High quality Digital and Analog Force Gauges

High-precision Universal Test Machines

Specialized Force Testing Software

Extensive range of grips, fixtures, couplings and sensors
MEASURING UP TO YOUR STANDARDS – EASY AND ACCURATE SOLUTIONS TO YOUR EVERYDAY CHALLENGES
About Us

AMETEK Sensors, Test & Calibration is one of the world’s leading manufacturers of Force Measurements Instruments. This includes a wide variety of testing as for the Industries of; Plastics, Metals, Textile, Rubber, Paper, Food, Chemical, Aerospace, Defense, Automotive, Military, Packaging, Construction Cosmetics and many more…

We design, manufacture and deliver products under the well known brands; Chatillon Force Measurement, Chatillon Scales, Lloyd Material Testing, Davenport Polymer Testing and Newage Hardness Testing.

Chatillon has a global network of sales and service centers and authorized distributors who have expertise to provide assistance with the most challenging force testing applications. Our force measurement products are used in a host of applications and markets within production, quality assurance and R&D.

Contents

5 The Product Range
6 Applications
8 Digital Force Testers
9 Digital Force Gauges
12 Dedicated Remote Load Sensor
13 Non-dedicated Remote Force or Torque Measurement
14 Motorized Test Stands
15 Mechanical Test Stands
16 Pneumatic Test Stands
17 Mechanical Force Gauges
19 Ergonomic Force Gauges
20 Hydraulic Force Gauges
21 Quick Comparison – Force Gauges
22 Software – Nexygen DF and DF2 Wedge
24 Grips and Fixtures
35 Force Gauge Accessories
38 Thread Adapters
39 Gauge Adapters
40 Interface Cables
41 Included in Packaging
42 Connection Diagrams
COMPLETE RANGE OF INSTRUMENTS AND FORCE TESTING MACHINES DESIGNED TO SOLVE BOTH SIMPLE AND COMPLEX FORCE MEASUREMENT APPLICATIONS.
Features & Functions

Force Measurement; peak and average

Break Detection, Statistics (SPC), Automatic Data Capture

Fixed Alignment and Repeatable Load

Repeatable Speed and Travel

Automation and Reporting

Material Analysis
Medical Device Manufacturing

- Adhesives
- Artificial Skin
- Aspirators
- Balloons
- Compression Stockings
- Dental Materials
- Dialysis Catheters
- Electrosurgical Cables
- Feeding Tubes
- Guidewires
- Hypodermic Needles
- Medical Implants
- Lancets
- Luer Fittings
- Medical Tape
- Metered Dose Inhalers
- Ostomy Bags
- Prosthetics
- Syringes
- Staples
- Stents
- Sutures
- Surgical Screws
- Tapes

Applications

The versatility of our instruments and fixtures allow you to test a variety of materials to specific applications.

Customers crave innovation, reliability, performance and high quality. Companies expect shorter product-to-market cycle times, lower manufacturing costs and improved profitability. Basically, you’re expected to do more with less while ensuring customer safety, satisfaction and, ultimately, loyalty.

Our products will help you deliver dependable and reliable products that meet customers requirements and standards.
Feel free to contact our experts for additional applications!
DIGITAL FORCE TESTERS

CS SERIES

- Conforms to ISO and ASTM testing procedures
- User friendly and intuitive touch screen tablet
- Large, flexible work area
- Sample testing and quality assurance
- 2.5N to 5kN load cells

The CS Series is a revolutionary tabletop tester optimized for production & R&D testing applications, including medical devices, plastics, packaging, textiles, rubber and electronics to name a few. No personal computer is required, no proprietary software is required, and no knowledge of programming languages is required.

Both models provide you with an easy-to-use, intuitive and straight-forward method for tensile testing, compression testing, shear testing, flexural testing, peel testing or advanced multistage testing that conforms to ISO or ASTM testing procedures.

Both models have an adjustable T-Slot Table with US and Metric threads. With its one click operation on a robust and reliable touch screen, the CS Series is an excellent choice for simple testing applications.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Crosshead Travel</td>
<td>500 / 800mm (19.7 / 31.5 in)</td>
</tr>
<tr>
<td>Crosshead speed</td>
<td>0.01 to 1270mm/min (0.001 to 50 in/min)</td>
</tr>
<tr>
<td></td>
<td>0.01 to 1016mm/min (0.001 to 40 in/min)</td>
</tr>
<tr>
<td>Speed Accuracy</td>
<td>±1% of selected speed</td>
</tr>
<tr>
<td>Data Sampling Rate</td>
<td>1000Hz</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>5 to 35°C / 40 to 95°F</td>
</tr>
</tbody>
</table>

### OPTIONAL ACCESSORIES

- Wide range of Grips and Fixtures
- Over 50 Interchangeable CLC Load Cells

### FORCE CAPACITY

<table>
<thead>
<tr>
<th>Model</th>
<th>LBF</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS225</td>
<td>225</td>
<td>1000</td>
</tr>
<tr>
<td>CS1100</td>
<td>1124</td>
<td>5000</td>
</tr>
</tbody>
</table>

The CS Series is a revolutionary tabletop tester optimized for production & R&D testing applications, including medical devices, plastics, packaging, textiles, rubber and electronics to name a few. No personal computer is required, no proprietary software is required, and no knowledge of programming languages is required.

Both models provide you with an easy-to-use, intuitive and straight-forward method for tensile testing,
DIGITAL FORCE GAUGES
DFS II SERIES

Capacities from 0.5 to 500 lbf / 2.5 to 2500 N
USB, RS-232 and analog communication
Normal and Peak operating modes
Integral or remote load cell
Accuracy ±0.1% of Full Scale

The DFS II Series offers the best price performance of any digital force gauge available.

This compact force gauge is designed for basic and advanced applications. Ideal for hand-held, field or test stand applications, and can be equipped with integral load cells or external self-recognizing load & torque cells.

The gauge offers six different display languages.

A large, high resolution, full color LCD display supports a variety of standard gauge functions including normal and peak readings, high/low limits, set points (with output contacts for external alarms or other devices), pass/fail results, statistical results, load averaging, load comparisons, % and sharp break detection, loadcell actuation and direction. Loads are displayed in ozf, gf, lbf, kgf and N units.

See the Force Gauge Connection Diagrams at page 42.
DIGITAL FORCE GAUGES

DFE II SERIES

- Capacities from 2 to 500 lbf / 10 to 2500 N
- USB, RS-232 and analog communication
- Normal and Peak operating modes
- Selectable units of measurement
- Accuracy ±0.25% of Full Scale

The DFE II Series marks a new era in digital force measurement. This compact, easy-to-use force gauge is designed for economy applications without compromising functionality. Ideal for hand-held, field or test stand applications.

The gauge features an integral load cell, a large, easy-to-read, high resolution full color LCD display supports a variety of standard gauge functions including normal and peak readings, high/low limits, set points, pass/fail results, statistical results, load cell actuation and direction. Loads are displayed in ozf, gf, lbf, kgf and N units.

The display language may also be selected between English, Spanish, French, German, Portuguese, and Chinese.

See the Force Gauge Connection Diagrams at page 42.
**DIGITAL FORCE GAUGES**

**DFX II SERIES**

Four models to choose from 10 to 200 lbf / 50 to 1000 N

Normal and Peak operating modes

Selectable units of measurement

Economical

Accuracy ±0.3% Full Scale

The DFX II Series is an economical digital force gauge ideal for applications where users are interested in basic peak force measurement.

It features an integral loadcell with a measurement accuracy of better than 0.3% full scale, and operates by using a rechargeable NiMH battery pack or by using the supplied universal charger. Under battery operation, the gauge will operate for 70 to 100 hours of continuous use and also has an automatic power shutoff extending the recharge intervals. A large, easy-to-read, high resolution LCD display supports a variety of standard gauge functions including normal and peak readings. Loads are displayed in ozf, gf, lbf, kgf and N units.

The gauge offers six different display languages, and the calibration procedure is included in the gauge’s setup.

### FORCE RANGE

<table>
<thead>
<tr>
<th>FORCE RANGE</th>
<th>LBF</th>
<th>N</th>
<th>KGF</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFX2-010</td>
<td>10x0.01</td>
<td>50x0.05</td>
<td>5x0.005</td>
</tr>
<tr>
<td>DFX2-050</td>
<td>50x0.05</td>
<td>250x0.2</td>
<td>25x0.02</td>
</tr>
<tr>
<td>DFX2-100</td>
<td>100x0.1</td>
<td>500x0.5</td>
<td>50x0.05</td>
</tr>
<tr>
<td>DFX2-200</td>
<td>200x0.2</td>
<td>1000x1</td>
<td>100x0.1</td>
</tr>
</tbody>
</table>

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±0.3% of Full Scale</td>
</tr>
<tr>
<td>Max. overload</td>
<td>150% of rated capacity</td>
</tr>
<tr>
<td>Tare capacity</td>
<td>10% of rated capacity</td>
</tr>
<tr>
<td>Resolution</td>
<td>1:1000</td>
</tr>
<tr>
<td>Data sampling rate</td>
<td>1 KHz</td>
</tr>
<tr>
<td>Peak capture rate</td>
<td>1 KHz</td>
</tr>
<tr>
<td>Display update rate</td>
<td>4Hz</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>5 to 45°C / 40 to 110°F</td>
</tr>
</tbody>
</table>

See the Force Gauge Connection Diagrams at page 42.
DEDICATED REMOTE LOAD SENSOR
DFS-R II SERIES

- Normal and Peak operating modes
- Ideal for test bench integration
- Selectable units of measurement
- Choose from 2.5N to 5KN capacity load cell

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±0.1% of Full Scale</td>
</tr>
<tr>
<td>Max. overload</td>
<td>150% of rated capacity</td>
</tr>
<tr>
<td>Tare capacity</td>
<td>10% of rated capacity</td>
</tr>
<tr>
<td>Resolution</td>
<td>1:1000</td>
</tr>
<tr>
<td>Data sampling rate</td>
<td>10 Hz</td>
</tr>
<tr>
<td>Peak capture rate</td>
<td>10 KHz</td>
</tr>
<tr>
<td>Display update rate</td>
<td>10 Hz</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>5 to 45°C / 40 to 110°F</td>
</tr>
</tbody>
</table>

FORCE RANGE

<table>
<thead>
<tr>
<th>Load Cell</th>
<th>LBF</th>
<th>N</th>
<th>KGF</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFS2-R-250G</td>
<td>0.5x0.0001</td>
<td>2.5x0.0005</td>
<td>1x0.0001</td>
</tr>
<tr>
<td>DFS2-R-002</td>
<td>2x0.0002</td>
<td>10x0.001</td>
<td>1x0.0001</td>
</tr>
<tr>
<td>DFS2-R-010</td>
<td>10x0.001</td>
<td>50x0.005</td>
<td>5x0.0005</td>
</tr>
<tr>
<td>DFS2-R-025</td>
<td>25x0.002</td>
<td>100x0.01</td>
<td>10x0.001</td>
</tr>
<tr>
<td>DFS2-R-050</td>
<td>50x0.005</td>
<td>250x0.02</td>
<td>25x0.002</td>
</tr>
<tr>
<td>DFS2-R-100</td>
<td>100x0.01</td>
<td>500x0.05</td>
<td>50x0.005</td>
</tr>
<tr>
<td>DFS2-R-200</td>
<td>200x0.02</td>
<td>1000x0.1</td>
<td>100x0.01</td>
</tr>
<tr>
<td>DFS2-R-500</td>
<td>500x0.05</td>
<td>2500x0.2</td>
<td>250x0.02</td>
</tr>
<tr>
<td>DFS2-R-1000</td>
<td>1000x0.01</td>
<td>5000x0.2</td>
<td>500x0.05</td>
</tr>
</tbody>
</table>

The DFS-R II Series with dedicated remote load cell is the ideal solution for applications that require measurements in confined areas where the gage can’t fit.

The gauge can be handheld or remotely mounted and the load cell placed where the load needs to be applied. This allows the gage to be placed remotely where you need it for easy reading. All functions of the gauge will operate identically to a gage with an integral load cell.

All DFS II load cells are available with the addition of a 1,000 lbf (5KN) capacity.
If you need flexibility in your applications, the DFS-R-ND II Series with non-dedicated remote load and torque sensors are the answer. An economical solution compared to dedicated Load cells you now gain flexibility with interchangeable Load and Torque sensors.

As the dedicated load cell, the gauge can be handheld or remotely mounted and the torque sensor can be manipulated to take the reading. This configuration also gives the user the flexibility of having force and torque measurement in a single gauge.

This is the Gauge of choice for maximum flexibility: one unit and interchangeable sensor can do it all.
MOTORIZED TEST STANDS

LTGM SERIES

- Ideal solution for production environments
- Compact benchtop design, large work area
- Simple operation with intuitive controls
- Adjustable mechanical limits
- Remote footswitch control and operation

The LTCM Series is an economical, motorized tester optimized for production floor operation and when combined with a DF II Series digital force gauge, it provides users with an easy-to-use testing system.

It is ruggedly built and designed to promote simple operation. It features a large working area and a 130mm (5 in) throat ideal for large sample sizes. The LTCM500 has an adjustable T-Slot Table with US and Metric threads.

Crosshead travel is controlled from a simple console or using an optional footswitch controller. The series is very flexible with crosshead speeds up to 500mm (20 in) per minute and a travel distance of up to 750mm (29 in).

When combined with a DFS II Series force gauge, you have a complete force measurement system with load accuracy of better than 0.1% Full Scale.

See the Force Gauge Connection Diagrams at page 43.
MECHANICAL TEST STANDS

MT SERIES

Two models with lever or handwheel actuator
- Large working area
- Compact and modular design
- Basic solution for repeat testing
- Column height up to 1500mm

The MT Series mechanical test stands are an easy-to-use solution for force measurement applications up to 500 lbf (2.5kN). The test stand may be equipped with a quick-action lever or precision handwheel for controlling crosshead speed and travel.

See the Force Gauge Connection Diagrams at page 42.

OPTIONAL ACCESSORIES
- Digital Travel Indicator
- Ruler Assembly
- Gauge Mounting Kit
- Wall/Horizontal Mounting Kit
- Lever Actuator Assembly
- Handwheel Actuator Assembly

FORCE CAPACITY

<table>
<thead>
<tr>
<th></th>
<th>LBF</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT150</td>
<td>150</td>
<td>660</td>
</tr>
<tr>
<td>MT500</td>
<td>500</td>
<td>2500</td>
</tr>
</tbody>
</table>

SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>Lever: 75mm (3 in) per revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel rates</td>
<td>Handwheel: 12mm (0.5 in) per revolution</td>
</tr>
<tr>
<td>Column Height</td>
<td>Standard: 750mm (29.5 in)</td>
</tr>
<tr>
<td></td>
<td>Extended: 1000mm (39.4 in)</td>
</tr>
<tr>
<td></td>
<td>Ultra: 1500mm (59 in)</td>
</tr>
<tr>
<td>Maximum Stroke</td>
<td>150mm (6 in) longer strokes available</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>5 to 45°C / 40 to 110°F</td>
</tr>
</tbody>
</table>

Gauges are sold separately.

The MT test stand can be bench mounted, wall mounted or positioned horizontally. Vertical clearances are available from 750mm (29.5 inch) up to 1500mm (60 inch). Standard stroke is 150 mm (6 inch), although longer strokes can be accommodated as a special order.
The TT Series is a pneumatically-operated tester for measuring breaking strength of electrical leads, terminals, connectors, wire wraps, etc.

The TT Series operates using clean, dry air with a maximum air pressure up to 160 psig (11.2 bar).

It meets MIL-T-7928 (ASG) requirements for crimped, solderless lugs, and may be used for tensile or compression testing. The rapid test speed makes it ideal for production line testing, incoming inspection testing or for the R&D laboratory.

The TT Series is available in two models: one with a foot-actuated switch; the other with a hand-actuated switch.
MECHANICAL FORCE GAUGES

LG SERIES

Lbf, ozf, kgf and N models
Peak load button to memorize peak load
Tensile and Compression testing
Tare ring

The LG Series is ideal for a wide range of low capacity force testing applications.

The ergonomically shaped LG gage features a large, 2.25 inch dial indicator for improved resolution and readability, including a peak load switch to capture the maximum force achieved during a test.

This gauge is an ideal and economical solution for low capacity of tensile and compression testing.

### FORCE RANGE

<table>
<thead>
<tr>
<th>Model</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG-002</td>
<td>2 x 0.01 lbf</td>
</tr>
<tr>
<td>LG-005</td>
<td>5 x 0.025 lbf</td>
</tr>
<tr>
<td>LG-080</td>
<td>80 x 4 ozf</td>
</tr>
<tr>
<td>LG-010</td>
<td>10 x 0.05 lbf</td>
</tr>
<tr>
<td>LG-020</td>
<td>20 x 0.1 lbf</td>
</tr>
<tr>
<td>LG-030</td>
<td>30 x 0.15 lbf</td>
</tr>
<tr>
<td>LG-050</td>
<td>50 x 0.25 lbf</td>
</tr>
<tr>
<td>LG-075</td>
<td>75 x 0.375 lbf</td>
</tr>
<tr>
<td>LG-100</td>
<td>100 x 0.5 lbf</td>
</tr>
<tr>
<td>LG-10N</td>
<td>10 x 0.05 N</td>
</tr>
<tr>
<td>LG-20N</td>
<td>20 x 0.1 N</td>
</tr>
<tr>
<td>LG-30N</td>
<td>30 x 0.15 N</td>
</tr>
<tr>
<td>LG-50N</td>
<td>50 x 0.25 N</td>
</tr>
<tr>
<td>LG-100N</td>
<td>100 x 0.5 N</td>
</tr>
<tr>
<td>LG-200N</td>
<td>200 x 1 N</td>
</tr>
<tr>
<td>LG-300N</td>
<td>300 x 1.5 N</td>
</tr>
<tr>
<td>LG-500N</td>
<td>500 x 2.5 N</td>
</tr>
<tr>
<td>LG-1KG</td>
<td>1 x 0.005 kgf</td>
</tr>
<tr>
<td>LG-2KG</td>
<td>2 x 0.01 kgf</td>
</tr>
<tr>
<td>LG-3KG</td>
<td>3 x 0.015 kgf</td>
</tr>
<tr>
<td>LG-5KG</td>
<td>5 x 0.025 kgf</td>
</tr>
<tr>
<td>LG-10KG</td>
<td>10 x 0.05 kgf</td>
</tr>
<tr>
<td>LG-20KG</td>
<td>20 x 0.1 kgf</td>
</tr>
<tr>
<td>LG-30KG</td>
<td>30 x 0.15 kgf</td>
</tr>
<tr>
<td>LG-50KG</td>
<td>50 x 0.25 kgf</td>
</tr>
</tbody>
</table>

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±0.5% of Full Scale</td>
</tr>
<tr>
<td>Overload capacity</td>
<td>110% of rated capacity</td>
</tr>
<tr>
<td>Max. Overload</td>
<td>150% of rated capacity</td>
</tr>
<tr>
<td>Tare capacity</td>
<td>10% of rated capacity</td>
</tr>
<tr>
<td>Dial resolution</td>
<td>0.5% of Full Scale</td>
</tr>
<tr>
<td>Deflection</td>
<td>10mm / .394 in at Full Scale</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>5 to 45°C / 40 to 110°F</td>
</tr>
</tbody>
</table>

See the Force Gauge Connection Diagrams at page 42.

### OPTIONAL ACCESSORIES

- Handle assembly
MECHANICAL FORCE GAUGES

DG SERIES

- Lbf, kgf and N models
- Tensile and Compression testing
- Tare ring
- Peak load button to memorize peak load

The DG Series is ideal for a wide range of high capacity force testing applications up to 500 lbf / 2.5 kN.

The ergonomically shaped DG gage features a large, 2.25 in dial indicator for improved resolution and readability, including a peak load switch to capture the maximum force attained during a test.

The housing is made of durable plastic featuring a universal mounting plate.

This gauge is an ideal and economical solution for high capacity tensile and compression testing.

### SPECIFICATIONS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accuracy</strong></td>
<td>±0.5% of Full Scale</td>
</tr>
<tr>
<td><strong>Overload capacity</strong></td>
<td>110% of rated capacity</td>
</tr>
<tr>
<td><strong>Max. Overload</strong></td>
<td>150% of rated capacity</td>
</tr>
<tr>
<td><strong>Tare capacity</strong></td>
<td>10% of rated capacity</td>
</tr>
<tr>
<td><strong>Dial resolution</strong></td>
<td>0.5% of Full Scale</td>
</tr>
<tr>
<td><strong>Deflection</strong></td>
<td>10mm / .394 in at Full Scale</td>
</tr>
<tr>
<td><strong>Operating temp.</strong></td>
<td>5 to 45°C / 40 to 110°F</td>
</tr>
</tbody>
</table>

### FORCE RANGE

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>DG-200</td>
<td>200 x 1 lbf</td>
</tr>
<tr>
<td>DG-300</td>
<td>300 x 1.5 lbf</td>
</tr>
<tr>
<td>DG-400</td>
<td>400 x 2 lbf</td>
</tr>
<tr>
<td>DG-500</td>
<td>500 x 2.5 lbf</td>
</tr>
<tr>
<td>DG-1000N</td>
<td>1000 x 5 N</td>
</tr>
<tr>
<td>DG-2500N</td>
<td>2500 x 12.5 N</td>
</tr>
<tr>
<td>DG-100Kg</td>
<td>0.5 kgf</td>
</tr>
<tr>
<td>DG-250Kg</td>
<td>1.25 kgf</td>
</tr>
</tbody>
</table>

See the Force Gauge Connection Diagrams at page 42.
ERGONOMIC FORCE GAUGES

Muscle Strength &
Functional Capacity

Used in Physical & Muscle Strength applications

Job Task Analysis

Use with any Chatillon Force Gauge

Waist belt for field portability of attachments

Portable Kits

The Ergonomic force kits are ideal for; job task analysis, functional capacity and muscle strength analysis.

The different ergonomic kits are popular for usage in the field and at physical therapy facilities. These kits can be used with both our mechanical LG and DG Series or the Digital DF II Series force gauges.

See comparison chart on page 36, and additional accessory details on page 37.
HYDRAULIC FORCE GAUGES
ERICHSEN WUPPERTAL

- N and kgf models
  - 7 available models to choose from
- Economical force measurement
- Verify your press force
- Ideal to monitor Load Distribution

Hydraulic Gauges are a low-cost method for obtaining general force measurements. With a wide range of styles and sizes, these gauges are popular in many industries and particularly popular for use in hazardous environments.

The hydraulic gauges can be used for occasional force checks, continuous loading, or permanent installation. Every model has a robust construction and most are suitable for use in rough operating conditions on machines and in production.
# QUICK COMPARISON CHART

## Analog and Digital Force Gauges

<table>
<thead>
<tr>
<th>Feature</th>
<th>LG Series</th>
<th>DG Series</th>
<th>DFX II Series</th>
<th>DFE II Series</th>
<th>DFS II Series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accuracy (±% of full scale)</strong></td>
<td>0.5</td>
<td>0.5</td>
<td>0.3</td>
<td>0.25</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Resolution</strong> (Capacity; Resolution Points)</td>
<td>0.5% of FS</td>
<td>0.5% of FS</td>
<td>1:1000</td>
<td>1:1000 or 1:5000</td>
<td>1:10000</td>
</tr>
<tr>
<td><strong>Force Ranges</strong></td>
<td>10-500N (2-100lbf)</td>
<td>1000-2500N (200-500lbf)</td>
<td>50-1000N (10-200lbf)</td>
<td>10-2500N (2-500lbf)</td>
<td>2.5-2500N (0.5-500lbf)</td>
</tr>
<tr>
<td><strong>Units of Measurement</strong></td>
<td>N/lbf/kgf</td>
<td>N/lbf/kgf</td>
<td>N/lbf/kgf/gf/ozf</td>
<td>N/lbf/kgf/gf/ozf</td>
<td>N/lbf/kgf/gf/ozf</td>
</tr>
<tr>
<td><strong>Sampling</strong></td>
<td>-</td>
<td>-</td>
<td>1KHz</td>
<td>7KHz</td>
<td>10KHz</td>
</tr>
<tr>
<td><strong>Peak Rate</strong></td>
<td>-</td>
<td>-</td>
<td>40-1KHz</td>
<td>10-100-1K-7KHz</td>
<td>10-100-1K-7KHz</td>
</tr>
<tr>
<td><strong>Display Update Rate</strong></td>
<td>-</td>
<td>-</td>
<td>4Hz</td>
<td>4 or 10Hz</td>
<td>4-10Hz</td>
</tr>
<tr>
<td><strong>Overload Capacity of 150%</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>10% of Tare Capacity of FS</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Communication Outputs</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RS-232/USB</td>
<td>RS-232/USB/</td>
</tr>
<tr>
<td><strong>Mitutoyo Interface</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Display Type</strong></td>
<td>Dial indicator</td>
<td>Dial indicator</td>
<td>LCD</td>
<td>Hi Res Color</td>
<td>Hi Res Color</td>
</tr>
<tr>
<td><strong>Typical Battery Life</strong></td>
<td>-</td>
<td>-</td>
<td>70-100 hours</td>
<td>16-20 hours</td>
<td>12-20 hours</td>
</tr>
<tr>
<td><strong>Auto Dimming</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Measurement Unit Lock</strong></td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Data Results Storage</strong></td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Auto Shut Down</strong></td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>NIST Calibration Certificate</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Overload “Counting-history”</strong></td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Adjustable load limit w/buzz</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Average load/time</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Statistical Calculations</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Interface to PC using Nexygen</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Peak Detection</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Break Detection</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Sharp &amp; % Break</td>
</tr>
<tr>
<td><strong>Contact Closure feature</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Pass &amp; Fail Results</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Password Protection</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Load Bargraph</strong></td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Multi Language</strong></td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Optional Dedicated &amp; Detachable Load/Torque Cells</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
</tbody>
</table>
This easy-to-use Windows-based package interfaces directly to your digital force gauge.

You can download peak load results from the gauge and display your results in tabular and graphical formats. Graphical results include markers denoting exact point positions. Results can be color coded for immediate pass/fail recognition. You can easily specify units of measure, fonts, titles, force measurement resolution. The software provides basic force measurement tensile and compression test formats including pull to break, pull to limit, compress to rupture and compress to limit.

The software also provides torque to break and torque to limit analysis when connected to a torque gauge.

The software is easy to setup and features intelligent prompts, menus, combo boxes and other methods to get you up and running quickly and efficiently with minimal training. Data is easily exported to Word, Excel, Access, PowerPoint and Outlook.

Order No. NC002867 - Nexygen Application Software, Single User License

**FEATURES:**

- Simple to setup and operate
- Seamless integration with Word, Excel, Access
- Graphical & Tabular results
- Pre and post-test analysis
- Mathematical calculations including statistics
DF2 Wedge Communication Software

- Free download @ www.ametektest.com
- Automatic communication setup
- Automatic Excel file generation
- Automatic language selection
- Time & Date stamped data
- Electronic file or printed reports

DF2 Wedge communication software provides seamless serial data communications between your Windows-based personal computer and the entire DF II Series or LTCM Series with a DF II Series gauge.

Measurement data is sent from your gauge over an RS232 serial connection or USB with auto-detect to an Excel file on your computer.

You can easily choose the exact data you want to transfer as well as how you want it to be transferred.
Grips and Fixtures

JACOBS CHUCKS
Jacobs Chuck fixture are ideal for holding small cylindrical samples during tensile or compression testing. They are commonly used for testing wire samples.

GF-51  Sample size: 4mm (0.16 in) diameter
Capacity: 20 lbf (100N)
Thread: #10-32F
GF-52  Sample size: 6mm (0.25 in) diameter
Capacity: 20 lbf (100N)
Thread: #10-32F

Note: Both include a 1/4-28M to #10-32M adapter and #10-32M Set Screw

COMPRESSION PLATENS
Circular compression platens are made of aluminium and may be used for general purpose compression testing.

17109  Sample size: 50mm (2 in) diameter
Capacity: 225 lbf (1000N)
Thread: #10-32F
17012  Sample size: 75mm (3 in) diameter
Capacity: 550 lbf (2500N)
Thread: 5/16-18F

RECTANGULAR PLATENS
Provide more surface area and are ideal for testing foam, composites, metals, wood products, packaging materials, etc.

TG-37  Sample size: 175 x 115mm (7 x 4.5 in)
Capacity: 110 lbf (500N)
Thread: 5/8" eye end upper, 5/8" eye end bottom

Grip opening may vary depending on Grip Face thickness, see data sheets
**WEDGE ACTION GRIPS**

These miniature wedge action grips are ideal for tensile testing wire, filaments, fibers, cables, etc. Grips have serrated teeth for extra gripping power as tensile force is applied.

- **GF-11**  
  Sample size: 12mm (0.5 in)  
  Capacity: 110 lbf (500N)  
  Thread: #10-32 Male or 1/4”-28 Male

- **ML1700**  
  Sample size: 5.6mm (0.2 in)  
  Capacity: 450 lbf (2000N)  
  Thread: 5/16-18F

**WEDGE GRIP WITHOUT FACES**

A range of wedge action grips for general tension testing of metals and plastic. The wedge design of the grip means the grip tightens on the sample as the force increases, initial force can be applied by various methods such as side lever, capstan action wheel or screw action. Faces are interchangeable for different samples types and dimensions.

- **01/4644**  
  Sample size: 40x10x10mm (1.5x0.4x0.4 in)  
  Capacity: 1100 lbf (5000N)  
  Thread: 5/8” Female Eye End

**LEVER ACTUATED**

A range of wedge action grips for general tension testing of metals and plastic. The wedge design of the grip means the grip tightens on the sample as the force increases, initial force can be applied by various methods such as side lever, capstan action wheel or screw action. Faces are interchangeable for different samples types and dimensions.

- **01/4650**  
  Sample size: 34x40x9mm (1.3x1.5x0.3 in)  
  Capacity: 2200 lbf (10KN)  
  Thread: 5/8” Female Eye End

Grip opening may vary depending on Grip Face thickness, see data sheets
VICE GRIP, 0–8MM OPENING
A vice grip with manual tightening action by thumb screw grips are dual action. Ideal for paper, thin film and general tensile and peeling applications where forces are low.

01/4221  Sample size: 8x10x100mm (0.3x0.4x3x9 in)
  Capacity: 22 lbf (100N)
  Thread: 5mm Threaded Female

SMALL PINCER GRIP
A range of small vice action pincer grips, available as direct connect and options of a connecting chain for self alignment. Ideal for testing of small component parts where access is an issue such as electrical and electronic components.

01/4191  Sample size: 10x25x25mm (0.4x1x1 in)
  Capacity: 450 lbf (2000N)
  Thread: 5/8" Female Eye End

VICE GRIP, 0–30MM OPENING
A vice grip with manual tightening action by T-bar, grip is dual action and allows for offset sample alignment for shear testing. Ideal for all types of samples, rubber, plastic film, plastic dumbbells, paper and cardboard, sheet metal, foils, wood, fabrics and composites (depends on rating).

01/4265  Sample size: 30x30x100mm (1.1x1.1x3.9 in)
  Capacity: 1100 lbf (5000N)
  Thread: 5/8" Female Eye End

Grip opening may vary depending on Grip Face thickness, see data sheets.
VICE ACTION GRIP
This lightweight, spring-loaded, rubber faced clamp grips very light loads. Ideal for paper, film, foils, etc.

TG-33  
Sample size: 25mm (1 in) width, 2mm (0.08 in) thickness  
Capacity: 1.1 lbf (5N)  
Thread: 5/8"F eye end upper, 5/8"F eye end bottom

QUICK RELEASE TENSILE GRIP
Ideal for tensile testing paper, rubber, plastic, film textiles, etc. the grip is a general purpose tensile grip. It is supplied standard with 100mm x 50mm crosscut faces. Faces are interchangeable. A large thumbscrew is used to secure the sample. Optional jaw faces are available and may be ordered separately.

TG-26  
Sample size: 150mm (6 in) width, 12mm (0.5 in) thickness  
Capacity: 225 lbf (1000N)  
Thread: 5/8"F eye end upper, 5/8"F eye end bottom

VICE GRIP, 0-15MM OPENING
A vice grip with manual tightening action either by thumb screw or T-bar, grips are dual action and allow for offset sample alignment for shear testing. Ideal for all types of flat samples, rubber, plastic film, plastic dumbbells, paper and cardboard, sheet metal, foils, wood, fabrics and composites (depends on rating).

01/4304  
Sample size: 15x30x50mm (0.6x1.1x2 in)  
Capacity: 1100 lbf (5000N)  
Thread: 5/8" Female Eye End

VICE GRIP, 0-10MM OPENING
A vice grip with manual tightening action either by thumb screw or T-bar, grips are dual action and allow for offset sample alignment for shear testing. Ideal for all types of flat samples, rubber, plastic film, plastic dumbbells, paper and cardboard, sheet metal, foils, wood, fabrics and composites (depends on rating).

01/4291  
Sample size: 10x30x30mm (0.4x1.1x1.1 in)  
Capacity: 1100 lbf (5000N)  
Thread: 5/8" Female Eye End
ECCENTRIC ROLLER GRIP, 50 MM
A self tightening eccentric roller grips, the grip tightens as the sample is pulled. Ideal for all types of flat samples, rubber, plastic film, plastic dumbbells, paper and cardboard, sheet metal and foils.

01/4184 Sample size: 7x50mm (0.3x2 in)
Capacity: 220 lbf (1000N)
Thread: 5/8” Female Eye End

ECCENTRIC ROLLER GRIP, 100 MM
A self tightening eccentric roller grips, the grip tightens as the sample is pulled. Ideal for all types of flat samples, rubber, plastic film, plastic dumbbells, paper and cardboard, sheet metal and foils.

01/4186 Sample size: 7x100mm (0.3x4 in)
Capacity: 1100 lbf (5000N)
Thread: 5/8” Female Eye End

ECCENTRIC ROLLER GRIP, 50 MM
A range of self tightening eccentric roller grips, the grip tightens as the sample is pulled. Ideal for all types of flat samples, rubber, plastic film, plastic dumbbells, paper and cardboard, sheet metal and foils.

01/4185 Sample size: 7x50mm (0.3x2 in) with plain roller & rubber lined surface
Capacity: 220 lbf (1000N)
Thread: 5/8” Female Eye End

Grip opening may vary depending on Grip Face thickness, see data sheets.
3-POINT BEND Fixture
This low force bending jig is supplied as standard with a set of three anvils, one upper and two lower. Upper anvils have single radii and Lower anvil sets are reversible with different radii on each side. Other anvil sets are also available as additional accessories.

01/4104  Sample size: 4-150mm (0.15-6 in)
Capacity: 560 lbf (2500N)
Thread: 5/8” Female Eye End

CIRCULAR ADHESIVE FixTure
Includes top and bottom fixture for general purpose compressive testing or adhesive determination. Top fixture is self-aligning. Top and Bottom fixture may be ordered separately.

GF-8  Sample size: 75mm (3 in) diameter
Capacity: 550 lbf (2500N)
Thread: 1/4”-20 Male Upper; 3/8”-16 Female bottom with Gauge and tester coupling hardware included

CLEVIS FIXTURE
The GF-2 comes with an upper and lower fixture. The fixture has a concave diameter that centers the sample and secures the pins while under load. The throat clearance with pin installed is 12mm (0.5 in) at the centerline. Ideal for spring tensile testing. Top and Bottom fixture may be ordered separately.

GF-2  Sample size: 12mm (0.5 in) width
Capacity: 550 lbf (2500N)
Thread: 1/4”-20 Male Upper; 3/8”-16 Female bottom with Gauge and tester coupling hardware included

BOTTLE TOP TORQUE
This single fixture is used with the STS torque sensor to determine bottle top torque results. A manual screw mechanism is used to affix to the bottle top.

B200309  Sample size: 38mm (1 1/2 in) min, 70mm (2 3/4 in) max
Capacity: 100 lbf-in (10N-m)
Thread: 1/4” Hex

Grip opening may vary depending on Grip Face thickness, see data sheets
**PNEUMATIC VICE GRIP**

A small pneumatic vice grip suitable for low force tensile and peeling applications. One side is closed with a thumb screw and the other is pneumatic. 1KN @ 7 bar, M5 pneumatic connector. All pneumatic grips are suitable for use with the foot and hand controls.

01/4421 Single Sided & 01/4422 Dual Sided
- Sample size: 10x30x30mm (0.4x1.1x1.1 in)
- Capacity: 220 lbf (1000N), Single Sided
- Thread: 5/8" Female Eye End

**PNEUMATIC VICE GRIP**

A Pneumatic grip ideal for general purpose tensile testing up to 5KN, the grip has a manual adjust on one side and a pneumatic actuator on the other side, useful for shear testing where the sample requires an offset. Pneumatic pressure 2.6KN @ 7 bar, M5 pneumatic connector. All pneumatic grips are suitable for use with the foot and hand controls.

01/4435 Single Sided & 01/4436 Dual Sided
- Sample size: 15x30x50mm (0.6x1.1x2 in)
- Capacity: 1100 lbf (5000N), Single Sided
- Thread: 5/8" Female Eye End

Grip opening may vary depending on grip face thickness, see data sheets
CAM FIXTURE
This fixture is used for testing tensile strength on wire, filament, magnetic tape, etc. The sample is inserted between the holding block and secured by the cam. Cam and holding block may be separated for cleaning.

ML1821  Sample size: 6mm (0.25 in) width  
         Capacity: 30 lbf (130N)  
         Thread: #10-32F

WIRE CONNECTOR FIXTURE
Used to test wrapped wire connections and terminations. The fixture has a “L” shape that may be notched by the user to any desired dimension. During a test, the fixture is slipped over the terminal post below the wire wrap. When tension load is applied, the fixture engages the wrap and pulls it off the connection post.

ML4244  Capacity: 30 lbf (130N)  
         Thread: #10-32F

SPOOL FIXTURE
Ideal for difficult to handle samples such as very fine wires, medical wire, dental wire, etc. The sample is threaded into the locking groove and wrapped around the spool. A tension wire holds the specimen securely on the spool.

ML1949  Sample size: 6mm (0.25 in) width  
         Capacity: 30 lbf (130N)  
         Thread: #10-32F

WIRE & CORD FIXTURE
Used to test insulated wire, cord, stranded cable, etc. The sample is wrapped around the smaller semi-circular block and looped over the larger block. This is a single fixture. Use two for securing sample during tensile test, or combine with a suitable bottom grip, e.g. GF9-BOT.

ML1977  Sample size: 12mm (0.5 in) width  
         Capacity: 550 lbf (2500N)  
         Thread: 5/16-18F
WIRE & TERMINALS

WIRE TURRET ASSEMBLY
This assembly is ideal for testing wire terminals, connectors and other end fittings. A rotating turret has 9 grooves to accept wire sizes from 28 gauge to 10 gauge. A ring stud behind the turret is supplied for ring-type terminals.

ML1785  Wire gauge size:ample size: From 0.06 up to 0.21 in
         Capacity: 550 lbf (2500N)
         Thread: 5/16-18F

TERMINAL TESTING FIXTURE
Specifically designed to test the ultimate strength of wire connectors and terminals. Upper fixture consists of a self-aligning wheel with 9 equally spaced slots to accept standard terminal shank sizes. Ring terminals are secured with a pin. Bottom fixture has an eccentrically mounted, self-tightening knurled roller which accepts wire diameters up to 3mm (0.13 in).

GF-10   Sample size: From 0.8 to 6mm (0.03 to 0.25 in)
         Capacity: 110 lbf (500N)
         Thread: 1/4”-20 Male Upper; 3/8”-16 Female bottom with Gauge and
tester coupling hardware included

WIRE & CORD LOCKING FIXTURE
Three non-locking pins designed for a “Figure 8” wrap help ensure a center break. Designed for fast installation and release. Throat clearance with pins installed and clearance between pins is 9.5mm (0.4 in). Top fixture is self-aligning. Top and Bottom Fixtures may be ordered separately:

GF-5    Sample size: 9.5mm (0.4 in) diameter
         Capacity: 550 lbf (2500N)
         Thread: 1/4”-20 Male Upper; 3/8”-16 Female bottom with Gauge and
tester coupling hardware included

BOLLARD GRIP
A thin rope, yarn and thread bollard grip, ideally it should be used with an extensometer to calculate true strain in the sample. Pneumatic versions are available. The 01/4625 is designed for the tensile strength of fibers, wires, yarns, threads and ropes it is fitted with a crosscut face as standard with no optional faces.

01/4625 Sample size: 5mm (0.2 in) diameter/15mm (0.6 in) width
         Capacity: 1100 lbf (5000N)
         Thread: 5/8” Female Eye End

Grip opening may vary depending on Grip Face thickness, see data sheets
SCREW ACTION GRIP
The Bollard grip is suitable for a wide range of samples such as fiber, yarn, thread, rope, string, and strapping tape. The grips are designed so that the sample can be wrapped around the bollard and clamped at one end, this helps reduce the sample suffering a jaw break and spreads the load around the bollard by introducing friction to the sample. Ideally it should be used with an extensometer to calculate true strain in the sample.

01/4623  Sample size: 5mm (0.2 in) diameter/8mm (0.3 in) width
Capacity: 1100 lbf (5000N)
Thread: 5/8" Female Eye End

GROOVED SNUBBER FIXTURE
Grooved snubber and post design ensures centerline breaks of flexible wires and cable up to 1.6mm (0.06 in) diameter. The 25mm (1 in) diameter snubber is mounted on a swiveling plate so that the sample aligns when force is applied. Top and Bottom fixture may be ordered separately.

GF-3  Sample size: 1.6mm (0.06 in) diameter
Capacity: 225 lbf (1000N)
Thread: 1/4"-20 Male Upper; 3/8"-16 Female bottom with Gauge and tester coupling hardware included

MINIATURE BOLLARD
Includes top and bottom fixture for lightweight loads. Ideal for extremely small wire and filament. Fixtures have a 11mm (0.4 in) diameter snubber which is part of a precision machined swivelling mechanism that ensures sample alignment. May order Top and Bottom fixtures separately.

GF-4  Sample size: 0.8mm (0.03 in) diameter
Capacity: 55 lbf (250N)
Thread: 1/4"-20 Male Upper; 3/8"-16 Female bottom with Gauge and tester coupling hardware included

Grip opening may vary depending on Grip Face thickness, see data sheets
BALL PROBES
Used for a variety of texture analysis tests. Ideal for fruit, vegetable and confectionary product testing including ripeness. Provides a uniform compression force distributed at a normal angle to the surface area of the ball. Gives an averaging effect over the local area being tested.

FG/BA  Ball Diameter: From 2 to 10mm (0.25 to 1 in)
       Capacity: 110 lbf (500N)
       Thread: M6

CONE PROBES
Used for penetration testing on products including cosmetics, pharmaceuticals, pastes, ointments, sealants and mastics. Useful for determining the spreadability of dairy products including butter, margarine and cheese spreads.

FG/CO  Cone Angle: 15 to 90°
       Capacity: 110 lbf (500N)
       Thread: M6

CYLINDER PROBES
Used to determine the deformation characteristics of materials including gelatine, e.g. gel strength (Bloom Value) and gel elasticity. Cylinder probes are also useful for applying a shear force to a gel to determine break strength.

FG/CY  Cylinder Diameter: From 1 to 10mm (0.25 to 4.0 in)
       Capacity: 110 lbf (500N)
       Thread: M6

Grip opening may vary depending on Grip Face thickness, see data sheets
**Force Gauge Accessories**

### Chisel Point Adapters

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-FMG-008B</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
<tr>
<td>SPK-FMG-008A</td>
<td>#10-32F</td>
<td>100 lbf</td>
</tr>
</tbody>
</table>

### Point Adapters

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-FMG-009B</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
<tr>
<td>SPK-FMG-009A</td>
<td>#10-32F</td>
<td>100 lbf</td>
</tr>
</tbody>
</table>

### Notch Adapters

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC000725</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
<tr>
<td>SPK-FMG-010A</td>
<td>#10-32F</td>
<td>100 lbf</td>
</tr>
<tr>
<td>NC000721</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
<tr>
<td>SPK-FMG-010B</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
</tbody>
</table>

### Flat Adapters

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-FMG-011B</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
<tr>
<td>SPK-FMG-011A</td>
<td>#10-32F</td>
<td>100 lbf</td>
</tr>
</tbody>
</table>
### Hooks

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-FMG-012A</td>
<td>#10-32F</td>
<td>50 lbf</td>
</tr>
<tr>
<td>SPK-FMG-012B</td>
<td>#10-32F</td>
<td>100 lbf</td>
</tr>
<tr>
<td>SPK-FMG-012C</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
</tbody>
</table>

Thread Coupling included

### Hooks, Swivel

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML3868</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
<tr>
<td>ML3869</td>
<td>5/16-18F</td>
<td>200 lbf</td>
</tr>
<tr>
<td>ML3850</td>
<td>#10-32F</td>
<td>100 lbf</td>
</tr>
<tr>
<td>ML3867</td>
<td>#10-32F</td>
<td>50 lbf</td>
</tr>
</tbody>
</table>

### Hooks, Clasp

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC002500</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
</tbody>
</table>

### Torque accessories

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-DTG-039</td>
<td>1/2 Drive</td>
<td>200 lb-in</td>
</tr>
<tr>
<td>SPK-DTG-038</td>
<td>3/8 Drive</td>
<td>200 lb-in</td>
</tr>
<tr>
<td>SPK-DTG-037</td>
<td>1/4 Drive</td>
<td>200 lb-in</td>
</tr>
<tr>
<td>SPK-DTG-040</td>
<td>Hex Blade</td>
<td>200 lb-in</td>
</tr>
</tbody>
</table>

### Extension rods

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Thread</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-FMG-013A</td>
<td>#10-32F</td>
<td>100 lbf</td>
</tr>
<tr>
<td>SPK-FMG-013B</td>
<td>5/16-18F</td>
<td>500 lbf</td>
</tr>
</tbody>
</table>

### Ergonomic Kit Comparison

<table>
<thead>
<tr>
<th>Description</th>
<th>K-DMG-200/500</th>
<th>MSCK-Travel</th>
<th>DMG-200/500</th>
<th>MSCK</th>
<th>FCEK</th>
</tr>
</thead>
<tbody>
<tr>
<td>DG 200 &amp; 500Lbf Gauge</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Handle Assembly</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Extension Rod</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Clasp</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cable with Eyelets</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small V-Notch (0.625”)</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Large V-Notch (1”)</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Palm Button (Nylontron GS)</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Round Fixture, Disk (Padded)</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rectangle Fixture, Large (Padded)</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rectangular Fixture, Small (Padded)</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Curved Fixture, Rectangular (Padded)</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Coupling 1/2-20F to 5/16-18F with Knurl Nut</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>Knurl Nut</td>
</tr>
<tr>
<td>Carrying Case</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pistol Grip</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Fanny Waist Belt Pack</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
</tbody>
</table>
## Job Task Analysis accessories

<table>
<thead>
<tr>
<th>No.</th>
<th>Thread</th>
<th>Capacity</th>
<th>Description</th>
<th>Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-FMG-142</td>
<td>5/16-18</td>
<td>500 lbf</td>
<td>Compression fixture, Curved Profile</td>
<td>1</td>
</tr>
<tr>
<td>SPK-FMG-143</td>
<td>5/16-18</td>
<td>500 lbf</td>
<td>Compression fixture, Flat Circular</td>
<td>2</td>
</tr>
<tr>
<td>SPK-FMG-144</td>
<td>5/16-18</td>
<td>500 lbf</td>
<td>Palm fixture</td>
<td>3</td>
</tr>
<tr>
<td>SPK-FMG-145</td>
<td>5/16-18</td>
<td>500 lbf</td>
<td>Compression fixture, Large Profile</td>
<td>4</td>
</tr>
<tr>
<td>SPK-FMG-146</td>
<td>5/16-18</td>
<td>500 lbf</td>
<td>Compression fixture, Small Profile</td>
<td>5</td>
</tr>
<tr>
<td>NC002844</td>
<td></td>
<td>500 lbf</td>
<td>Grasping Loop</td>
<td>6</td>
</tr>
</tbody>
</table>

## Handles & Assemblies

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-FMG-Handle</td>
<td>Assembly, for LG series</td>
</tr>
<tr>
<td>SPK-DG-Handle</td>
<td>Assembly, for DG series</td>
</tr>
<tr>
<td>SPK-DF-Handle</td>
<td>Assembly, for DF II series</td>
</tr>
<tr>
<td>SPK-FMG-106</td>
<td>Handle, Alu, 4 in (pair)</td>
</tr>
<tr>
<td>SPK-FMG-107</td>
<td>Handle, Alu, 6 in (pair)</td>
</tr>
<tr>
<td>SPK-FMG-141</td>
<td>Pistol Grip, for DF II series</td>
</tr>
<tr>
<td>NC002825</td>
<td>Vinyl Grip, for SPK-DF-Handle</td>
</tr>
</tbody>
</table>

## Carrying cases

<table>
<thead>
<tr>
<th>Ordering No.</th>
<th>Gauge type</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC002753</td>
<td>LG series</td>
</tr>
<tr>
<td>NC003115</td>
<td>DG series</td>
</tr>
<tr>
<td>SPK-DF-118</td>
<td>DF II series</td>
</tr>
<tr>
<td>SPK-FMG-149</td>
<td>MSCK Travel Kit Case</td>
</tr>
<tr>
<td>NC002845</td>
<td>Fanny Pack, soft case</td>
</tr>
</tbody>
</table>
Thread Coupling Hardware

<table>
<thead>
<tr>
<th>P/N</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3127</td>
<td>#10-32M #10-32M x 3/16”</td>
</tr>
<tr>
<td>2</td>
<td>3157</td>
<td>#10-32M #10-32M x 3/4”</td>
</tr>
<tr>
<td>3</td>
<td>NC002686</td>
<td>5/16-18M 5/16-18M x 1”</td>
</tr>
<tr>
<td>4</td>
<td>P-10020</td>
<td>5/16-18M #10-32F</td>
</tr>
<tr>
<td>5</td>
<td>P-10269</td>
<td>#10-32M 5/16-18F</td>
</tr>
<tr>
<td>6</td>
<td>17039</td>
<td>#10/32M 1/4-28M</td>
</tr>
<tr>
<td>7</td>
<td>NC000686</td>
<td>#10/32M 5/16-18M</td>
</tr>
<tr>
<td>8</td>
<td>NC000296</td>
<td>1/4-28M 5/16-18M</td>
</tr>
<tr>
<td>9</td>
<td>17162</td>
<td>1/2-20M 5/16-18M</td>
</tr>
<tr>
<td>10</td>
<td>17160</td>
<td>#10/32F #10/32F</td>
</tr>
<tr>
<td>11</td>
<td>17057</td>
<td>#10/32F 1/4-20F</td>
</tr>
<tr>
<td>12</td>
<td>17056</td>
<td>1/4-20F 5/16-18F</td>
</tr>
<tr>
<td>13</td>
<td>13048</td>
<td>1/4-28F 5/16-18F</td>
</tr>
<tr>
<td>14</td>
<td>SPK-EYE-1032F</td>
<td>#10/32F 5/8”Eye Fem</td>
</tr>
<tr>
<td>15</td>
<td>ADT/0115</td>
<td>5/16-18F 5/8”Eye Fem</td>
</tr>
<tr>
<td>16</td>
<td>SPK-AGF-1032F</td>
<td>#10/32F 5/8”Eye Fem</td>
</tr>
<tr>
<td>17</td>
<td>SPK-SGF-2520F</td>
<td>1/4-20F 5/8”Eye Fem</td>
</tr>
<tr>
<td>18</td>
<td>SPK-AGF-2528F</td>
<td>1/4-28F 5/8”Eye Fem</td>
</tr>
<tr>
<td>19</td>
<td>NC000612</td>
<td>Grip Pin -</td>
</tr>
</tbody>
</table>
# Gauge Adapters

<table>
<thead>
<tr>
<th>Gauge-Tester Interface Adapters</th>
<th>MT150</th>
<th>MT500</th>
<th>TT</th>
<th>LTCM-100</th>
<th>LTCM-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG series</td>
<td>SPK-MT-0001</td>
<td>SPK-MT-0001</td>
<td>NC002582</td>
<td>Direct</td>
<td>Direct</td>
</tr>
<tr>
<td>DG series</td>
<td>SPK-MT-0005</td>
<td>SPK-MT-0005</td>
<td>SPK-DG-TT</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>DFX II</td>
<td>SPK-MT-0001</td>
<td>SPK-MT-0004</td>
<td>NC002582</td>
<td>Direct</td>
<td>Direct</td>
</tr>
<tr>
<td>DFE II</td>
<td>SPK-MT-0001</td>
<td>SPK-MT-0004</td>
<td>NC002582</td>
<td>Direct</td>
<td>Direct</td>
</tr>
<tr>
<td>DFS II</td>
<td>SPK-MT-0001</td>
<td>SPK-MT-0004</td>
<td>NC002582</td>
<td>Direct</td>
<td>Direct</td>
</tr>
<tr>
<td>DFS II-R</td>
<td>SPK-MT-Remote</td>
<td>SPK-MT-Remote</td>
<td>NC002582</td>
<td>NC000300</td>
<td>NC000300</td>
</tr>
<tr>
<td>DFS II-R-ND</td>
<td>SPK-MT-0001</td>
<td>SPK-MT-0004</td>
<td>NC002582</td>
<td>NC000300</td>
<td>NC000300</td>
</tr>
</tbody>
</table>

NOTE: The table is based on using the lower capacity Gauge with the lower capacity test frame.
Interface Cables

USB Adapter

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input</th>
<th>Output</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-DF-USB</td>
<td>DB 9 pin Male</td>
<td>USB</td>
<td>280mm/11 in</td>
</tr>
<tr>
<td>SPK-FMG-USB</td>
<td>Micro USB</td>
<td>USB</td>
<td>1.8m/6 ft</td>
</tr>
</tbody>
</table>

Universal DF II Gauge Cable

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input</th>
<th>Output</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPK-DF-UNIV</td>
<td>Hirose (12 pin round)</td>
<td>Un-terminated</td>
<td>2m/6 ft</td>
</tr>
</tbody>
</table>

Mitutoyo Cable

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input</th>
<th>Output</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC000654</td>
<td>DB 9 Pin Female</td>
<td>Mitutoyo 10 DIP</td>
<td>1.5 m/5 ft</td>
</tr>
<tr>
<td>ENCO157</td>
<td>Hirose (12 pin round)</td>
<td>Mitutoyo 10 DIP</td>
<td>2 m/6 ft</td>
</tr>
</tbody>
</table>

Tester Cable

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input</th>
<th>Output</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENCO125</td>
<td>Hirose (12 pin round)</td>
<td>DB 9 Pin Female</td>
<td>3 m/9 ft</td>
</tr>
<tr>
<td>NC000647</td>
<td>Hirose (12 pin round)</td>
<td>DB 9 Pin Female</td>
<td>2 m/6 ft</td>
</tr>
</tbody>
</table>

Personal Computer Cable

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input</th>
<th>Output</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC000850-1</td>
<td>Hirose (12 pin round)</td>
<td>DB 9 Pin Female</td>
<td>3 m/9 ft</td>
</tr>
<tr>
<td>NC000850-2</td>
<td>Hirose (12 pin round)</td>
<td>DB 9 Pin Female</td>
<td>7 m/20 ft</td>
</tr>
<tr>
<td>NC000875</td>
<td>DB 9 Pin Female</td>
<td>DB 9 Pin Female</td>
<td>3 m/9 ft</td>
</tr>
</tbody>
</table>
## Included in Packaging

### CS SERIES
- Calibration Certificate
- Tester Mounting Hardware
- Manual

### MT SERIES
- Stationary Hook
- Compression Platen
- Set Screw, 5/16-18 x 1 in
- Set Screw, #10-32 x 3/4 in
- Thread Adapter
- Coupler
- 5/8” Eye Adapter Male
- Hex Key
- Manual

### TT SERIES
- DF II Series Gauge Adapter Plate
- Foot Pedal (Model ML3353 only)
- Manual

### DFS II SERIES*
- Flat Adapter
- Hook
- Chisel Point
- Point Adapter
- Notch Adapter
- Extension Rod
- USB Cable
- Universal Battery Charger
- TCD Wedge Software
- Carrying Case
- Calibration Certificate
- Manual

### LTCM SERIES*
- Stationary Hook
- Compression Platen
- Hex Key, 5/32 in
- Hex Key, 5 mm Only LTCM-500
- Power Cable
- Set Screw, #10-32 x 3/4 in
- Manual

### DFX II SERIES*
- Flat Adapter
- Hook
- Universal Battery Charger
- Carrying Case
- Calibration Certificate
- Manual

### DFE II SERIES*
- Flat Adapter
- Hook
- Chisel Point
- Point Adapter
- Notch Adapter
- Extension Rod
- USB Cable
- Universal Battery Charger
- Carrying Case
- Calibration Certificate
- Manual

### LG SERIES*
- Stationary Hook
- Chisel Point
- Point Adapter
- Notch Adapter
- Flat Adapter
- Extension Rod
- Carrying Case
- Calibration Certificate
- Manual

### DG SERIES*
- Stationary Hook
- Chisel Point
- Point Adapter
- Notch Adapter
- Flat Adapter
- Extension Rod
- Carrying Case
- Calibration Certificate
- Manual

*) Adapter size depends on capacity of Gauge.

Items can change without notice
1 to 2.5 KN (200 to 500 Lbf), Connection Diagram

**DFS II**
- 200 & 500 Lbf
- 5/16-24 Female
- 5/16-18 Male *

**DFE II**
- 200 & 500 Lbf
- 5/16-24 Female
- 5/16-18 Male *

**DFX II**
- 200 & 500 Lbf
- 5/16-18 Female
- 5/16-18 Male

**DG**
- 200, 300, 400 & 500 Lbf
- 5/16-18 Male

---

**UPPER GRIP & FIXTURE CONNECTION**

- 5/16-18 Female Coupler *
- to 1/4-28 Female
- SPK-FMG-012C

- 5/16-18 Female Swivel Hook
- ML3868

- 5/16-18 Female Snap Hook
- NC002500

- 5/16-18 Female Flat Adapter *
- SPK-FMG-011B

- 5/16-18 Female Chisel Point */**
- SPK-FMG-008B

- 5/16-18 Female Extension Rod */**
- to 5/16-18 Male
- SPK-FMG-013B

- 5/16-18 Female Flat Adapter *
- SPK-FMG-011B

- 5/16-18 Female Chisel Point */**
- SPK-FMG-008B

- 5/16-18 Female Point Adapter */**
- SPK-FMG-009B

- 5/16-18 Female Notch Adapter */**
- SPK-FMG-010B

- 5/16-18 Female Knurl Nut
- NC 000857

- 5/16-18 Female Knurl Nut
- NC 000857

---

**LOWER GRIP & FIXTURE CONNECTION**

- 5/16-18 Female Knurl Nut
- NC002686

- 1/2-20 Female to 5/16-18 Female Coupler
- NC000635

- 5/8" Male Eye Adapter to 1/4-28 Male Thread
- with Pin & Locking Rings
- SPK-TLC-003

- 5/8" Male Eye Adapter to 1/4-28 Male Thread
- with Pin & Locking Rings
- SPK-TLC-003

- 5/8" Male Eye Adapter for LTCM500
- NC002686

---

**CAUTION:** Adapter can not weight more than 10% of Full Scale of force gauge.
Connection Diagram, 2 to 500 N (0.5 to 100 Lbf)

DFS II
0.5, 2, 10, 25, 50 & 100 Lbf
5/16-24 Female

DFE II
2, 10, 25, 50 & 100 Lbf
5/16-24 Female

DFX II
1, 50 & 100 Lbf

LG
2.5, 10, 20, 30, 50, 75 & 100 lbf

Connection Diagram:

UPPER GRIP & FIXTURE CONNECTION

DFS II
- 0.5 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Female Flat Adapter *
- #10-32 Female Swivel Hook
- #10-32 Female Chisel Point **
- #10-32 Female Flat Adapter *
- #10-32 Female Point Adapter **
- #10-32 Female Notch Adapter **

DFE II
- 2 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Female Flat Adapter *
- #10-32 Female Swivel Hook ML3867 (50 lbf)
- #10-32 Female Swivel Hook ML3860 (100 lbf)
- #10-32 Female Swivel Hook ML3850 (100 lbf)

DFX II
- 1 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Male Stationary Hook *
- #10-32 Female Swivel Hook
- #10-32 Female Flat Adapter *
- #10-32 Female Chisel Point */**
- #10-32 Female Flat Adapter *
- #10-32 Female Point Adapter */**
- #10-32 Female Notch Adapter */**

LG
- 2.5 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Male Stationary Hook *
- #10-32 Female Swivel Hook ML3867 (50 lbf)
- #10-32 Female Swivel Hook ML3860 (100 lbf)
- #10-32 Female Swivel Hook ML3850 (100 lbf)

LOWER GRIP & FIXTURE CONNECTION

DFS II
- 0.5 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Female Flat Adapter *
- #10-32 Female Swivel Hook ML3867 (50 lbf)
- #10-32 Female Swivel Hook ML3860 (100 lbf)
- #10-32 Female Chisel Point **

DFE II
- 2 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Male Stationary Hook *
- #10-32 Female Swivel Hook ML3867 (50 lbf)
- #10-32 Female Swivel Hook ML3860 (100 lbf)
- #10-32 Female Chisel Point */**

DFX II
- 1 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Male Stationary Hook *
- #10-32 Female Swivel Hook ML3867 (50 lbf)
- #10-32 Female Swivel Hook ML3860 (100 lbf)
- #10-32 Female Chisel Point */**

LG
- 2.5 to 100 Lbf
- 5/16-24 Female
- #10-32 Male *
- #10-32 Female Coupler *
- #10-32 Male Stationary Hook *
- #10-32 Female Swivel Hook ML3867 (50 lbf)
- #10-32 Female Swivel Hook ML3860 (100 lbf)
- #10-32 Female Chisel Point */**

CAUTION:
Adapter can not weight more than 10% of Full Scale of force gauge
ABOUT AMETEK

AMETEK Sensors, Test & Calibration
A business unit of AMETEK Measurement & Calibration Technologies offering the following industry leading brands for test and calibration instrumentation.

LLOYD Material Testing
Material Testing Solutions
Material testing machines and software from Lloyd guarantee the highest level of performance and capability for production testing, quality control, laboratory testing, research and education to provide expert materials testing solutions.

Davenport Polymer Test Equipment
Allows critical polymer parameters to be determined, including melt flow index and melt flow rate, intrinsic viscosity (IV) measurement of moisture-sensitive PET polymers and polymer density measurement.

Chatillon Force Measurement
Chatillon has been a hallmark in the industry since 1835. The handheld gauges and motorized testers have earned their reputation for quality, reliability and accuracy and they represent the de facto standard for force measurement.

Newage Hardness Testing
Newage offers a comprehensive range of hardness testers, durometers, optical systems and software for measurement, data acquisition and analysis.

JOFRA Calibration
The inventor of the portable high precision dry-block temperature calibrators. The calibration instruments program also covers precision thermometers and temperature baths, temperature sensors, handheld instruments for pressure calibration and process signal calibrators for easy control loop calibration, measurements and simulation.

Crystal Pressure
Digital pressure gauges and calibrators that are accurate, easy-to-use and reliable. Designed for use in the harshest environments; most products carry an IS, IP67 and DNV rating.

M&G Calibration
Pneumatic floating-ball or hydraulic piston dead weight testers with accuracies to 0.015% of reading.

France
Tel +33 (0) 30 68 89 40
Mail general.lloyd-instruments@ametek.fr

Germany
Tel +49 (0) 2159 9136 510
Mail info.mct-de@ametek.de

India
Tel +91 22 2836 4750
Mail ametekdk@ametek.com

Singapore
Tel +65 6844 2388
Mail ametekdk@ametek.com

United Kingdom
Tel +44 (0) 1243 833 370
Mail caluk.sales@ametek.com

USA
Florida
Tel +1 (727) 536 7831
Mail chatillon.fl-lar@ametek.com

California
Tel +1 (800) 444 1850
Mail crystal@ametek.com

China
Beijing
Tel +86 10 8526 2111
Mail lloyd@ametek.com.cn

Shanghai
Tel +86 21 5868 5111
Mail lloyd@ametek.com.cn