ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

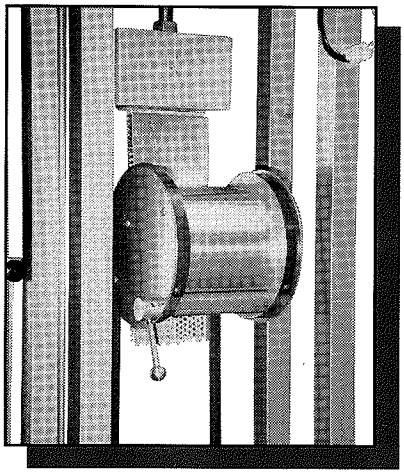
All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Comten Industries 94KRC1000* at our website: ***Click HERE***

CUSTOM & SPECIAL FIXTURES

In addition to the many stock and standard clamps offered, COMTEN makes many clamps that are not listed. We have designed and manufactured custom clamps and fixtures for everything from seatbelt retractors to wooden pencil leads. Send us a sample and we will select or design the best fixture for your needs.

Listed on this page are some examples of some non-stock and custom fixtures COMTEN has manufactured. If you have a special application or any questions regarding custom fixturing please contact one of our Sales Engineers.



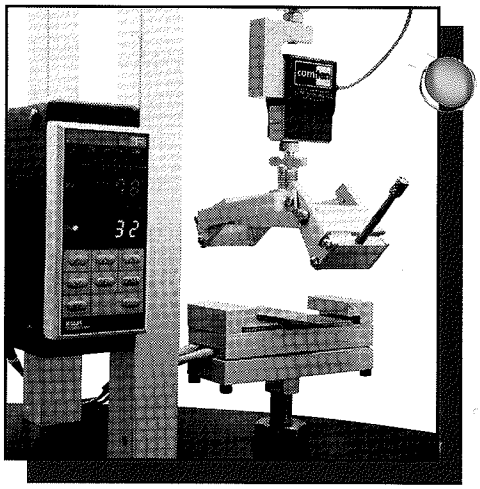
CDP 0435 - CLIMBING DRUM PEEL FIXTURE

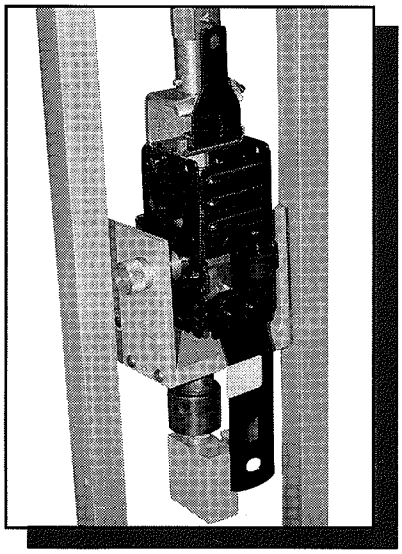
This fixture performs standard peal tests and is custom built to the customers material and test specifications. It checks the adhesion of bonded materials and composites. Accepts samples up to 3.5 inch wide and .125 inch thick. Requires machine travel of 24 inches. Use with either SCC 3037 or FCM 3037 upper grip.

Capacity: 400 lbs. Height: 5.0 in. Tare Weight: 50 oz. Quantity: Each

HEATED ADHESIVE TEST FIXTURE

This is a custom fixture that provides for testing an adhesive that bonds two metal plates. This can be either a single or double heating element and control. COMTEN can help solve your environmental needs with innovative fixture design or modification of our test stand to accommodate standard environmental chambers.





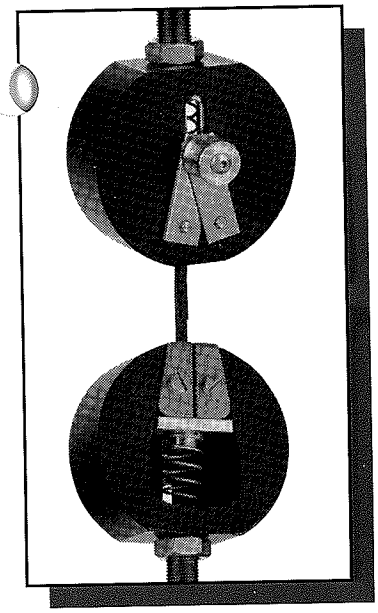
SEAT BELT RETRACTOR TESTING FIXTURE

This fixture was designed to test the strength of staked components on seat belt retractors. The unit can accommodate up to 12 different styles of retractors by varying the angle of the sample using precise pin location holes. This allowed the customer to test different retractor styles at will without having to change fixtures.

COMTEN INDUSTRIES
1124 - 19th St. North, St. Petersburg, FL 33713-5724 • 813-822-3508 • FAX 813-895-2328

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TENSILE FIXTURES



WCS 0525 - WEDGE CLAMPS SELF CLOSING *QUICK SHIP DELIVERY* (WCS 0525)

Extra strong self closing sliding wedges for sure, fast clamping action on many materials. Available with standard or severe knurls, severe grooves, or V indents. Holds up to 1 inch wide by 0 - .25 thick rubber, plastic, belting, metal, etc.

Capacity: 5000 lbs. Height: 2.75 in. Tare Weight: 32 oz. Quantity: 1 Pair

WCA 0525 - Air Operated - Same as above

WCS 0550 - Same as WCS 0525 except samples to 1 inches wide by .50 inch thick and larger frame.

Capacity: 5000 lbs. Height: 4.25 in. Tare Weight: 68 oz. Quantity: 1 Pair

WCS 0575 - Same as WCS 0550 except samples to 1 inches wide by .25 - .75 inch thick.

WCS 0588 - Same as WCS 0550 except samples to 1 inches wide by .375 - .88 inch thick.

WCS 1050 - Same as WCS 0525 except samples to 1 inches wide by .50 inch thick and 10000 lb.

Capacity: 10000 lbs. Height: 4.25 in. Tare Weight: 91 oz. Quantity: 1 Pair

WCS 1075 - Same as WCS 1050 except samples to 1 inches wide by .25 - .75 inch thick.

WCS 1088 - Same as WCS 1050 except samples to 1 inches wide by .375 - .88 inch thick.

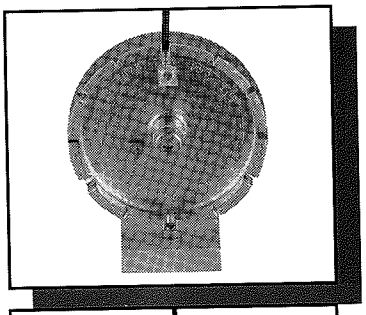
METAL PLASTIC WIRE RUBBER NORMALLY STOCKED

WTC 0331 - WIRE TERMINAL FIXTURE

Tests the integrity of wire/terminal connections. The rotating self aligning wheel has 12 equally spaced slots from .031 inch to .312 inch. Ring terminals can be tested on a pin located in line with the .312 slot. Use as bottom clamp and use with SGO 0125 or SFO 0187 as upper clamp.

Capacity: 1000 lbs. Height: 4.75 in. Tare Weight: 0 oz. Quantity: Each

TERMINALS *QUICK SHIP DELIVERY*

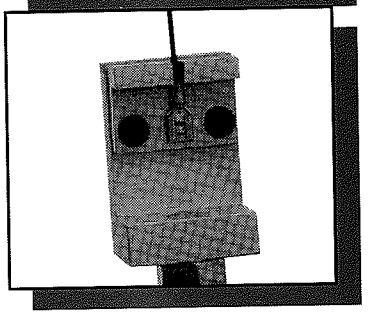


WTC 0XXX - WIRE TERMINAL CLAMP

Catch type crimp terminal holder designed to accommodate different terminal sizes. Used for wire terminals and cable connectors. Specify slot size.

Capacity: 600 lbs. Height: 2.25 in. Tare Weight: 11 oz. Quantity: 1 Pair

TERMINALS DELIVERY: 4-6 WEEKS



Quick Disconnect Fixtures can be used for both compression and tensile fixtures. They are recommended for quick changing of fixtures when multiple load cells or clamps/cages are used. They also provide excellent alignment and load distribution.

QDS 0100 - QUICK DISCONNECT SWIVEL

Used as an upper fixture mount this adaptor provides for better alignment of samples and better load distribution as well as quick changing of load cells or fixtures.

Capacity: 5000 lbs. Height: 4.0 in. Tare Weight: 13 oz. Quantity: Each

QDS 0050 - FIXTURE END OF QUICK DISCONNECT

For use with multiple fixtures for fast replacement of clamps and accessories.

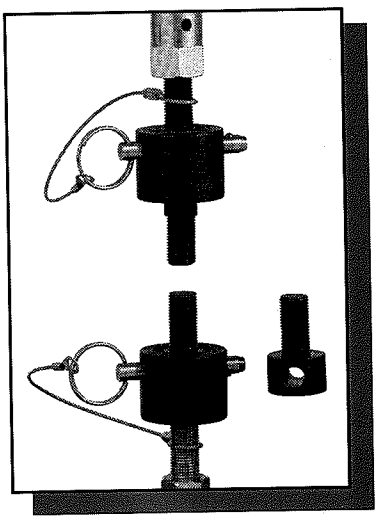
Capacity: 5000 lbs. Height: 4.0 in. Tare Weight: 4 oz. Quantity: Each

QDR 0100 - QUICK DISCONNECT RIGID

Used as a lower fixture mount that will provide for fast replacement of fixtures.

Capacity: 5000 lbs. Height: 3.0 in. Tare Weight: 10 oz. Quantity: Each

QUICK SHIP DELIVERY

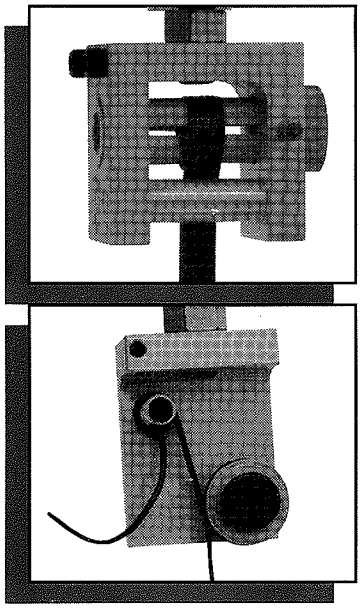


Care should be taken to assure that the total tare weight of the fixtures and the test specimen does not exceed 10% of the load cell capacity.

Pairs may be broken at 1/2 price plus 10%

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TENSILE FIXTURES



SFC 1040 - SPOOL FLAT CLOSED CLAMP *QUICK SHIP DELIVERY* (SFC 1040)

Spool type holders for samples to 1 inch wide and .100 inch thick. Spools are slotted and may be knurled for extra grip. Used for strapping, belting, and other flexible strip material.

Capacity: 4000 lbs. Height: 2.5 in. Tare Weight: 18 oz. Quantity: 1 Pair

SFC 3010 - Same as above except samples to 3 inches wide by .100 inch thick.

Capacity: 1000 lbs. Height: 2.5 in. Tare Weight: 25 oz. Quantity: 1 Pair

SFC 3050 - Same as above except samples to 3 inches wide by .250 inch thick.

Capacity: 5000 lbs. Height: 4.0 in. Tare Weight: 90 oz. Quantity: 1 Pair

STRAPPING FABRIC CORD **NORMALLY STOCKED** (SFC 3010 & 3050)

SFO 0187 - SPOOL GROOVED OPEN CLAMP

Spool type holder for tubing or wire to .187 inch diameter. Feed spool helps reduce breaking at the clamp. Used for wire, cable, cord, or filament.

Capacity: 1000 lbs. Height: 3.0 in. Tare Weight: 11 oz. Quantity: 1 Pair

WIRE CORD *QUICK SHIP DELIVERY*

SFS 4438 - SPOOL FLAT SPLIT CLAMP *QUICK SHIP DELIVERY*

The clamping ability when combined with the wrapping of the material around the spool provides for high capacity and prevents sample failure at the clamp. Yarns, fabric, twine, and cord up to .437 inch wide by .375 inch thick can be used on this fixture.

Capacity: 1000 lbs. Height: 3.5 in. Tare Weight: 14 oz. Quantity: 1 Pair

SFS 0550 - Same as above except samples to 1 inch wide flat by .50 inch thick (or .50 inch round).

Capacity: 5000 lbs. Height: 3.75 in. Tare Weight: 60 oz. Quantity: 1 Pair

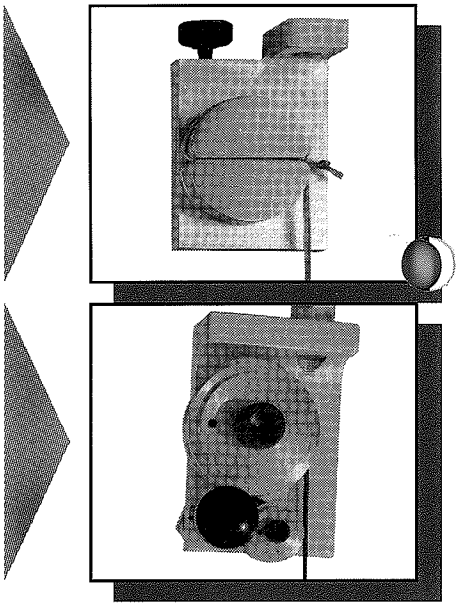
WIRE CORD **DELIVERY: 4-6 WEEKS**

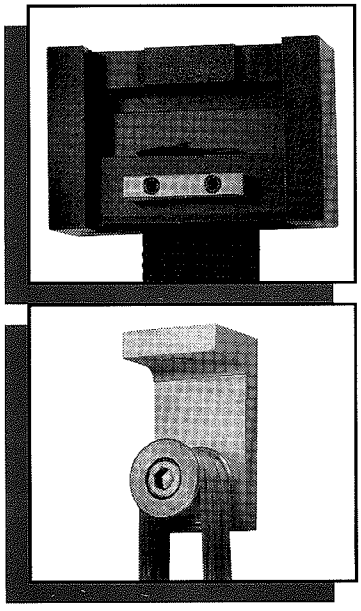
SGO 0125 - SPOOL GROOVED OPEN CLAMP

Spool and groove type holders for round filament to .125 inch diameter. Material locks into a grooved pulley for extra gripping power. Used for monofilament and wire with difficult to grip sheathing.

Capacity: 2000 lbs. Height: 4.5 in. Tare Weight: 28 oz. Quantity: 1 Pair

WIRE *QUICK SHIP DELIVERY*





SWC 0531 - SINGLE WEDGE CLAMPS

Extra strong self closing wedge clamps for excellent holding on hard to hold wide materials. Holds up to 3 inch wide by .312 inch thick samples.

Capacity: 5000 lbs. Height: 3.0 in. Tare Weight: 80 oz. Quantity: 1 Pair

METAL PLASTIC **NORMALLY STOCKED**

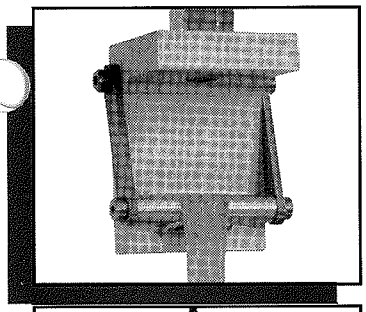
YSF 1311 - YARN SKEIN TESTER

Specifically for testing skeins of yarn but could also be used for large O-rings. Spools are 1.25 inch in diameter and 1.125 inch between shoulders.

Capacity: 2000 lbs. Height: 3.7 in. Tare Weight: 16 oz. Quantity: 1 Pair

YARN *QUICK SHIP DELIVERY*

TENSILE FIXTURES

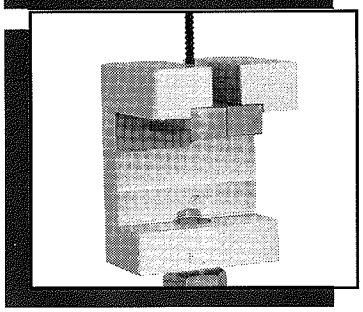


SBB 0200 - SELF BINDING BOLLARD CLAMP

Binding type clamp for thin elastic materials such as latex. Especially designed for latex glove material. Samples to 2 inches wide and .125 inch thick.

Capacity: 200 lbs. Height: 2.5 in. Tare Weight: 10 oz. Quantity: 1 Pair

FILM PLASTIC **NORMALLY STOCKED**



SBH 0100 - SLIDE-IN BRIQUETTE HOLDER

Slide-in briquette type holders for objects with expanded heads, such as nails, screws, rivets, bolts, etc. Available with many different briquette styles to suit different needs. Specify briquette style and size. Maximum shaft diameter is .312 inch.

Capacity: 500 lbs. Height: 2.25 in. Tare Weight: 12 oz. Quantity: 1 Pair

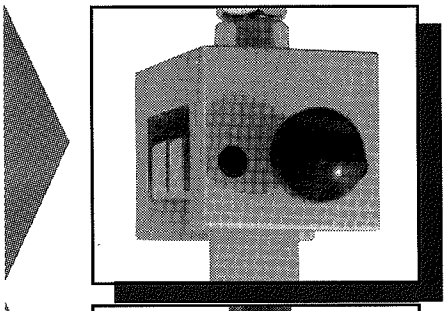
BOLTS SCREWS **DELIVERY: 4-6 WEEKS**

SCA 1037 - SHEET CLAMP ADJUSTABLE ANVILS

Adjustable center clamps for holding flat stock to 1 inch wide by .375 inch thick. Hardened serrated anvils provide a clamping area of .625 inch by 1 inch.

Capacity: 600 lbs. Height: 2.0 in. Tare Weight: 15 oz. Quantity: 1 Pair

METAL PLASTIC *QUICK SHIP DELIVERY*



SCC 1037 - SELF CLOSING CAM CLAMP

Self closing cam type clamps for samples to 1 inch wide and .375 inch thick. Available with standard knurled, smooth, and severe knurled cams. Used for rubber, plastic, foil, film, fabric, etc.

Capacity: 500 lbs. Height: 2.25 in. Tare Weight: 13 oz. Quantity: 1 Pair

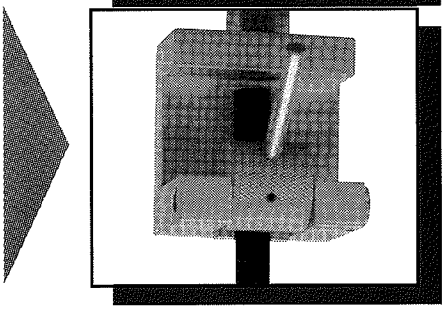
SCC 3037 - Same as above except samples to 3 inches wide by .375 inch thick.

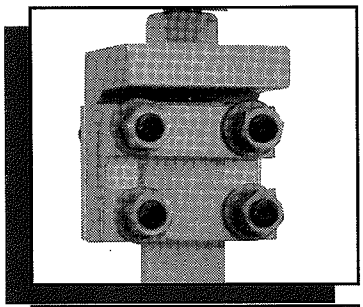
Capacity: 500 lbs. Height: 2.25 in. Tare Weight: 25 oz. Quantity: 1 Pair

SCC 3075 - Same as above except samples to 3 inches wide by .75 inch thick.

Capacity: 2000 lbs. Height: 3.0 in. Tare Weight: 53 oz. Quantity: 1 Pair

FABRIC PLASTIC FILM *QUICK SHIP DELIVERY*



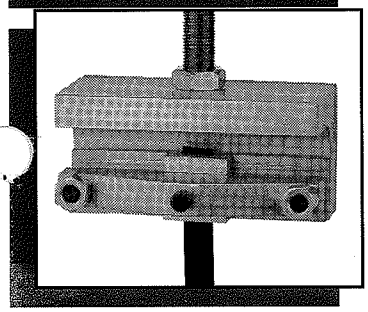


SCF 1031 - SHEET CLAMP FOUR BOLT

Four bolt anvil clamp for hard to hold materials. Grip area is 1 square inch. Samples up to 1 inch wide and .312 inch thick. Hardened anvils. Used for metal strips, strapping, etc.

Capacity: 2000 lbs. Height: 2.5 in. Tare Weight: 19 oz. Quantity: 1 Pair

METAL PLASTIC *QUICK SHIP DELIVERY*



SCT 3012 - SHEET CLAMP TWO BOLT

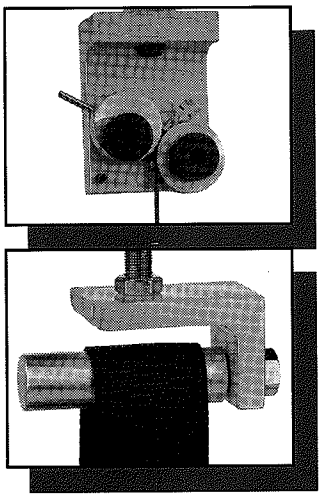
Two bolt clamp for sheet stock to 3 inches wide and .125 inch thick. Used for fabric, film, and sheet materials. Supplied with 1 inch by 1 inch and 1 inch and 3 inch anvils. May be modified for thicker materials.

Capacity: 1000 lbs. Height: 2.0 in. Tare Weight: 37 oz. Quantity: 1 Pair

METAL PLASTIC **DELIVERY: 6-8 WEEKS**

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TENSILE FIXTURES



CCO 3719 - CAM CLAMP OPEN SPOOL

Cam-type holders for wire, and other flexible material to .375 inch wide by .187 inch thick. Not suitable for some brittle or slick materials. Used for coated and bare wire, narrow strapping, and similar materials.
Capacity: 1000 lbs. Height: 3.0 in. Tare Weight: 12 oz. Quantity: 1 Pair

WIRE TERMINALS **DELIVERY: 4-6 WEEKS**

FLH 0300 - FABRIC LOOP HOLDER

Large peg-type grips for holding large loops of wide fabric, strapping, belting, etc. Accommodates material up to 3 inches in width.
Capacity: 500 lbs. Height: 2.0 in. Tare Weight: 12 oz. Quantity: 1 Pair

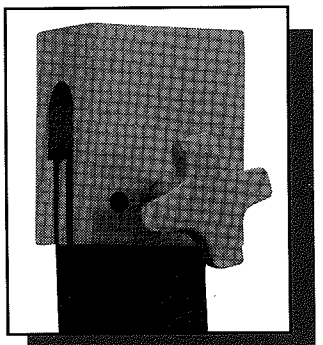
FABRIC STRAPPING **NORMALLY STOCKED**

FCM 2025 - FABRIC CLAMP MANUAL

Manually operated open-side anvil clamps for fabric tear tests, holds sheets up to 2 inches wide by .25 inch thick. Clamping knob provides excellent grip strength. For fabric, plastics, foil, etc. Includes 1 inch by 2 inch anvils. *Options:* FCM 2025 BP1 - 1 inch by 1 inch anvil. Rubber coated anvils also available.
Capacity: 500 lbs. Height: 2.5 in. Tare Weight: 13 oz. Quantity: 1 Pair

FCM 3037 - Similar to above except for samples up to 3 inches wide by .375 inch thick. Includes 2 inch by 3 inch anvils. *Options:* FCM 3037 BP1 - 2 inch by 1 inch anvils. FCM 3037 BP2 - 2 inch by 2 inch anvils. Rubber coated anvils also available.
Capacity: 2000 lbs. Height: 3.0 in. Tare Weight: 35 oz. Quantity: 1 Pair

FABRIC PLASTIC RUBBER *QUICK SHIP DELIVERY*

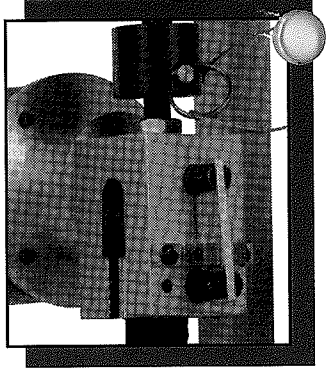


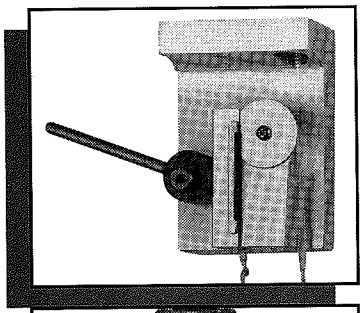
FCA 2025 - FABRIC CLAMP AIR

Air operated open-side anvil clamps for fabric samples same as FCM 2025. Constant air pressure continually compresses material in clamps to prevent slippage. Excellent for samples that tend to deform and slip in standard clamps. Includes 1 inch by 2 inch anvils. *Options:* FCM 2025 BP1 - 1 inch by 1 inch anvil. Rubber coated anvils also available.
Capacity: 500 lbs. Height: 2.5 in. Tare Weight: 22

FCA 3037 - Air operated holds same samples as FCM 3037. *Options:* FCM 3037 BP1 - 2 inch by 1 inch anvils. FCM 3037 BP2 - 2 inch by 2 inch anvils. Rubber coated anvils also available.
Capacity: 2000 lbs. Height: 3.0 in. Tare Weight: 45 oz. Quantity: 1 Pair

FABRIC PLASTIC RUBBER **DELIVERY: 6-8 WEEKS**

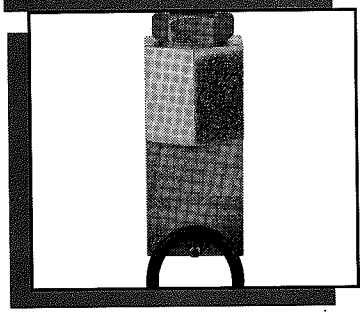




LCF 0093 - LOCKING CAM FIXTURE

This locking cam fixture allows for easy setup of samples. Smooth aluminum and rubber padded anvils securely grips very fine material while the radiused guide prevents sample failure at the grip. Used for fine monofilament, wire and yarns, up to .25 inch wide and .094 inch thick.
Capacity: 200 lbs. Height: 3.5 in. Tare Weight: 10 oz. Quantity: 1 Pair

WIRE YARN *QUICK SHIP DELIVERY*



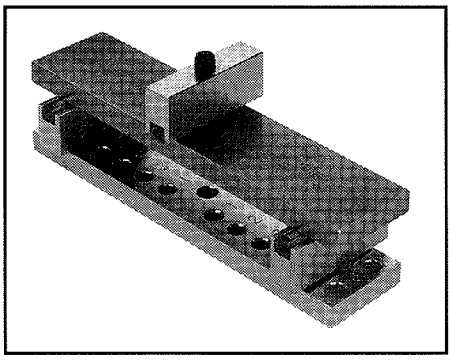
PTH 0XXX - PEG TYPE HOLDER *QUICK SHIP DELIVERY* (PTH 0XXX)

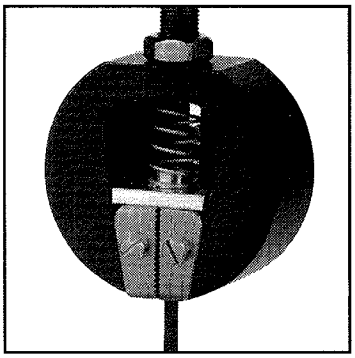
Peg-type grips for holding items such as O-rings, button-hole tests, pulley belts, rubber bands, etc. Pegs are available in many sizes. Specify peg diameter up to .50 inch.
Capacity: to 2000 lbs. Height: 2.25 in. Tare Weight: 5 oz. Quantity: 1 Pair

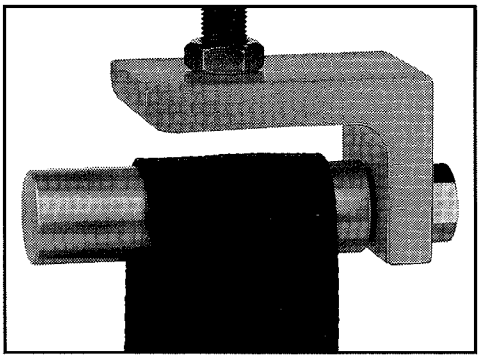
PHB 0235 - Same as above except peg rotates freely on ball bearings.
Capacity: to 2000 lbs. Height: 2.5 in. Tare Weight: 7 oz. Quantity: 1 Pair

O-RINGS BANDS **NORMALLY STOCKED** (PHB 0235)

HOLDERS, FIXTURES AND CLAMPS







COMTEN features

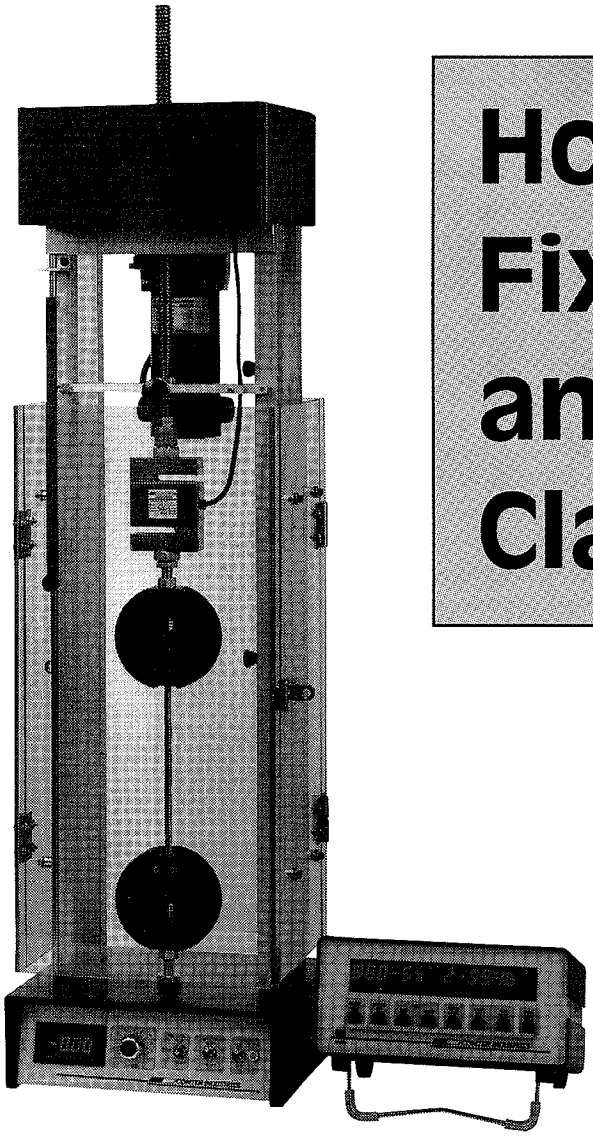
QUICK SHIP DELIVERY^{QS}

On our most popular clamps, cages and fixtures delivery time is less than a week and usually we can ship them the same day.

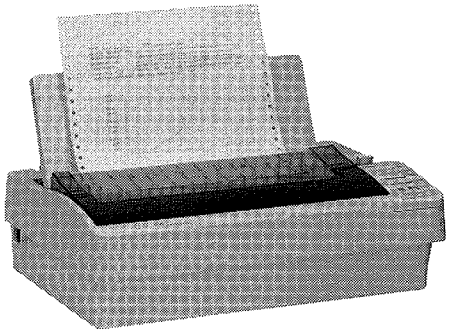
ALSO

NORMALLY STOCKED^{NS}

items. Other popular clamps that are normally kept in stock



Holders, Fixtures and Clamps



COMTEN INDUSTRIES manufactures a wide array of tensile and compression fixtures for all types of materials and testing needs.

Steel • Aluminum • Titanium • Plastic • Wire • Bottles • Yarn • Fabric • Fasteners • Strapping Films • Belting • Rubber • Foil • Ceramic • Monofilament • Bonds • Bolts • Bands • Rings

COMTEN INDUSTRIES®

1124 - 19th Street North, St. Petersburg, FL 33713-5724 • Phone 813-822-3508 • FAX 813-895-2328

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

VERSATILE FOR ALL KINDS OF TESTING

Comten offers Hand Operated, Fixed and Variable Speed Motorized test systems with either Analog or Digital force displays. The Digital Documentation Test System offers highly accurate force readings together with deflection data This system can automatically print a test report at the end of a test or can be coupled with Comten's Test Acquisiti Package for customized computer generated reports. Comten test equipment provides the following features:

- Capacities up to 5000 pounds
- Motorized and Hand Operated Models
- Value Engineered and Performance Guaranteed
- Wide Variety of Fixtures, Clamps, and Accessories
- Most Equipment Shipped in 2 Weeks or less
- Digital and Analog Readouts Available
- Rugged Design and Instrumentation
- Compact, Lightweight and Portable
- Accuracy to ± 0.1%
- Simplified Setup & Operation

DIGITAL DOCUMENTATION TEST SYSTEM (DDTS)

The Digital Monitor Controller is the heart of Comten Industries Digital Documentation Test System. One push of a button will start and stop the test, return the test stand to its original position and print a report or graph with optional printer. It provides full control of the test stand and can eliminate the difficult and time consuming task of manually recording important test results.

Features:

- *Perform ASTM test procedures - elasticity, rigidity, shear, tensile strength, compression, peel, and many more*
- *Data acquisition software for SPC, ISO9000, and ASTM tests (optional)*
- *Controller can display continuous or maximum force & deflection or testing speed*
- *Tensile test stands convert to compression testing with optional compression cage*
- *Ideal for a variety of uses in quality control, production control and design applications*
- *Calibrated & certified traceable to NIST standards and accurate to 0.1% of full scale*
- *Interchangeable Precision S-Block Load Cell provides highly accurate force measurements*
- *One push of a button will start and stop the test, return the test stand to its original position and print a report or graph with optional printer*
- *Optional Dust Cover and Lexan Safety Shield for increased life and safety*

C-TAP COMTEN TEST ACQUISITION PACKAGE

Through the use of your personal computer, **C-TAP** will allow the user to control the Tensile Test Stand with ease. A graphical environment provides all the tools necessary for data acquisition, control, and analysis for physical testing. **C-TAP** creates intuitive, fully integrated, front panel controls on the PC. Using the popular Microsoft® Windows™ , the user can perform most ASTM, ISO, DIN and other standard or custom tests with just a click of the mouse.

Features:

- *Fully integrated material testing package*
- *Machine control capability*
- *Microsoft Windows Graphical User Interface (GUI) format*
- *National Instruments LabView/CVI quality data analysis software*
- *Ability to create custom test methods for specific applications*
- *Pre-programmed ASTM, ISO, DIN, and other standard tests*
- *Real-time test monitoring and interactive test control*
- *Extensive graphing and plotting capability*
- *Built-in formulas and test equations*
- *Custom or pre-programmed report generator*

LabWindows CVI

NATIONAL INSTRUMENTS®
The Software is the Instrument®

SPECIFICATIONS

Hand Operated Test Systems

Sample size:
- Travel without clamps 20 in. (50.8 cm)
- Maximum sample width 6 in. (15.3 cm)

Force measurement:
- ANALOG - Capacity to 4000 lb (1800 kg) Accurate to ±1.0% full scale
- DIGITAL - Capacity to 5000 lb (2250 kg) Accurate to ±0.5% full scale

Speed - One handwheel revolution equals:
- 2000 LB capacity - 0.025 in. (0.635 mm)
- 4000 LB capacity - 0.010 in. (0.254 mm)

Physical specifications:
- Weight: 60-65 lb (28-30 kg)
- Dimensions: 14" W x 25" H x 8" D

Fixed Speed Motorized Test Systems

Sample size:
- Travel without clamps 20 in. (50.8 cm)
- Maximum sample width 6 in. (15.3 cm)

Force measurement:
- ANALOG - Capacity to 4000 lb (1800 kg) Accurate to ±1.0% full scale
- DIGITAL - Capacity to 5000 lb (2250 kg) Accurate to ±0.5% full scale

Speed:
- 25 speeds from 0.06-30 in/min (0.15-76.2 cm/min)

Physical specifications:
- Weight: 52-62 lb (26-28 kg)
- Dimensions: 10" W x 35" H x 12" D

Variable Speed Motorized Test Systems

Sample sizes available:
- Max travel w/o clamps 20, 30, & 46 in. (51, 76.2, 117 cm)
- Max widths of 8, 12, & 18 in. (20.3, 30.5, & 45.7 cm)

Force measurement:
- ANALOG - Capacity to 4000 lb (1800 kg) Accurate to ±1.0% full scale
- DIGITAL - Capacity to 5000 lb (2250 kg) Accurate to ±0.5% full scale
- DDTS - Capacity to 5000 lb (2250 kg) Accurate to ±0.1% full scale

Speed and Deflection:
- 12 speed ranges from .02-30 in/min (.03-76.2 cm/min)
- Deflection accurate to 0.001 in (0.02 mm) - DDTS only

Physical specifications:
- Weight: 82-380 lb (37-171 kg) depending on machine
- Dimensions: maximum of 28" W x 68" H x 12" D

COMTEN INDUSTRIES

1124 - 19th Street North, St. Petersburg, FL 33713-5724 • Phone 813-822-3508 • FAX 813-895-2328

GPC 0497

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

PACKAGING TEST EQUIPMENT



COMTEN

COMPRESSION AND TENSILE TESTING MACHINES

Manufacturers of quality equipment

SINCE 1960

Specializing in testing equipment for the packaging industry

Comten Test Equipment *is guaranteed against defects in material and workmanship for 1 year.*

1 YEAR GUARANTEE

PACKAGING TEST SYSTEMS FROM $2845

Most Equipment Shipped in 2 Weeks or less

Comten Industries packaging test equipment is versatile for all kinds of testing in the packaging industry. No matter what your packaging testing needs, Comten has a machine for you.

Ideal for:

- Topload testing of plastic bottles and containers
- Determining push out force of capsules in blister packs
- Crush testing of corrugated boxes and shipping containers
- Peel adhesive strength tests between laminated films
- Compressive testing of bubble and foam packaging
- Tensile breaking strength of paper and paperboard
- Breaking strength of perforations in continuous form paper
- Adhesion of pressure sensitive tape at 90° and 180°
- Force required to open child resistant packages
- Holding power of pressure sensitive tape
- Peeling resistance of paper and paperboard
- Tensile strength of net wrap materials
- Flexural stiffness of corrugated board
- Unwind force of tapes and films
- Tear resistance of thin plastic sheeting
- Tensile and elongation testing of tapes and films

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

COMTEN - TEST ACQUISITION PACKAGE

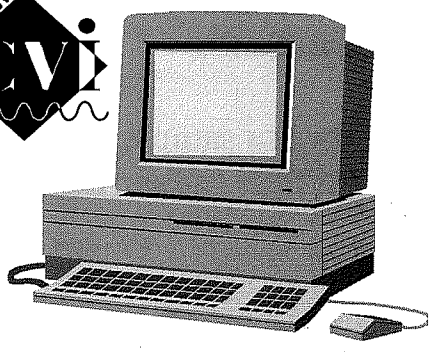
Introducing... C-TAP

Now material testing becomes a breeze

Through the use of a personal computer, the COMTEN - Test Acquisition Package will allow the user to control the COMTEN Tensile Test Stand with ease. With the help of LabWindows(tm)/CVI from National Instruments®, a graphical environment provides all the tools necessary for data acquisition and control, data analysis, and data presentation of mechanical testing. Capitalizing on the enormous popularity of Microsoft® Windows™, the user can perform most ASTM, ISO, DIN, and other standard or custom tests with just a click of the mouse. All operations are executed through a Graphical User Interface in conjunction with the Digital Monitor Controller. 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.

NATIONAL INSTRUMENTS®
The Software is the Instrument®

LabWindows CVI



Features:

- integrated material testing package
- instruments LabView/CVI quality
- software
- Windows Graphical User Interface
- format
- data acquisition through the Digital
- controller
- control capability
- ASTM, ISO, DIN, or other
- test procedures
- data presentation option
- Data Exchange for passing data
- graphing and plotting capability

◊ Ability to create custom test methods for specific applications
◊ Built in formulas and test equations
◊ Custom or pre-programmed report generator
◊ Real-time test monitoring and interactive test control
◊ Fully compatible with DMC 026S or CEDM-S COMTEN Testing Machines
◊ All communication via RS-232 (V.35) port, no expensive boards or equipment needed
◊ Reports can include tensile/compression stress, strength, percent elongation, modulus of elasticity, modulus of rupture, speed, etc.

Requirements:

- compatible 386DX 25MHz minimum, 486DX 33MHz is strongly recommended
- version 3.1 or later, Microsoft Windows 3.1 or Windows 95
- of hard disk storage and 4 MB RAM minimum, 8 MB RAM is strongly recommended
- ports, Microsoft compatible mouse on COM1
- , SVGA is recommended
- with co processor

Product and company names listed are trademarks or trade names of their respective companies.

COMTEN INDUSTRIES
street North, St. Petersburg, FL 33713-5724 • Phone 813-822-3508 • FAX 813-895-2328

DDTS0797

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

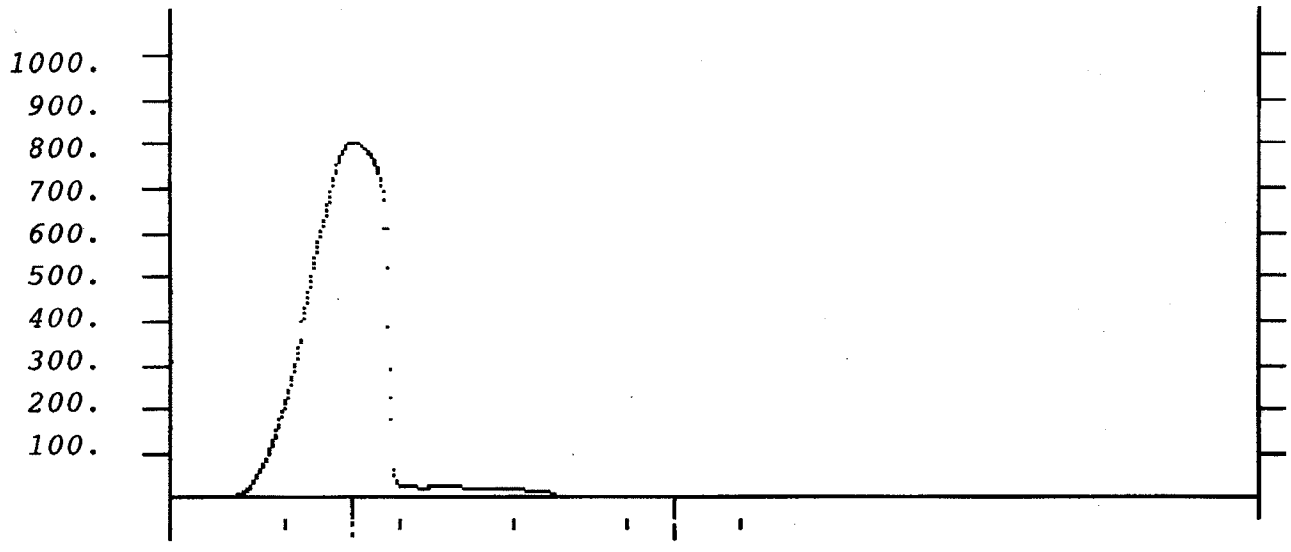
DIGITAL DOCUMENTATION TEST SYSTEM

DMC Controls

Select Mode	Select speed or deflection in inches or millimeters
SPD / DEF Set	Set deflection limits
Set Fast / Slow	Fast and slow increment allow setting parameters like a digital clock
Force Units	Read kilograms / pounds / newtons switch
Clear / Restart	Autotare and data clear switch
Peak Read	Peak hold switch
Limit Set	Force limit switch for stopping tests at a preset force
Load Cell Size	Automatic load cell size detection (external coding)
Communications	Selectable baud rate, parity, and stop bits (8 accessible dip switches select mode of operation)

Below is a sample of a printout of a report generated by a COMTEN Industries Digital Documentation Test System.

DATE 7 / 8 / 97 TIME 3 : 00 : 00
SAMPLE DESCRIPTION: .250 INCH DIAMETER WIRE
SAMPLE NUMBER : 1 OF 3
OPERATOR I.D. : C. GIEBNER
PEAK FORCE : 00800. LBS AT TIME :00:08:0 DEFL.: 000.220 INCH
LOAD CELL SIZE : 05000. LBS RUN TIME :00:16:0 SPEED: 001.66 INCH / MIN
TEST TERMINATED BY SAMPLE FAILURE 000.451 INCH



Warranty:

COMTEN PSB series S-Block Load Cell, Digital Monitor Controller, and Test Stand are guaranteed against failure from normal usage for a period of 1 year.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

DIGITAL DOCUMENTATION TEST SYSTEM

Digital Monitor Controller Specifications:

Linearity: ±0.1% of Full Scale
Display Update: 2 times per second
Sampling Rate: 20 times per second
Excitation: Factory set calibration, (10.000 VDC), current limited to 10ma.
Analog Output: 0-1 VDC Full Scale for printer (0-100 MV Full Scale on x10 scale)
Digital Output: Selectable data stream (serial) to computer or printer port.
Interface: A 34 line ribbon cable and a line shielded cable connect the DMC to the test stand and allow for full control of the test stand including automatic testing.
Display: Dual 6 digit, 7 segment red LED display, .56 inch high. Left display for Speed or Deflection (selectable), right display for Force.
Force: Resolution 4000 counts full scale adjusted to Pounds, Kilograms, or Newtons.
Speed: Resolution to .01 inch per minute (.254 mm as .2 mm).
Deflection: Resolution to .001 inch (.0254 mm as .02 mm).
Documentation: Printer output includes run length, peak force, crosshead speed, and graphic illustration of test results if elected. Computer interface sends force and deflection data through the serial port at a rate of 2 conversions per second.
Size and weight: 10.25" W x 5.5" H x 9.5" D ; weight 8 lbs.
Recalibration: Suggested at the end of 1st six months or any time results appear distorted or questionable. The frequency of future calibration is determined by the stability found between calibrations. Calibrated in accordance with ASTM E74 and MIL STD 45662 and certified traceable to NIST and accurate to 0.1% of full scale.

Special Functions:

Auto Ranging: When allowed by load cell requirements, the controller will initialize in x10 range (high gain) and switch to x1 above a predetermined point. This provides higher resolution data for lower force readings.
Auto Tare: The system is user selectable for automatic or manual tare.
Auto Termination: The controller may be set to terminate the test at various thresholds.
Force Limit Stop: The controller may be set to stop a test at a preset force limit.
Deflection Stop: A deflection limit set is provided to stop a test after a specified travel.
Peak Force Display: After the test is terminated, the peak force and deflection at peak are displayed.
Graph Output: If an acceptable graphic printer is connected, a graphic chart of the test may be produced.
Built in Diagnostics: Built in diagnostics allow automatic checkout on start-up and ease trouble shooting.
Test Stand Control: Control the test stand with software such as Telex, Kermit, X-Modem, Windows Terminal Emulator, etc. or COMTEN's own C-TAP Test Acquisition Package.

Precision S-Block Load Cells:

				Pounds at which printer graph changes scaling:				
Model	Accuracy (lb)	High Range Res (lb)	Low Range Res (lb)	1st	2nd	3rd	4th	5th
PSB 0004	± 0.004	0-4	n/a	1	2	4		
PSB 0010	± 0.01	0-10	0-3.5	2	4	10		
PSB 0020	± 0.02	0-20	0-3.5	2	4	10	20	
PSB 0040	± 0.04	0-40	0-3.5	2	4	10	20	40
PSB 0100	± 0.1	0-100	0-35	20	40	100		
PSB 0200	± 0.2	0-200	0-35	20	40	100	200	
PSB 0400	± 0.4	0-400	0-35	20	40	100	200	400
PSB 0600	± 0.6	0-600	0-35	20	40	100	200	600
PSB 0800	± 0.8	0-800	0-35	20	40	100	200	800
PSB1000	± 1.0	0-1000	0-350	200	400	1000		
PSB2000	± 2.0	0-2000	0-350	200	400	1000	2000	
PSB4000	± 4.0	0-4000	0-350	200	400	1000	2000	4000
PSB5000	± 5.0	0-5000	0-350	200	400	1000	2000	500

Excitation: 10.000 VDC
Output: 12 mV @ 4, 40, 400, and 5000 lbs
Over Force: 1.25 times rated force
Accuracy: Load Cell ± 0.05 % of full scale @ 75° F; System ± 0.10 % of full scale @ 75° F

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

DIGITAL DOCUMENTATION TEST SYSTEM

A Higher Level of Sophistication in Testing

The Digital Monitor Controller is the heart of COMTEN Industries Digital Documentation Test System. One push of a button will start and stop the test, return the test stand to its original position and print a report or graph with optional printer. It provides full control of the test stand and can eliminate the difficult and time consuming task of manually recording important test results.

A Digital Documentation Test System is made up of the following components:

1) **Test Stand** - Motorized variable speed to apply force to the specimen. Different models of stands are designed to provide 600 to 5000 pounds of force in a number of different speed ranges up to 30 inches per minute.

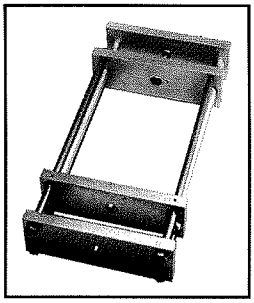
2) **Digital Monitor Controller** - Consists of a microprocessor, signal conditioner, amplifier, power supply, digital displays, optical travel detector, and associated control switching, cables and fusing to the Load Cell and Test Stand. Digital documentation of force readings in pounds, kilograms, or newtons, and speed or deflection in inches or millimeters. Provision for hard copy documentation to a printer/plotter or control interface through computer software is available through the Monitor Controller.

3) **Load Cell** - The S-Block Load Cell is the precision measuring device in the system. This unit provides a calibrated signal that is processed by the Digital Monitor Controller.

4) **Fixtures** - A tensile fixture or compression fixture may be used. Tensile strength is the force necessary to pull apart a material. There are a number of various tensile fixtures to accommodate the many shapes, sizes and physical properties of materials. Compressive strength is the force necessary to crush or burst an object. A compression cage is needed to perform these tests with platens or a modulus of rupture fixture.

5) **Optional Printer** - The optional Dot Matrix Printer will automatically print out a hard copy of the test results including a graph of force vs. time.

6) **Accessories** - Many different accessories can be added to the system such as a safety shield, dust cover, quick disconnect fixtures, etc.

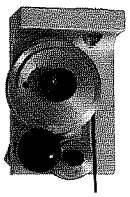


④ COMPRESSION CAGE

COMTEN INDUSTRIES
1124 - 19th St. North, St. Petersburg, FL 33713-5724 • 813-822-3508 • FAX 813-895-2328

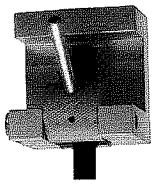
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

CLAMPS AND FIXTURE ACCESSORIES



SGO 0125

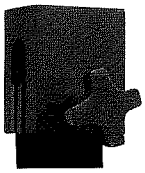
COMTEN INDUSTRIES manufactures a wide array of clamps and fixtures for all types of materials and testing needs. We also design many custom fixtures and accessories for special applications. Call one of our Sales Engineers for more details.



SCC 1037

COMTEN grips, clamps, and fixtures feature quality, durable construction and cover loads from mere ounces to 10,000 lb. Simple and efficient screw, cam, and pneumatically activated clamps are made to test a variety of materials and products such as:

Steel · Aluminum · Titanium · Plastic · Wire · Terminals · Yarn · Fabric · Fasteners · Films Strapping · Belting · Rubber · Foil · Ceramic · Monofilament · Bonds · Bolts · Bands · Rings



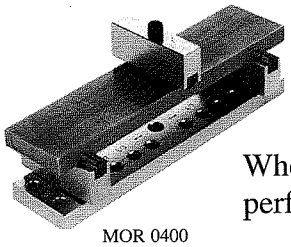
FCM 2025

Swivel Quick Disconnect Fixtures provide better alignment and fast replacement of any clamp.



WCS 0525

COMPRESSION FIXTURES



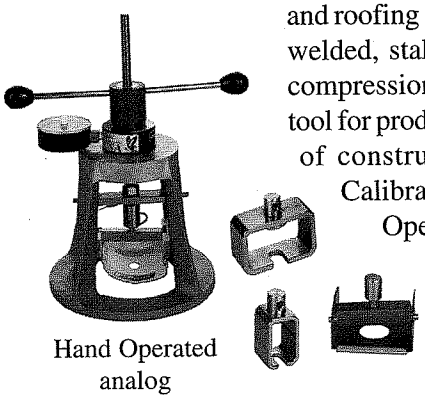
MOR 0400

COMTEN Test Stands can be quickly & easily converted from tensile to compression for testing of bottles, containers, packaging, and boxes with a Compression Cage and Platens.

When used with a Compression Cage, the adjustable rocking anvil fixture is an excellent way of performing Young's Modulus of Rupture and transverse tests on a wide range of materials.

PORTABLE TEST EQUIPMENT

SERIES 301

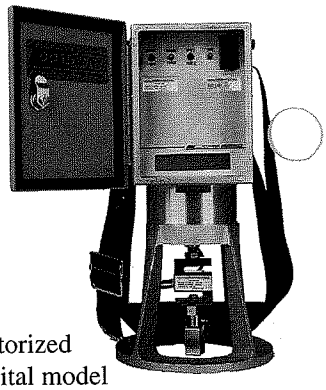


Hand Operated analog

These easy to operate tensile testers are designed to prove the holding capacity of many types and sizes of fasteners in construction, commercial, industrial, and roofing applications. Engineered for pullout strength tests of power-driven, welded, staked, threaded, and epoxied fasteners. Also adaptable to perform compression tests of foam and other types of samples in the field. An excellent tool for production sampling, quality control, on site testing and verifying results of construction research and development of new fastening methods. Calibrated to ASTM standards & traceable to NIST. Available in Hand Operated Analog and Battery Operated Motorized Digital models.

COMTEN Portable Analog Fastener Testers *are guaranteed against failure for 2 years or* ***COMTEN*** *will repair or replace defective parts free of charge.*

SERIES 385

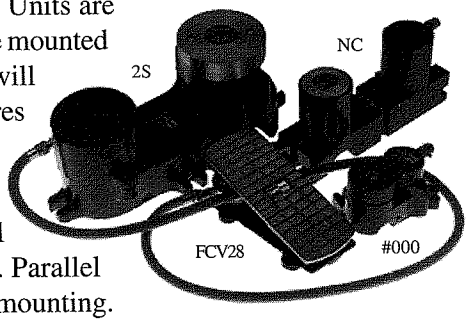


Motorized Digital model

REDMER AIR CHUCKS AND ACCESSORIES

The **Redmer Air Collet Chuck** gives superb accuracy as to depths and center of the part as the stationary collet does not move. This system eliminates the possibility of variations as the part is always in the same location regardless of slight changes in size. Units are operated using a 3-way foot control and can be mounted either horizontal or vertical. This fixture will eliminate the need for numerous jigs and fixtures that are only adaptable to one particular job.

Redmer AIR CHUCK
HEAVY DUTY PNEUMATIC WORK HOLDING DEVICES



NC - Air Chuck
Adapts to 00, 3C, 3AT, 5C, 10, 11, 11C & 21 collets for powerful holding of parts to 1-$^{1}/_{8}$". Parallel sides for stacking on its side or side-by-side mounting.

2S - Air Chuck
Adapts to 5C, 16C, 22, 22C, 22D, 22DS, & RC5 collets. A real heavy-duty workhorse for stock to 2".

#000 Air Chuck
Holds #00, 3C, 3AT, Brown & Sharp collets for small parts up to 1/2" round.

Collets
22DS ($^{7}/_{32}$ to 1-$^{25}/_{32}$") and RC5 ($^{1}/_{16}$ to 2")

Redmer Collet Air Chucks *are guaranteed against defects in material and workmanship for 5 years when operated at 100 lbs. or less air pressure.*

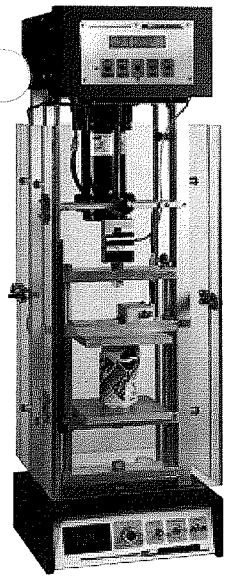
COMTEN INDUSTRIES

1124 - 19th Street North, St. Petersburg, FL 33713-5724 • Phone 813-822-3508 • FAX 813-895-2328

GPC 0497

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

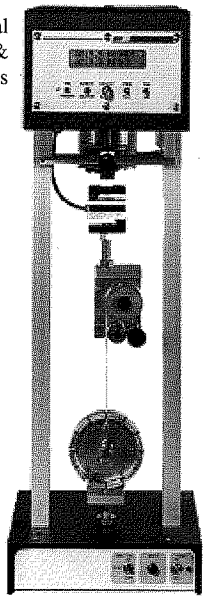
LOW COST DIGITAL TEST SYSTEMS



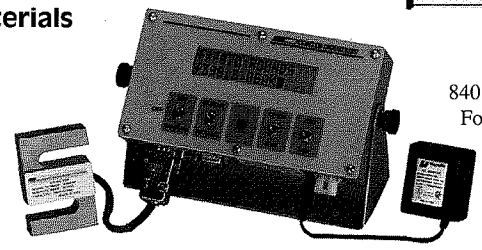
94 VD Variable Speed Digital Tester w/ Compression Cage

- **Interchangeable S-Block Load Cells accurate to ±0.5% of full scale with 10 capacities from 10 to 5000 lb.**
- **Digital Force Meter with continuous and peak force readings in pounds, kilograms, newtons, ounces, or grams**
- **Two way computer control and data transfer via RS232 communications**
- **Calibrated to ASTM and Mil Spec standards and traceable to NIST**
- **Available in variable speed, fixed speed, and hand operated models**
- **Great for economically converting older analog test stands to digital**
- **Ideal for testing applications that require high accuracy on a tight budget**
- **Easily and quickly converted from tensile to compression**
- **One year guarantee on workmanship and materials**

93 FD Fixed Speed Digital Tester w/ SGO 0125 & WTC 0331 Clamps



Optional 220 Volt, Dust Cover and Lexan Safety Shield also available. (See price sheet)



840 DFS Digital Force System

Hand Operated Digital Test Stands

91 HD SERIES - Working width is **6** inches (15.2 cm) between posts with **20** inches (50.8 cm) of travel without clamps.

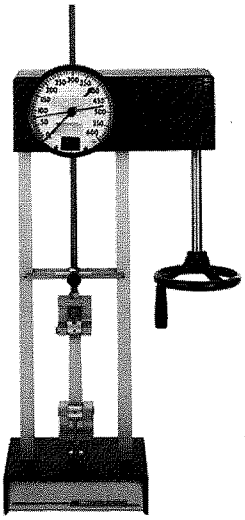
Fixed Speed Digital Test Stands

93 FD SERIES - Working width is **6** inches (15.2 cm) between posts with **20** inches (50.8 cm) of travel without clamps.

Variable Speed Digital Test Stands

94 VD, 94 RD, 94 YD, 94 BD, 94 WD SERIES - Dimensions are the same as on previous page for 94C models.

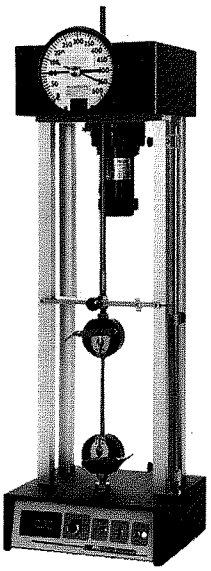
ANALOG TEST SYSTEMS



91 HA Test Stand w/ SCC 1037 Clamps

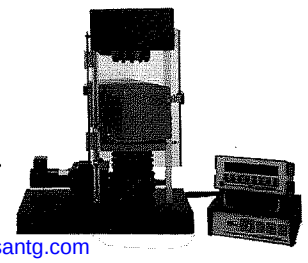
- **Interchangeable Analog Gauge Cells accurate to ±0.5% of full scale with 10 capacities from 30 to 4000 lb.**
- **Overforce protection available on motorized test stands**
- **Calibrated to ASTM and Mil Spec standards and traceable to NIST**
- **Available in the following Hand Operated, Fixed and Variable speed models: *91 HA, 93 FA, 94 VA, 94 RA, and 94 YA.* The test stand dimensions are the same as those for the Digital models listed above.**
- **Ideal for cost effective testing where digital accuracy is not required**
- **Easily and quickly converted from tensile to compression**
- **One year guarantee on workmanship and materials for test stand.**

94 VA Test Stand w/ WCS 0525 Clamps



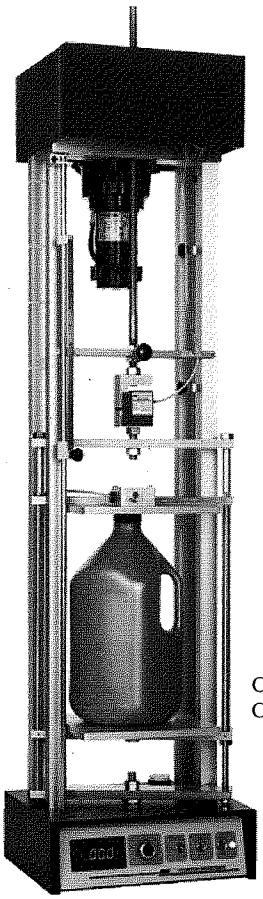
COMPRESSION ONLY TEST SYSTEMS

COMTEN also offers low cost compression only test stands with capacities up to 20,000 pounds that provide a simple to use design for low speed testing of rigid and brittle materials. These dedicated test stands are ideal for high force testing of ceramics, glass, tile, pelletized ore, and other similar materials. Models are available in Motorized (variable or fixed speed) and Hand Operated. Force is displayed through an analog gauge or a digital readout is offered on the variable speed motorized testers.

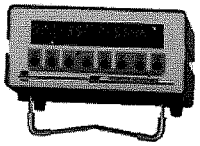


Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

DIGITAL DOCUMENTATION TEST SYSTEM



94 RC Test Stand w/ DMC 026S Digital Controller, Compression Cage & Auto-set Platens



- **Test stand capacities up to 5000 lb.**
- **Interchangeable S-Block Load Cells**
- **Digital Monitor with microprocessor controller for machine control and digital documentation of force readings in pounds, kilograms, or newtons, and speed or deflection in inches or millimeters**
- **Accuracy to ±0.1% of full scale with 12 capacities from 4 to 5000 lb.**
- **Calibrated to ASTM and Mil Spec standards and traceable to NIST**
- **Variable speed along with both force and deflection data provides maximum versatility for general purpose and highly specialized testing**
- **Ideal for a wide variety of uses in quality control, production control and product design applications**
- **Strong 4 post box construction of aluminum and steel, all critical components are heat treated and/or ground. Anodizing, zinc plating and quality polyester based paint provide for superior protection**
- **Easily and quickly converted from tensile to compression using the optional cages**
- **One year guarantee on workmanship and materials**



There are five series of Digital Documentation Test Systems. A wide variety of force ranges and adjustable speeds are available as well as optional Dust Covers and Lexan Safety Shields. Optional 220 Volt and Dot Matrix Printer/Report Generating Software can also be provided.

94 VC SERIES - Working width is **8** inches (20.3 cm) between posts with **20** inches (50.8 cm) of travel without clamps.
94 RC SERIES - Working width is **8** inches (20.3 cm) between posts with **30** inches (76.2 cm) of travel without clamps.
94 YC SERIES - Working width is **8** inches (20.3 cm) between posts with **46** inches (116.8 cm) of travel without clamps.
94 BC SERIES - Working width is **12** inches (30.5 cm) between posts with **46** inches (116.8 cm) of travel without clamps.
94 WC SERIES - Working width is **18** inches (45.7 cm) between posts with **46** inches (116.8 cm) of travel without clamps.

C-TAP COMTEN - Test Acquisition Package

Through the use of a personal computer, **C-TAP** will allow the user to control the **COMTEN** Tensile Test Stand with ease. With the help of LabWindows® / CVI from National Instruments®, a graphical environment provides all the tools necessary for data acquisition and control, data analysis, and data presentation of physical testing. **C-TAP** creates intuitive, fully integrated, front-panel controls on the PC. Using the popular Microsoft® Windows™, the user can perform most ASTM, ISO, DIN and other standard or custom tests with just a click of the mouse.

C-TAP FEATURES:

- Fully integrated material testing package
- National Instruments LabView/CVI quality data analysis software
- Microsoft Windows Graphical User Interface (GUI) format
- High speed data acquisition through the Digital Monitor Controller
- Pre-programmed ASTM, ISO, DIN, or other standard test procedures
- Machine control capability
- Extensive graphing and plotting capability
- Built in formulas and test equations
- Custom or pre-programmed report generator
- Custom data presentation option
- Real-time test monitoring and interactive test control
- Ability to create custom test methods for specific applications
- Fully compatible with DMC 026S or CEDM-S COMTEN Controllers using Dynamic Data Exchange (DDE)

NATIONAL INSTRUMENTS®
The Software is the Instrument®

LabWindows CVI

Product and company names listed are trademarks or trade names of their respective companies.
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

GENERAL PRODUCT CATALOG

MANUFACTURERS OF

PHYSICAL TESTING EQUIPMENT

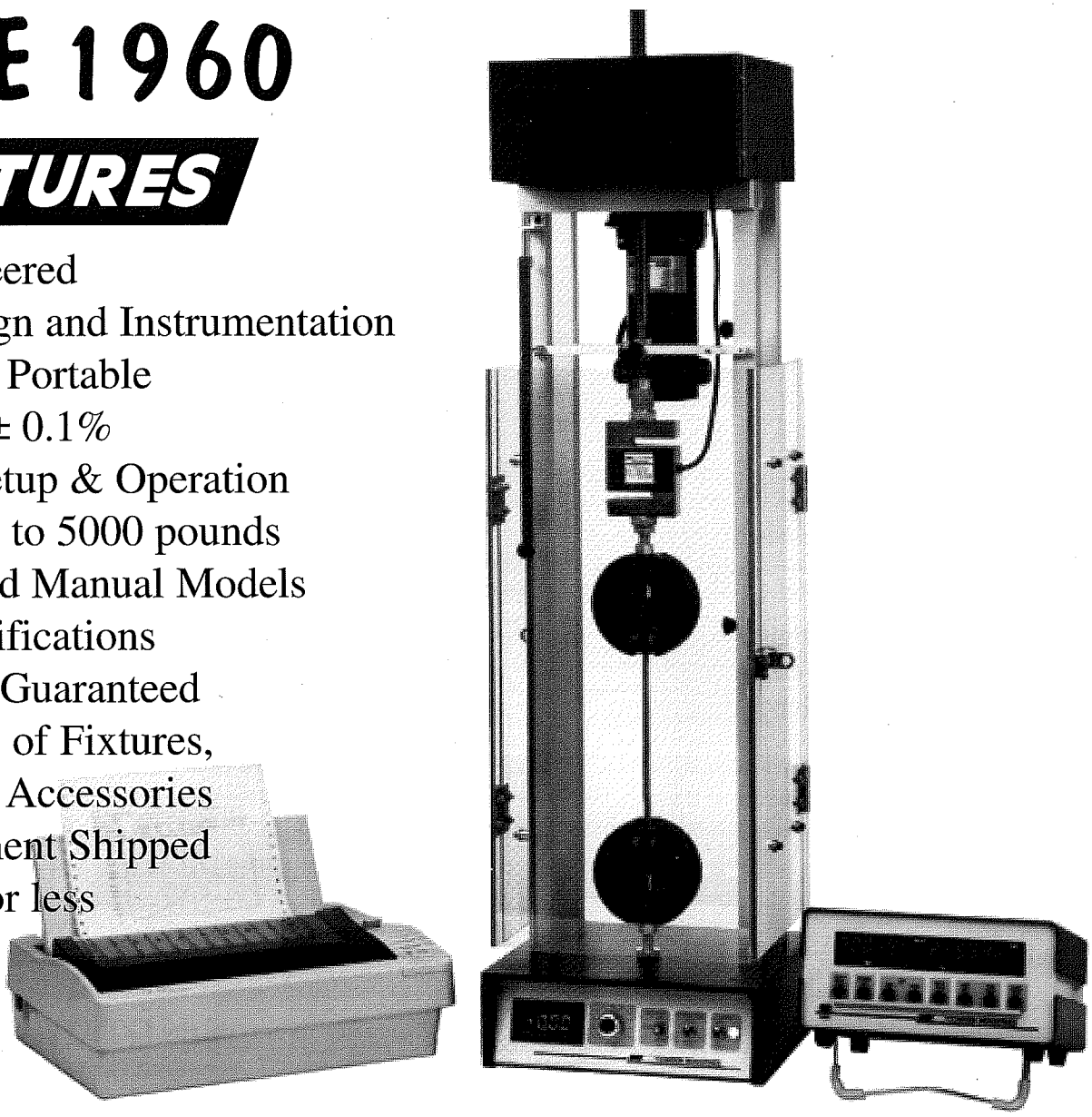
SINCE 1960

COMTEN

COMPRESSION AND TENSILE TESTING MACHINES

FEATURES

- Value Engineered
- Rugged Design and Instrumentation
- Compact and Portable
- Accuracy to ± 0.1%
- Simplified Setup & Operation
- Capacities up to 5000 pounds
- Motorized and Manual Models
- Custom Modifications
- Performance Guaranteed
- Wide Variety of Fixtures, Clamps, and Accessories
- Most Equipment Shipped in 2 Weeks or less



TASK ORIENTED TESTING MACHINES

FOR THE PRODUCTION FLOOR AND LABORATORY

Compression · Tensile · Modulus of Rupture

Digital Documentation · Test Data Acquisition Software

Also Redmer Air Chucks and Collets · Portable Test Equipment

COMTEN INDUSTRIES CALL 800-552-5546

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP