEL	DESCRIPTION	CAPACITY	SAMPLE DIMENSIONS
PSC533B	Peel strength clamp for ASTM B533	50 lb	3.1" wide by 4.1" long
SBB0200	Self binding bollard clamp for thin latex	200 lb	2" wide
BBT0405	Ball burst test for ASTM D-751, D-3787 AND D-3940	400 lb	
PRF1306	Puncture resistance fixture for ASTM F1306	400 lb	
PRF1342	Puncture resistance fixture for ASTM F1342	400 lb	
PRF4833	Puncture resistance fixture for ASTM D4833	400 lb	
FAP1203	Fixed angle 90 degree peel fixture	400 lb	3" wide by 12" long
VAP1203	Variable angle peel fixture	400 lb	3" wide by 12" long
SBH0100	Slide-in briquette holder	500 lb	
BRA2095	Bar & rod adhesives fixture for ASTM D2095	2000 lb	1/2" by 1/2"
BTF2020	Bond test fixture for ASTM C297	2000 lb	2" by 2"
PSA5000	Platen swivel adapter for aligning platen on uneven samples	5000 lb	
TRH2075	Threaded rod holder for ASTM E8	20000 lb	0.75" up to 10" threaded
WWFA497	Welded wire fabric fixture for ASTM A497	20000 lb	0.625" diameter
CFRD395	Compression rubber set fixtur for ASTM D395-B		
CFRPD695	Compressive fixture for plastic for ASTM D695		

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Torque measurement

CENTOR W

Using the CENTOR technology, **the CENTOR W** digital torque gauges have a very large graphic display and show a maximum amount of information for more efficient measuring: they show the current reading and the peak value at the same time, and a bar graph to show the operator whether they are close to their maximum capacity. If necessary, the backlighting can be used to further enhance reading comfort.
Its advanced measurement chain enables it to use a sampling rate of 1,000 Hertz with a resolution of 1/10,000 FS and a total error of less than 0.5% FS.
Many other functions complete the possibilities of the gauge:

the Set point functions can be used to carry out "OK, NOK" tests: a symbol appears on the display.

The fully programmable RS232 output sends the data to a PC.
A digimatic output can be used with Mitutoyo statistical printers.
The CENTOR W is availbale in EASY or STAR versions with the sensors p 19

Technical characteristics version Star

– Clockwise and counterclockwise measurement
– Accuracy 0.5% FS
– Resolution 1/10,000 FS
– Peak function in both directions
– Simultaneous display of the peak and the current reading
– Display of the Torque/Time graph
– Calculation of specific points of the graph:
  • Maxima
  • Torque at time T
  • Break point
  • Derivative
  • First peak
  • Torque upon opening/closing of contact
  • Average torque
– Memorization of the last graph curve measured
– Bar graph
– 4 units available: Nm, Kg.cm, mNm, lbin
– Sampling rate 1,000 Hertz
– Can be used with a pedal
– Tare function
– Auto-off adjustable from 5 to 15 min, can be deactivated
– Programmable set point functions
– Two-way RS232 output, transmission of the current reading, minimum, peak, or calculation
– Running transmission of 50 values per second
– Possibility of transmitting the graph curve memorized
– Digimatic output
– Memorization of 2 configurations
– Protection function (blocking) for the current configuration
– Automatic recognition of additional sensors
– Reversible display
– Backlit display
– Operates on rechargeable batteries
– 8 hours of operation without recharging
– Fast charge
– Low battery indicator
– Metal casing and protective elastomer overmould
– Calibration certificate included
– Supplied in a carrying case with a mains adaptor

Technical characteristics version Easy

– Clockwise and counterclockwise measurement
– Accuracy 0.5% FS
– Resolution 1/10,000 FS
– Peak function in both directions
– Simultaneous display of the peak and the current reading
– Bar graph
– 4 units available: Nm, Kg.cm, mNm, lbin
– Sampling rate 1,000 Hertz
– Can be used with a pedal
– Tare function
– Auto-off adjustable from 5 to 15 min, can be deactivated
– Programmable set point function
– Two-way RS232 output: transmission of current reading, minimum, or maximum values
– Digimatic output
– 8 hours of operation without recharging
– Fast charge
– Reversible display
– Backlit display
– Operates on rechargeable batteries
– Low battery indicator
– Memorizes its configuration
– Metal casing and protective elastomer overmould
– Calibration certificate included
– Supplied in a carrying case with a mains adaptor

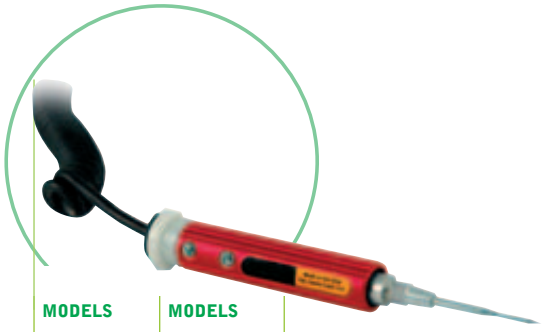
COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Torque gauges

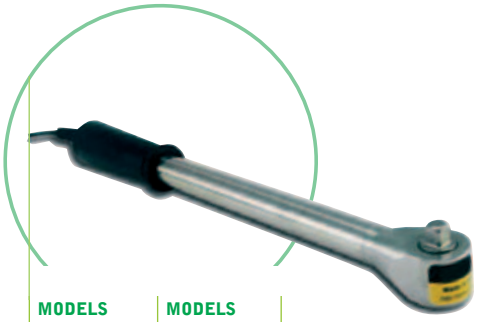
Static torque sensors

The additional torque sensors are recognized by CENTOR Star force gauge or torque gauge version instruments and can complete a set of force/torque instruments at a very reasonable price.
The sensor characteristics are stored in the memory of an electronic circuit located inside the sensor connector, and they are read by the CENTOR Star or Dual instrument, which is automatically configured and becomes a torque gauge without the operator having to make any adjustments.
Our torque sensors are availble in 3 versions:

- Centor Easy with non removable sensor
- Centor Star With non removable sensor
- Additionnal remobale sensor for Centor version Star and Dual



MODELS	MODELS	MODELS			
Centor Easy	Centor Star	SPIP additionnal sensors	ACCURACY	CAPACITIES	RESOLUTIONS
CNR EA TM-04	CNR ST TM-04	SPIP TM-04	0.5% FS	3 lbin	0.0003 lbin
CNR EA TM-07	CNR ST TM-07	SPIP TM-07	0.5% FS	6 lbin	0.0006 lbin



MODELS	MODELS	MODELS			
Centor Easy	Centor Star	SPIP additionnal sensors	ACCURACY	CAPACITIES	RESOLUTIONS
CNR EA TW-15	CNR ST TW-15	SPIP TW-15	0.5% FS	120 lbin	0.01 lbin
CNR EA TW-60	CNR ST TW-60	SPIP TW-60	0.5% FS	600 lbin	0.06 lbin
CNR EA TW-150	CNR ST TW-150	SPIP TW-150	0.5% FS	1200 lbin	0.1 lbin
CNR EA TW-600	CNR ST TW-600	SPIP TW-600	0.5% FS	6000 lbin	0.6 lbin

MODELS	MODELS	MODELS			
Centor Easy	Centor Star	SPIP additionnal sensors	ACCURACY	CAPACITIES	RESOLUTIONS
CNR EA TH-0.12	CNR ST TH-0.12	SPIP TH-0.12	0.5% FS	1 lbin	0.0001 lbin
CNR EA TH-0.3	CNR ST TH-0.3	SPIP TH-0.3	0.5% FS	3 lbin	0.0003 lbin
CNR EA TH-1.5	CNR ST TH-1.5	SPIP TH-1.5	0.5% FS	12 lbin	0.001 lbin
CNR EA TH-6	CNR ST TH-6	SPIP TH-6	0.5% FS	50 lbin	0.005 lbin
CNR EA TH-12	CNR ST TH-12	SPIP TH-12	0.5% FS	100 lbin	0.01 lbin

MODELS	MODELS	MODELS			
Centor Easy	Centor Star	SPIP additionnal sensors	ACCURACY	CAPACITIES	RESOLUTIONS
CNR EA TT-0.05	CNR ST TT-0.05	SPIP TT-0.05	0.5% FS	0.6 lbin	0.00006 lbin
CNR EA TT-0.15	CNR ST TT-0.15	SPIP TT-0.15	0.5% FS	1.25 lbin	0.0001 lbin
CNR EA TT-0.35	CNR ST TT-0.35	SPIP TT-0.35	0.5% FS	3 lbin	0.0003 lbin
CNR EA TT-0.75	CNR ST TT-0.75	SPIP TT-0.75	0.5% FS	6 lbin	0.0006 lbin
CNR EA TT-1	CNR ST TT-1	SPIP TT-1	0.5% FS	10 lbin	0.001 lbin
CNR EA TT-3	CNR ST TT-3	SPIP TT-3	0.5% FS	25 lbin	0.003 lbin
CNR EA TT-6	CNR ST TT-6	SPIP TT-6	0.5% FS	60 lbin	0.006 lbin
CNR EA TT-12	CNR ST TT-12	SPIP TT-12	0.5% FS	100 lbin	0.01 lbin
CNR EA TT-24	CNR ST TT-24	SPIP TT-24	0.5% FS	200 lbin	0.02 lbin
CNR EA TT-60	CNR ST TT-60	SPIP TT-60	0.5% FS	500 lbin	0.05 lbin

MODELS			
SPIP additionnal sensors	ACCURACY	CAPACITIES	RESOLUTIONS
SPIP TDF-150	0.5% FS	1200 lbin	0.1 lbin
SPIP TDF-300	0.5% FS	2400 lbin	0.2 lbin
SPIP TDF-600	0.5% FS	6000 lbin	0.6 lbin
SPIP TDF-1200	0.5% FS	12000 lbin	1 lbin

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Spring tests

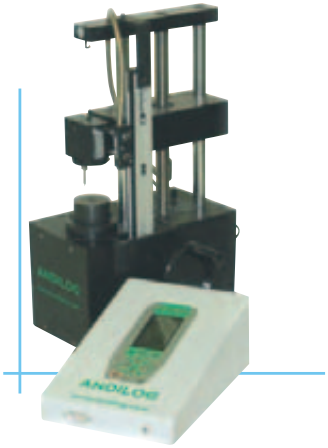
Springtest 1

Basic tester

A very simple, economical system for checking compression springs. The measurement head gives the force applied, the displacement sensor shows the flexion or height measured under load. The parallelism of the lower plate can be adjusted to ensure correct seating for the spring. Ready to use system. Supplied with a Ø 2 in fixed plate and a self-adjusting plate.

MODELS	MAX CAPACITIES	RESOLUTIONS	TRAVEL	DIAMETER
Springtest 1-10	2 lb	0.0002 lb	8 in	2 in
Springtest 1-25	5 lb	0.0005 lb	8 in	2 in
Springtest 1-50	10 lb	0.001 lb	8 in	2 in
Springtest 1-100	20 lb	0.002 lb	8 in	2 in

Displacement resolution: 0.01 mm



Springtest 2

Precision tester

A system specially designed for high precision measurements of compression. With its high reduction ratio, this manually operated test stand is well suited for the measurement of small springs with low force levels. The displacement sensor gives a measurement of the flexion or height measured under load with a resolution of 0.00002 in. The test stand is equipped with a set of adjustable limit stops. The measurement display shows the force and the displacement simultaneously and plots the graph curve for the spring. These data can be exported via the RS232 output of the display unit. The parallelism of the lower plate can be adjusted to ensure correct seating for the spring. An accessory kit can be used to make measurements on tension springs.

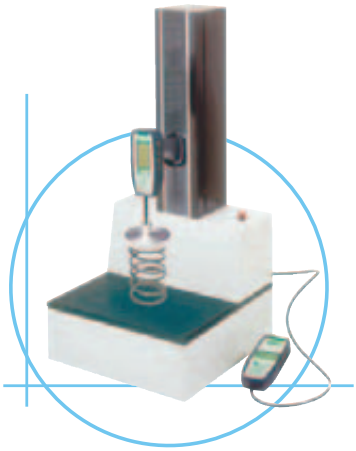
MODELS	MAX CAPACITIES	RESOLUTIONS	TRAVEL	DIAMETER
Springtest 2-10	2 lb	0.0002 lb	4 in	1 in
Springtest 2-25	5 lb	0.0005 lb	4 in	1 in
Springtest 2-50	10 lb	0.001 lb	4 in	1 in

Displacement resolution: 5 micrometers.

Springtest 3

Automatic tester

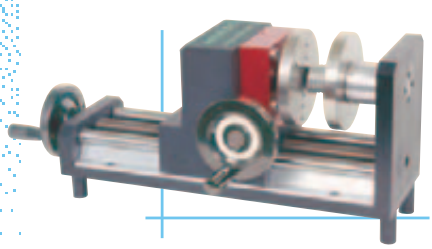
With its CENTOR Dual force gauge, fixed plate and adjustable plate, this unit can be used to test high capacity tension and compression springs. The command automatically determines the origin of the displacements and then stops the machine at a predetermined flexion value to measure the height under load. It is also possible to measure flexion, and cycles can be programmed. The instrument has an RS232 to store the results on a computer. Additional sensors are available to provide high levels of precision for springs with low force levels.
Ready to use system. Supplied with a Ø 4 in fixed plate.



MODELS	MAX CAPACITIES	RESOLUTIONS	TRAVEL	DIAMETER
Springtest 3-250	50 lb	0.005 lb	12 in	4 in
Springtest 3-500	100 lb	0.01 lb	12 in	4 in
Springtest 3-1000	200 lb	0.02 lb	12 in	4 in
Springtest 3-2500	500 lb	0.05 lb	15 in	4 in

Springtwist

Torsion tester



Dedicated to controls on torsion springs, this manual torsion test stand is fitted with a CENTOR Dual. It shows the torque and angle values on the same display. It is supplied with a set of bored plates and fitted with locating pins to hold the springs in place.

MODELS	MAX CAPACITIES	RESOLUTIONS	TRAVEL	DIAMETER
Springtwist-05	0 - 5 lbin	0.0005 lbin	4 in	4 in
Springtwist-2	0 - 15 lbin	0.001 lbin	4 in	4 in
Springtwist-10	0 - 100 lbin	0.01 lbin	4 in	4 in

Additional sensors are available to provide high levels of precision for springs with low force levels.

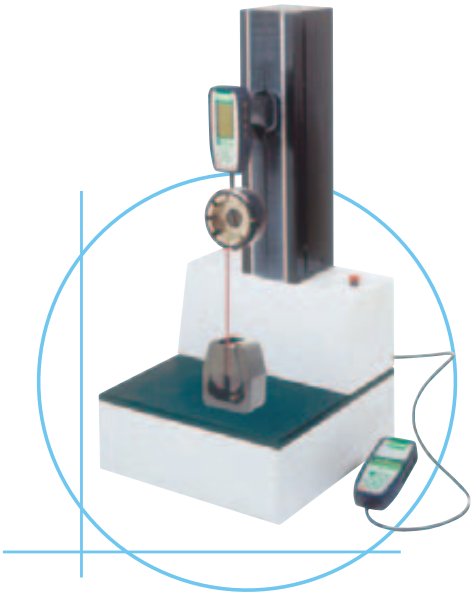
COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Cable tests

Wire Test 1

Ideal for small cross-sections, the **WIRE TEST 1** instrument measures the pull-out forces for terminals up to 100 lb. The force gauge can be set to beep as soon as the necessary force has been reached. The operator then stops the test without reaching the pull-out force.
Ready to use system, supplied with a basic eccentric and a carousel.

MODEL	MAX CAPACITY	RESOLUTION	TRAVEL
WIRE TEST 1	0 – 100 lb	0.01 lb	8 in
Max sample length: 8 in			
Max wire diameter: 0.17 in			



Wire Test 2

The **WIRE TEST 2** test bench is designed to test the quality of connections in place.
The success of a connection is related to the quality of the setting tools and the proper adjustment of the setting machines. Because these settings tend to evolve over the course of production, it is essential to check them regularly.
Measuring the force needed to pull out the connections is a quick and easy step that very clearly shows the condition of the setting.
Several aeronautic, automotive or railway standards define the test conditions: minimum acceptable forces depending on the diameter of the cable, tension rates, etc.
WIRE TEST II meets all those conditions. Thanks to its control console, the operator selects the settings for the tension rates, the return speed and the automatic return to the starting position. The force gauge displays the current values and the pull-out force. These results can either be stored in the memory (up to 100 values) or even transferred to a computer. Designed for use in the production workshop, the WIRE TEST II guarantees a faultless wiring.
Maximum force 200 lb, displacement length 8 in, maximum length of samples 12 in, sold with a carousel for terminals and an eccentric or an optional self-closing grip.
Also available with a 1,000 lb capacity.

MODEL	MAX CAPACITY	RESOLUTION	TRAVEL
WIRE TEST 2	0 – 500 lb	0.05 lb	12 in
WIRE TEST 3	0 – 1000 lb	0.1 lb	18 in
Max sample length: 8 in			
Max wire diameter: 0.17 in			

Tests on switches and keyboards

Thanks to its many calculation possibilities, the CENTOR Star force gauge can be used to fully characterize switches, contactors, circuit breakers and keyboards.
During the test, the CENTOR Star memorizes not only the maximum system opening force (mechanical force), but also the force exerted at the time of electric opening (or closing) of the contact (electric cut off function).
These two characteristics, which are always different, are essential in assessing the functionality and quality of keyboards and switches, and also those of cut off mechanisms such as circuit breakers.
All the measurements are made at a sampling rate of 1,000 Hertz, which ensures high levels of repetitivity and accuracy.
Both values are shown on the same display and are available for downloading via the RS232 output.
The CENTOR Star is available in all capacities from 0 – 2 lb up to 0 – 200 lb and for this application it requires an additional optional CNR CB TOP cable.

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Packaging tests

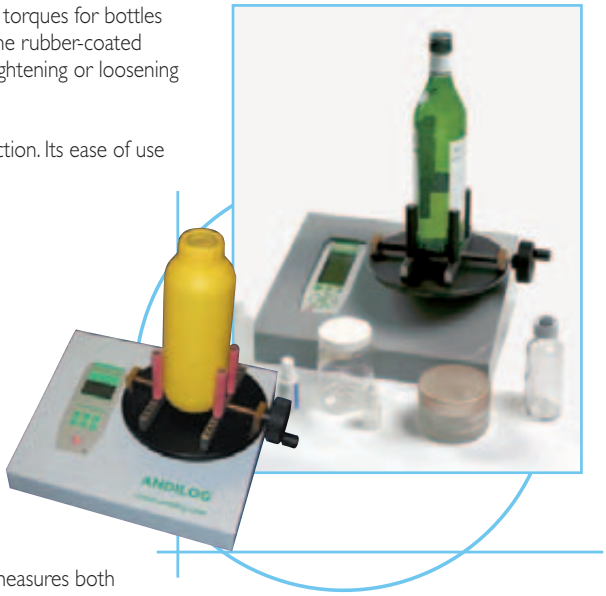
Anditork

The ANDITORK bottle or jar opening tester is specially designed to measure opening torques for bottles and jars. It is equipped with a grip plate that holds products from 0.5 to 8 in in diameter. The rubber-coated gripping fingers are adjusted quickly using a travel knob. Torque readings can be made by tightening or loosening it, and the RS232 output can be used to save the data to a PC.

The ANDITORK First is specially designed to measure opening/closing torques in production. Its ease of use makes it an invaluable tool for measuring the maximum torque:

MODELS	TORQUES	ACCURACIES	RESOLUTIONS	DIAMETERS
Anditork FT 10	0 – 100 lbin	0.5% FS	1 lbin	0.5 to 8 in

Options: The ANDITORK instruments are fitted with grip fingers as standard, but they can be supplied with gripping Vs on request.

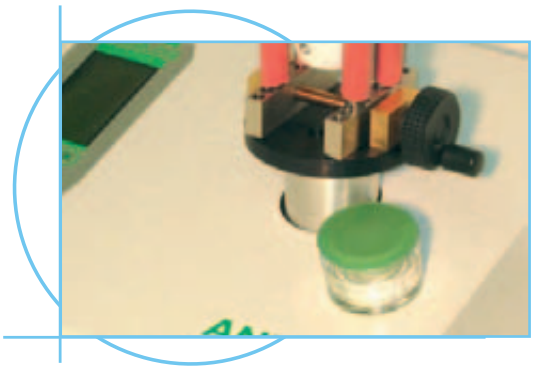


The ANDITORK Easy is the most popular model due to its set point functions and its ability to communicate with a PC or a printer.

MODELS	TORQUES	ACCURACIES	RESOLUTIONS	DIAMETERS
Anditork EA 3	0 – 25 lbin	0.5% FS	0.002 lbin	0.5 to 8 in
Anditork EA 6	0 – 50 lbin	0.5% FS	0.005 lbin	0.5 to 8 in
Anditork EA 10	0 – 100 lbin	0.5% FS	0.01 lbin	0.5 to 8 in

If the cap has a safety ring, the test can be carried out using **the ANDITORK Star**, which measures both the break (first peak) and the opening torque (max torque).

MODELS	TORQUES	ACCURACIES	RESOLUTIONS	DIAMETERS
Anditork ST 3	0 – 25 lbin	0.5% FS	0.002 lbin	0.5 to 8 in
Anditork ST 6	0 – 50 lbin	0.5% FS	0.005 lbin	0.5 to 8 in
Anditork ST 10	0 – 100 lbin	0.5% FS	0.01 lbin	0.5 to 8 in



Microtork

The MICROTORK was specially designed for small bottles, and it is equipped with a small grip plate whose fingers can be used to hold small containers. Available in Easy and Star versions.

MODELS	TORQUES	ACCURACIES	RESOLUTIONS	DIAMETERS
Anditork EA 1.5	0 – 12 lbin	0.5% FS	0.001 lbin	2 in
Anditork ST 1.5	0 – 12 lbin	0.5% FS	0.001 lbin	2 in

Anditork Security

The ANDITORK DL product is designed to measure opening torques with downward force. This procedure is used to check safety caps.
It is equipped with a grip plate that holds products from 0.5 to 8 in in diameter. The rubber-coated gripping fingers are adjusted quickly using a travel knob. The operator applies downward force and opening torque in exactly the same conditions as the user, and both values are shown simultaneously on the measurement display. They can be transmitted to a computer via the RS232 output. The ANDITORK DL is available in 50 lbin AND 100 lbin versions.

MODELS	TORQUES	ACCURACIES	RESOLUTIONS	DIAMETER	FORCES
Anditork DL 6	0 - 50 lbin	0.5% FS	0.005 lbin	0.5 to 8 in	20 lb
Anditork DL 10	0 - 100 lbin	0.5% FS	0.01 lbin	0.5 to 8 in	20 lb

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Packaging tests

Drivetork EA

The DRIVETORK motorized opening torque measurement instrument is the ideal tool for production teams that have to carry out a large number of opening tests and wish to eliminate the variability linked to operators.
Many test conditions can be programmed: screwing movement, unscrewing movement, sequence screwing, and unscrewing movements, etc.
The speed is adjustable in both directions, from 1 to 20 rpm, the internal motor exerts the torque at a constant speed. The test is therefore always carried out in identical conditions. The height of the measuring head can be adjusted to take bottles from 0.5 to 8 in in height. It is fitted with small jaws that grip the cap to be tested. The torque curve is shown on the measurement display, which also calculates the maximum opening torque.
It can also be used to consecutively measure the rupture of security rings and the unscrewing torque.
Ready to use system, supplied with grip fingers.

Drivetork ST

Besides having all the functions of **DRIVETORK Easy**, the **Star version** can also carry out the rupture test when the cap has a security ring.
It measures both the break (first peak) and the opening torque (max torque), and it displays the test curve.

Drivetork DL

The Drivetork DL
If you would like to measure the screwing angle, the Drivetork dual can carry out a simultaneous measurement of the torque and the angle.
The curve is saved and can be downloaded on a PC.
Angle resolution 0.1°
Maximum rate 10 rpm.

MODELS	Drivetork EA1 Drivetork ST1	Drivetork EA6 Drivetork ST6	Drivetork EA10 Drivetork ST10
TORQUES	10 lbin	50 lbin	100 lbin
ACCURACIES	0.5% FS	0.5% FS	0.5% FS
RESOLUTIONS	0.001 lbin	0.005 lbin	0.01 lbin
MAX DIAMETERS	4 in	4 in	4 in
MAX HEIGHTS UNDER HEAD	12 in	12 in	12 in
MAX CAP DIAMETER	1.3 in	1.3 in	1.3 in
ROTATION SPEED ADJUSTMENT	from 2 to 20 rpm	from 2 to 20 rpm	from 2 to 20 rpm
SPEED RESOLUTIONS	0.1 rpm	0.1 rpm	0.1 rpm
ACCURACY	5%	5%	5%
FAST DISPLACEMENT SPEEDS	35 rpm	35 rpm	35 rpm
ROTATION ANGLE DISPLAY	in revolutions	in revolutions	in revolutions
RESOLUTIONS	0.1 revolution	0.1 revolution	0.1 revolution
OVERALL DIMENSIONS IN MM	45 x 20 x 19	45 x 20 x 19	45 x 20 x 19
WEIGHT	70 lb	70 lb	70 lb
MAINS POWER SUPPLY	110V	110V	110V

Safety: internal protection from overloads, emergency stop.

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Packaging tests

TOPLOAD tester

The TOPLOAD is specially designed to provide an easy method for carrying out compression tests on all kind of packaging: plastic bottles, containers, boxes, shipping container, bubble or foam packaging… The instrument can be used in the workshop or the laboratory. It is fitted with compression platens round for the bottles or square for the packaging.
Thanks to his ComTouch controller, this tester allows you to perform different compressive tests automatically:
– Measure the peak force and the deflection to collapse your sample
– Measure the peak force at a deflection limit
– Test that your samples can resist a constant force
With the touch screen the controller is used to start the test just by pressing one button, setup the test parameters or setup the speed between 0.8 and 40 in/min.
The current force reading, the deflection and the speed are displayed continuously on the ComTouch. Or if required you can link the test stand to a computer with our software CTAP to display in real time the curve of your test or setup an advanced ASTM compression test.

Technical characteristics:

– Variable speeds from 0.8 to 40 in/min
– Large testing area for wide samples
– Precision linear bearing guided ball screw drive for accurate crosshead positioning
– 0.1% speed ratio on all testers
– 0.5% force accuracy
– Sampling rate – 100/sec
– Protection function (blocking) for the current configuration
– All control for ball screw through touch screen menus on the ComTouch Total Control
– Can perform both tensile and compression testing without the need of a compression cage
– Peak hold feature
– Drive control with Dynamic brake
– Push button emergency stop switch
– Adjustable magnetic limit stops
– One easy-to-use connection out to controller
– Rugged and durable construction includes a one year quality guarantee
– Memorization of 2 configurations
– Automatic recognition of additional force sensors

Options:
– Test report printer
– Safety guard to protect from breaking sample
– C-TAP testing software for advanced test stand control, graphing and reporting

MODELS	CAPACITY	ACCURACY	COMPRESSION PLATEN
TOPLOAD BOT 500	500 lbs	0.5% Full Scale	2.5" diameter platen
TOPLOAD BOX 500	500 lbs	0.5% Full Scale	8" by 8" square platen

The pack includes:

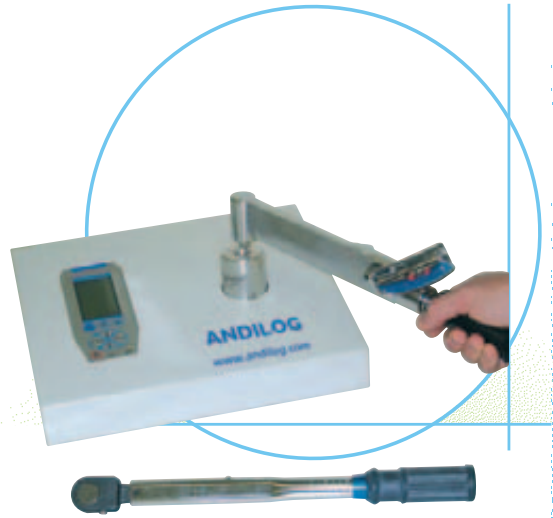
– 701SN Universal test stand
– A ComTouch controller
– One 8" x 12" lower platen
– One round 2.5" diameter compression platen for the TOPLOAD BOT 500
– One square 8" x 8" platen for the TOPLOAD BOX 500

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Metrology

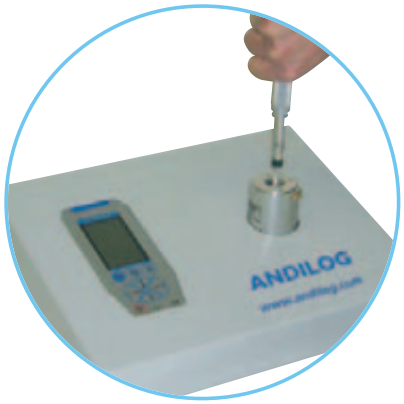
CENTORMETER

OUR CENTORMETER LINE allows you to calibrate and check all of your measuring instruments: torque wrenches, torque screwdriver, screw gun, compression and tension system, force gauges, etc. These tools are essential in ensuring the quality of your measurements throughout the lifetime of your instruments.
The new version of the CentorMeter equipment verifies the regulating torques of screw guns. This includes electric, pneumatic and hydraulic screw guns whose rotation speed can be regulated up to 3,000 RPM.
The CentorMeter traces the curve, enabling immediate visualization of the increase in the torque. The range of sensors allows for precise measurements from 0–50 lbin up to 0–12000 lbin.
Each base is equipped with a main sensor and can support additional sensors, which will be recognized without the user having to do a thing.



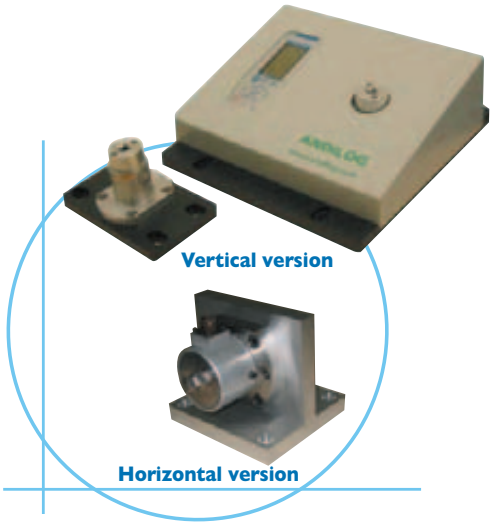
VERSION H (torque screwdriver calibrator) low torque

MODELS	CAPACITY	RESOLUTION	SQUARE
CENTORMETER H 3	25 lbin	0.002 lbin	3/8" female
CENTORMETER H 6	50 lbin	0.005 lbin	3/8" female



VERSION W (torque screwdriver calibrator) strong torque

MODELS	CAPACITY	RESOLUTION	SQUARE
CENTORMETER W 15	150 lbin	0.01 lbin	3/8" female
CENTORMETER W 60	500 lbin	0.05 lbin	3/8" female
CENTORMETER W 150	1000 lbin	0.1 lbin	1/2" female
CENTORMETER W 300	2000 lbin	0.2 lbin	1/2" female
CENTORMETER W 600	4000 lbin	0.4 lbin	1/2" female
CENTORMETER W 1400	12000 lbin	1.2 lbin	1/2" female



Additional sensors

All additional sensors can be used with the same display screen in order to measure different capacities with great precision. Each sensor is provided with a support stand, a SPIP connector to connect to the instrument and its calibration certificate. Available with horizontal or vertical axis.

REF./VERSION				
Horizontal axis	Vertical axis	CAPACITY	RESOLUTION	SQUARE
SPIP CMH/TH 3	SPIP CMV/TH 3	25 lbin	0.002 lbin	3/8" female
SPIP CMH/TH 6	SPIP CMV/TH 6	50 lbin	0.005 lbin	3/8" female
SPIP CMH/TH 15	SPIP CMV/TH 15	150 lbin	0.01 lbin	3/8" female
SPIP CMH/TH 60	SPIP CMV/TH 60	500 lbin	0.05 lbin	3/8" female
SPIP CMH/TH 150	SPIP CMV/TH 150	1000 lbin	0.1 lbin	1/2" female
SPIP CMH/TH 300	SPIP CMV/TH 300	2000 lbin	0.2 lbin	1/2" female
SPIP CMH/TH 600	SPIP CMV/TH 600	4000 lbin	0.4 lbin	1/2" female
SPIP CMH/TH 1400	SPIP CMV/TH 1400	12000 lbin	1.2 lbin	1/2" female

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Weld test

The quality of spot welding depends on the force applied by the electrodes as well as on the intensity of the welding current. Within such a control program, the measurement of the force applied by the electrodes is extremely important for ensuring constant production.
That is why **ANDILOG has developed this equipment to measure the closing force of the grips** that may be used during the final stage or during periodic maintenance.
The end-pieces are interchangeable and can be used to measure force with various shapes of electrodes, the minimum closing dimension being 0.12 in.
This new instrument leverages the robustness, quality and precision of the CENTOR instrument family, which are specially designed for mobile use in a production workshop.

MODEL	CAPACITY	RESOLUTION
WELD TEST 1	0 - 1,000 lb	0.1 lb
WELD TEST 2	0 - 2,000 lb	0.2 lb
WELD TEST 3	0 - 5,000 lb	0.5 lb

Andidoor

In compliance with the new EN12453 standards, **the ANDIDOOR can measure the closing of automatic doors on site**. Compact, light and self-contained, it can instantly measure and calculate dynamic and static forces.
Dynamic force between 0 and 0.75 s (< 100 lb), FS1 from 0.75 to 5 s (< 30 lb) and FS2 from 5 to 10 s (< 5 lb).
It traces the curve on the display screen (and notes the set points to respect), saves the values in the memory (100 per calculation) and gives the statistical results for each calculation. All the values can then be saved to a PC for the test reports. If there is any doubt, the last curve saved can also be transferred to a computer for further study.
Supplied in its carrying case, it is a robust tool (screen protected by a neoprene shell, sensor protected against overloads) and it is invaluable for checking automatic doors, whether vertical or horizontal.
Supplied in a carrying case, with a mains adaptor, data transfer software, PC connecting cables and a COFRAQ certificate.

MODEL	CAPACITY	RESOLUTION	ACCURACY
ANDIDOOR	0 - 400 lb	0.04 lb	0.5% FS

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Ergonomics

Ergokit

Our ERGOKIT line was specially designed to suit any situations encountered on the workstation: pulling, pushing, pressing with one's hand or finger, lifting… With its comfortable neck strap, the ERGOKIT is an ideal tool for ergonomics specialists and the IPCA wishing to check the level of strain developed by operators at their workstation. Our instruments are ready to use in a compact carrying case and come with a set of accessories: a tension hook, a compression plate, an extension, a large diameter hook, a large diameter push button, a key for pressions, a multifunction handle, an RS232 cable (except on version FIRST) and a shoulder strap. All of our devices are sold with a calibration certificate.

Ergokit First

This is a simple and robust system (admitting twice its nominal capacity without damage) for directly reading the maximum value in tension or compression. This digital force gauge is essential for any "live" measurement or for one-off checks.
MAX and RAZ functions, auto off: 15 min.
Operates on rechargeable batteries.

MODEL	CAPACITY	RESOLUTION
ERGOKIT FT500	0 – 100 lb	0.01 lb

Ergokit Easy

THE ERGOKIT EASY is ideal for a direct reading of the maximum value and the current value simultaneously. It also enables two limits to be programmed to sound an alarm, which is essential to any precise measurement when checking for conformity to regulations. Thanks to its statistical functions allowing 100 values to be saved and the average value and the standard deviation to be displayed, it is easy to immediately determine the repeatability of the measurements.
The appliance comes with a COFRAC calibration certificate, as is Andilog procedure.
Operates on rechargeable batteries.
RS232 data output.

MODELS	CAPACITY	RESOLUTION
ERGOKIT EA100	0 – 20 lb	0.002 lb
ERGOKIT EA500	0 – 100 lb	0.01 lb
ERGOKIT EA1000	0 – 200 lb	0.02 lb

Ergokit Star

THE ERGOKIT STAR is the full system necessary for any serious ergonomic study, with its ability to directly show the test curve on the display, along with specific calculated items, such as the average force, the force at a particular time "t" or the bearing force.
Of course, it also allows the current value and the maximum value to be read, and it handles tolerance via the programming of the two set points that can trigger an alarm.
Also, its memory can store 100 values and statistical calculations, and it allows other sensors to be read for torque or pinching measurements.

Torque measurement

Pinching measurement

Additional sensors available with Ergokit Star.

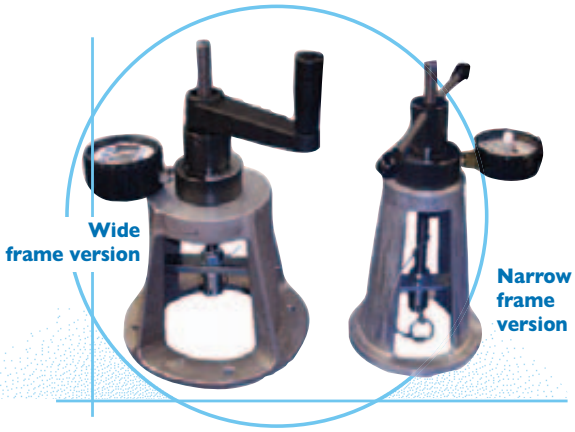
RS232 data output.
Shows the test graph.
Operates on rechargeable batteries.
Comes in its own carrying case with a mains adaptor and its certificate.

MODELS	CAPACITY	RESOLUTION
ERGOKIT ST100	0 – 20 lb	0.002 lb
ERGOKIT ST500	0 – 100 lb	0.01 lb
ERGOKIT ST1000	0 – 200 lb	0.02 lb

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Extractors

This EXTRACTOR force gauge has been specially adapted for measuring the strength of hundreds of types of fastenings in the areas of roofing, building, general industry, etc.
Designed for pull-out tests and non-destructive tests.
It is suitable for all types of fastenings: welding, sticking, interlocking, screwing, etc.
This instrument can be used for tests in production, for quality control tests, or for designing new fastening systems.
With its wide 8.25 in opening, it can test fastenings up to 3.5 in in diameter as well as the majority of those used in the building industry. A special adaptor with a 6 in diameter is available for measurements in confined places.
Maximum measurement display
Supplied with carrying and storage case.
Optional backpack available.

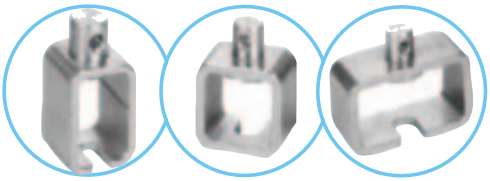


ANALOG EXTRACTOR

WIDE FRAME MODEL	NARROW FRAME MODEL	CAPACITIES	ACCURACY
301W-1M	301N-1M	100 lb	3% FS
301W-2M	301N-2M	200 lb	3% FS
301W-3M	301N-3M	300 lb	3% FS
301W-4M	301N-4M	400 lb	3% FS
301W-6M	301N-6M	600 lb	3% FS
301W-1K	301N-1K	1000 lb	3% FS
302W-2K	302N-2K	2000 lb	3% FS
304W-4K	304N-4K	4000 lb	3% FS

DIGITAL EXTRACTOR

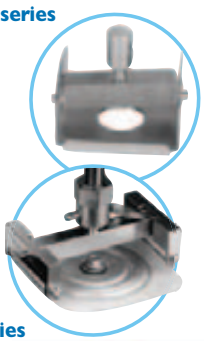
WIDE FRAME MODEL	NARROW FRAME MODEL	CAPACITIES	ACCURACY
361W-0100	361N-0100	100 lb	0.5% FS
361W-0200	361N-0200	200 lb	0.5% FS
361W-0300	361N-0300	300 lb	0.5% FS
362W-0400	362N-0400	400 lb	0.5% FS
361W-0500	361N-0500	500 lb	0.5% FS
362W-0600	362N-0600	600 lb	0.5% FS
361W-0750	361N-0750	750 lb	0.5% FS
362W-1000	362N-1000	1000 lb	0.5% FS
362W-1500	362N-1500	1500 lb	0.5% FS
362W-2000	362N-2000	2000 lb	0.5% FS
364W-3000	n/a	3000 lb	0.5% FS
364W-4000	n/a	4000 lb	0.5% FS
364W-6000	n/a	6000 lb	0.5% FS



STANDARD GRIPS

MODELS	CAPACITIES	SHANK	HEAD DIAM
LFS0250	2000 lb	0.25 in	0.625 in
LFS0312	2000 lb	0.3125 in	0.625 in
LFS2XXX	2000 lb	CUSTOM	0.625 in
LFR0437	2000 lb	0.4375 in	1 in
LFR2XXX	2000 lb	CUSTOM	1 in
LFN0468	2000 lb	0.46875 in	2 in
LFN2XXX	2000 lb	CUSTOM	2 in
LFS4XXX	4000 lb	CUSTOM	1 in

LIGHT WEIGHT GRIPS

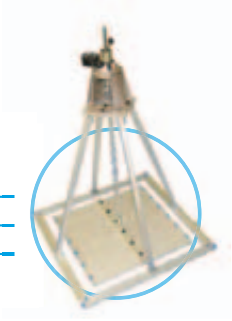


MODELS	CAPACITIES	SHANK	HEAD DIAM
LFL1500	300 lb	0.875 in	0.75-1.50 in
LFL2250	300 lb	0.875 in	1.25-2.25 in
LFL3000	300 lb	0.875 in	2.00-3.00 in
LFL3500	300 lb	0.875 in	2.75-3.50 in
LFH3500	1000 lb	0.875 in	3.5 in
LFF3500	300 lb	0.625 in	1.25-3.5 in
PLFF3500S2	Replacement fabric membrane for LFF3500		

MEMBRANE ADHESION

MODELS	DIAMETER	DESCRIPTION
LFM225D	2.25 in	Disposable
LFM225R	2.25 in	Reusable
LFM400R	4 in	Reusable

UPLIFT RESISTANCE FIXTURE



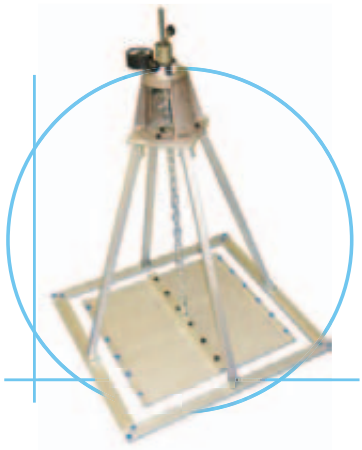
MODELS	DESCRIPTION	CAPACITIES	BASE
URF2424LD	Uplift resistance fixture	1000 lb	24x24"
URF2424	Uplift resistance fixture	2000 lb	24x24"
MPP2424	Metal pulling plate	2000 lb	24x24"

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

Extractor

THE EXTRACTOR 2000 is the ideal tool to check easily all the fixtures in the field. Delivered in its carrying case, it is an instrument you can bring anywhere you need and test all your fasteners from 1/4" to 7/8" diameter. The digital display allows you to read accurately and easily the peak force. Ready to use, supplied with a calibration certificate, a single arm crank and accessories.

Analog model	Digital model	Capacity	Accuracy	Frame	Accessory
EXTRACTOR 2000-AN	EXTRACTOR 2000-DN	2000 lb	10 lb	6" diameter frame	3 lifter feet (Shank: ¼", 15/32", 7/16") and one deckplate shank 7/8"
EXTRACTOR 2000-AW	EXTRACTOR 2000-DW	2000 lb	10 lb	8.25" diameter frame	
EXTRACTOR 4000-AW	EXTRACTOR 4000-DW	4000 lb	10 lb	8.25" diameter frame	1 lifter foot capacity 4000lbs, shank 0.5"



Uplift

The UPLIFT is the ideal tool to check easily all the fixtures in the field. Delivered in its carrying case, it is an instrument you can bring anywhere you need and test all your fasteners from 1/4" to 7/8" diameter. The digital display allows you to read accurately and easily the peak force. Ready to use, supplied with his calibration certificate, a single arm crank and accessories.

Analog model	Digital model	Capacity	Accuracy	Frame
UPLIFT 1000-A	UPLIFT 1000-D	1000 lb	5 lb	2 x 2 foot square base
UPLIFT 2000-A	UPLIFT 2000-D	2000 lb	10 lb	2 x 2 foot square base

FixuRoof

The FIXUROOF has been specially designed to meet Dade County Protocal PA105-A. This revolutionary design has a reinforced, replaceable, flexible fabric membrane that mimics the actual movements of roof membranes as they pull on a fastener during uplift. Ready to use, supplied with a calibration certificate, carrying case, a single arm crank and flexible fabric lifter foot.

Analog model	Digital model	Capacity	Accuracy	Frame
FIXUROOF-AN	FIXUROOF-DN	300 lb	1.5 lb	6" diameter frame
FIXUROOF-AW	FIXUROOF-DW	300 lb	1.5 lb	8.25" diameter frame

Adhor

The ADHOR has been designed to check the adhesion of a membrane to the substrate in the field. This tester has been adapted to simultaneously meet the requirement of the ASTM D4541 (Pull-Off strength of Coating) and Dade County PA-124 (Bond pull test). Ready to use, supplied with a calibration certificate, carrying case, a single arm crank and ten disposable membrane adhesion adapter.

Analog model	Digital model	Capacity	Accuracy	Frame
ADHOR-AN	ADHOR-DN	2000 lb	10 lb	6" diameter frame
ADHOR-AW	ADHOR-DW	2000 lb	10 lb	8.25" diameter frame

COM-TEN INDUSTRIES
6405 49ST ST NORTH, PINELLAS PARK, FL, 33781 sales@com-ten.com
Phone: 727-520-1200 • Fax: 727-520-0299

CONTENTS

Instruments and systems

Force measurement

Test stands

Software

Holders, Fixtures and clamps

Torque measurement

Dedicated systems

Spring tests

Cable tests

Packaging tests

Metrology

Ergonomics

Construction

COM-TEN INDUSTRIES

Phone: 727-520-1200
Fax: 727-520-0299
Web site: www.com-ten.com
Email: sales@com-ten.com

Com-Ten Industries
6405 49th Street North
Pinellas Park, FL, 33781
USA