

Digital Force & Torque Gauges



Tension and Compression Test Solutions









Advanced Force Gauge

See pages 5 - 8 for 'Smart' Force & Torque Sensors

The Advanced Force Gauge (AFG) is the most versatile and fully-featured digital force gauge on the market. It can be used hand-held or fixed to a manual or motorised test stand and for added flexibility the AFG is able to recognise data from a range of external 'Smart' force and torque sensors, so you can use it as a universal display for remote applications (see pages 5 to 8).

Mecmesin

AFG 500N ADVANCED FORCE GAUGE

KEY FEATURES:

- 10 capacities from 2.5N to 2500N
- Peak capture Ultimate max + 1st peak
- Data output RS232, digimatic and analogue
- Pass/Fail Alarms audible and visual
- Overload warning with trend bar
- Wide range of grips and fixtures

Audible & visual pass/fail alarms set a threshold for immediate alert when limits are exceeded

RS232, Mitutoyo,
Analogue data output for
easy data transmission.
A calibrated analogue
output can be supplied
as an option.



RS232 to Bluetooth adaptor (optional extra)

Recognises data from a range of external force & torque transducers e.g. S-Beam, Load Button Cell and Static Torque Wrench.

View the 1st peak and ultimate peak readings On-board memory stores up to 500 readings

Accurate to ±0.1% full-scale

Internal loadcell stud for quick and easy change of accessories and fixtures Loadcell stud 10-32 UNF male (5/16 UNC male for AFG 1000N & 2500N) Measurements made in N, kN, mN, lbf, ozf, kgf and gf with a sampling rate of 5000Hz

Reversible display View readings even when the gauge is positioned away from you

> Rugged metal housing ideal for factory or outdoor use



AFG Specification Table

| Model | Part No. | mN | N | kN | gf | kgf | ozf | lbf |
|----------|----------|-------------|--------------|--------------|-------------|--------------|-------------|---------------|
| AFG 2.5 | 850- 412 | 2,500 x 0.5 | 2.5 x 0.0005 | - | 250 x 0.05 | - | 9 x 0.002 | 0.55 x 0.0001 |
| AFG 5 | 850- 413 | 5,000 x 1 | 5 x 0.001 | - | 500 x 0.1 | 0.5 x 0.0001 | 18 x 0.005 | 1.1 x 0.0002 |
| AFG 10 | 850- 414 | 10,000 x 2 | 10 x 0.002 | - | 1,000 x 0.2 | 1 x 0.0002 | 35 x 0.01 | 2.2 x 0.0005 |
| AFG 25 | 850- 415 | 25,000 x 5 | 25 x 0.005 | - | 2,500 x 0.5 | 2.5 x 0.0005 | 90 x 0.02 | 5.5 x 0.001 |
| AFG 50 | 850- 416 | 50,000 x 10 | 50 x 0.01 | - | 5,000 x 1 | 5 x 0.001 | 180 x 0.05 | 11 x 0.002 |
| AFG 100 | 850- 417 | - | 100 x 0.02 | - | 10,000 x 2 | 10 x 0.002 | 350 x 0.1 | 22 x 0.005 |
| AFG 250 | 850- 418 | - | 250 x 0.05 | - | 25,000 x 5 | 25 x 0.005 | 900 x 0.2 | 55 x 0.01 |
| AFG 500 | 850- 419 | - | 500 x 0.1 | - | 50,000 x 10 | 50 x 0.01 | 1,800 x 0.5 | 110 x 0.02 |
| AFG 1000 | 850- 420 | - | 1,000 x 0.2 | 1 x 0.0002 | - | 100 x 0.02 | 3,500 x 1 | 220 x 0.05 |
| AFG 2500 | 850- 421 | - | 2,500 x 0.5 | 2.5 x 0.0005 | - | 250 x 0.05 | 9,000 x 2 | 550 x 0.1 |

• Accuracy ±0.1% of full scale

• Full scale deflection of loadcell typically 0.5mm



The dual level design of the keypad ensures that operation of this powerful gauge is kept simple, thereby making it ideal for use from production shop floor to R&D.

Housed in an ergonomically shaped, rugged aluminium case, the AFG is powered by either mains-adaptor or standard rechargeable AAA batteries.

All models carry CE marking and are supplied in a robust carrying case with standard accessories and a calibration certificate traceable to UK national standards.

See page 12 for details of accessories supplied.

versatile rugged accurate



Pull test on anchorage points



Compression test on medical device



AFG and accessories

The Advanced Force & Torque Indicator

See pages 5 - 8 for 'Smart' Force & Torque Sensors

The Advanced Force & Torque Indicator (AFTI) is a high-specification display unit with similar features and benefits of the AFG, for use with Mecmesin 'Smart' force and torque sensors. These plug into the AFTI enabling it to automatically register either force or torque readings for a variety of test applications. 'Smart' sensors may also be used with Mecmesin's Advanced Force Gauge (AFG).



'Smart' Force & Torque Sensors

All sensors are fitted with 1.5m cable length, are fully interchangeable and are supplied with Calibration Certificates traceable to UK National Standards. As standard they are delivered in cardboard transit cases

Key Features:

- Sensors for torque, tension & compression
- Calibration Certificates traceable to UK National Standards
- Resolution 1:5000
- Overload protection feature
- 1.5m cable length as standard

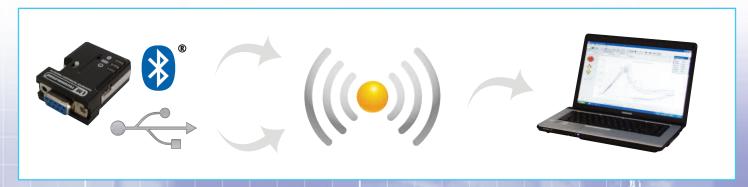


All dimensions quoted for the force & torque sensors are for reference only. Please contact the Mecmesin Sales Department for tolerance information if your application is dimensionally critical.

Overload protection by software warning is typically 120% of full scale for all items (without accessories), with additional mechanical overload protection being up to a minimum of 150% of full scale.

All gauges and sensors are calibrated under controlled laboratory conditions at a temperature of 20C ±2C. Resolution for all sensors is typically 1.5000 - e.g. a 5000N loadcell resolves to 1N.

Bluetooth/USB Adaptor



- Cableless CommunicationRange in excess of 30 metres
- Easy-to-use, just 'Plug & Play'
- Maximum flexibility for data transfer
- Connects to AFG & AFTI

Tension & Compression Sensors

For use with AFTI display or Advanced Force Gauge (AFG)

Junior S-Beam - 'Smart'



The Junior S-Beam is suitable for measuring tension and compression. Ideal for applications where available space is limited. Dedicated fixtures can be fitted via threaded holes.

Thread ≥

For use with AFTI display or Advanced Force Gauge (AFG)

| Model | Part No. | L mm | W mm | H mm | Thread |
|-------------------|-----------|------|------|------|----------|
| 1N/100gf/3.5ozf | 870 - 101 | 17 | 7 | 19 | M3 x 0.5 |
| 2.5N/250gf/9ozf | 870 - 102 | 17 | 7 | 19 | M3 x 0.5 |
| 5N/500gf/18ozf | 870 - 103 | 17 | 7 | 19 | M3 x 0.5 |
| 10N/1kgf/2.2lbf | 870 - 104 | 17 | 7 | 19 | M3 x 0.5 |
| 25N/2.5kgf/5.5lbf | 870 - 105 | 17 | 7 | 19 | M3 x 0.5 |
| 50N/5kgf/11lbf | 870 - 106 | 17 | 7 | 19 | M3 x 0.5 |
| 100N/10kgf/22lbf | 870 - 107 | 17 | 7 | 19 | M3 x 0.5 |
| 250N/25kgf/55lbf | 870 - 108 | 17 | 7 | 19 | M3 x 0.5 |
| 500N/50kgf/110lbf | 870 - 109 | 17 | 7 | 19 | M3 x 0.5 |

Accuracy ±0.25% of full scale



S-Beam - 'Smart'

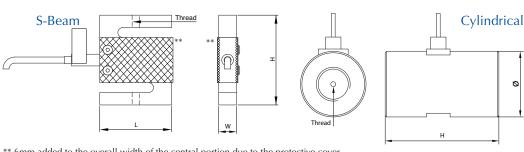
The S-Beam provides an economical solution to general force measurement applications where space is not restricted. Dedicated fixtures can be fitted via threaded holes.

For use with AFTI display or Advanced Force Gauge (AFG)

| Model | Part No. | L mm | W mm** | H mm | Thread |
|----------------------|-----------|------|--------|------|------------|
| 100N/10kgf/22lbf | 870 - 002 | 51 | 13 | 64 | M6 x 1 |
| 200N/20kgf/44lbf | 870 - 004 | 51 | 13 | 64 | M6 x 1 |
| 500N/50kgf/110lbf | 870 - 009 | 51 | 19 | 76 | M6 x 1 |
| 1000N/100kgf/220lbf | 870 - 001 | 51 | 19 | 76 | M10 x 1.5 |
| 2500N/250kgf/550lbf | 870 - 006 | 51 | 25 | 76 | M12 x 1.75 |
| 5000N/500kgf/1100lbf | 870 - 008 | 51 | 25 | 76 | M12 x 1.75 |
| 10kN/1000kgf/2200lbf | 870 - 003 | 51 | 25 | 76 | M12 x 1.75 |
| 25kN/2500kgf/5500lbf | 870 - 007 | 76 | 25 | 108 | M16 x 2 |

| Cylindrical | Part No. | Ø mm | H mm | Thread |
|---------------------------|-----------|------|------|---------|
| * 50kN/5000kgf/11000lbf | 870 - 011 | 70 | 120 | M36 x 3 |
| * 100kN/10000kgf/22000lbf | 870 - 010 | 70 | 120 | M36 x 3 |

Accuracy ±0.25% of full scale * Uni-directional calibration (please specify tension or compression)



^{** 6}mm added to the overall width of the central portion due to the protective cover

For use with AFTI display or Advanced Force Gauge (AFG)



Load Button Cell - 'Smart'

The Load Button Cell is a miniature sensor for compression measurement only, where available space is very limited. For optimum results apply compressive load to the top of the sensor's central dome.

For use with AFTI display or Advanced Force Gauge (AFG)

Miniature Series

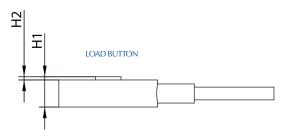
| Model | Part No. | Capacity | ØD1mm | ØD2mm | ØD3mm | H1mm | H2mm | T |
|--------|-----------|-----------------------|-------|-------|-------|------|------|---------|
| L16010 | 878 - 008 | 100N/10kgf/22lbf | 25 | 5 | 19 | 8 | 1 | 4/40UNC |
| | 878 - 009 | 250N/25kgf/55lbf | 25 | 5 | 19 | 8 | 1 | 4/40UNC |
| | 878 - 010 | 500N/50kgf/110lbf | 25 | 5 | 19 | 8 | 1 | 4/40UNC |
| L16020 | 878 - 011 | 1000N/100kgf/220lbf | 31 | 8 | 25 | 10 | 1 | 6/32UNC |
| | 878 - 012 | 2500N/250kgf/550lbf | 31 | 8 | 25 | 10 | 1 | 6/32UNC |
| | 878 - 013 | 5000N/500kgf/1100lbf | 31 | 8 | 25 | 10 | 1 | 6/32UNC |
| L16030 | 878 - 014 | 10kN/1000kgf/2200lbf | 38 | 11 | 32 | 16 | 2 | 6/32UNC |
| | 878 - 015 | 20kN/2000kgf/5500lbf | 38 | 11 | 32 | 16 | 2 | 6/32UNC |
| | 878 - 016 | 50kN/5000kgf/11000lbf | 38 | 11 | 32 | 16 | 2 | 6/32UNC |

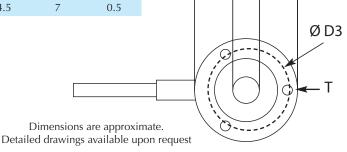
Accuracy ±1% of full scale

Sub-miniature Series

| Model | Part No. | Capacity | ØD1mm | ØD2mm | H1mm | H2mm |
|-------|-----------|----------------------|-------|-------|------|------|
| L1630 | 878 - 001 | 50N/5kgf/11lbf | 19 | 4.5 | 7 | 0.5 |
| | 878 - 002 | 100N/10kgf/22lbf | 19 | 4.5 | 7 | 0.5 |
| | 878 - 003 | 250N/25kgf/55lbf | 19 | 4.5 | 7 | 0.5 |
| | 878 - 004 | 500N/50kgf/110lbf | 19 | 4.5 | 7 | 0.5 |
| | 878 - 005 | 1000N/100kgf/220lbf | 19 | 4.5 | 7 | 0.5 |
| | 878 - 006 | 5000N/500kgf/1100lbf | 19 | 4.5 | 7 | 0.5 |
| | | | | | | |

Accuracy ±1% of full scale





Specialised Loadcells

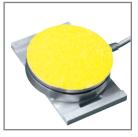
In addition to the standard range of sensors, Mecmesin also offers specialised loadcells dedicated to specific applications. A few examples are shown below. Contact our sales department for further details.



Pinch Sensor



Donut Loadcell



Pedal Force Accelerator



Hand Gripper

Ø D1 Ø D2

Static & Rotary Torque Sensors

For use with AFTI display or Advanced Force Gauge (AFG)

Static Torque Transducer - 'Smart'

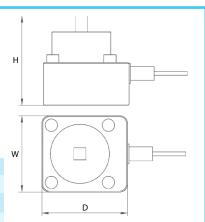


For mounting to a bench or integrating into a complete test rig. Equipped with male square drive for easy fitting of adaptors.

For use with AFTI display or Advanced Force Gauge (AFG)

| Model | Part No. | Capacity | Sq Drive Male | H mm | W mm | D mm |
|-------|-----------|------------------------------|---------------|------|------|------|
| ST15 | 872 - 006 | 15N.m/150kgf.cm/130lbf.in | 3/8" | 87 | 80 | 90 |
| ST60 | 872 - 008 | 60N.m/600kgf.cm/520lbf.in | 3/8" | 87 | 80 | 90 |
| ST100 | 872 - 003 | 100N.m/1000kgf.cm/870lbf.in | 1/2" | 93 | 80 | 90 |
| ST150 | 872 - 005 | 150N.m/1500kgf.cm/1300lbf.in | 1/2" | 93 | 80 | 90 |

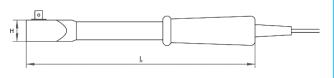
Accuracy ±0.5% of full scale



Static Torque Wrench - 'Smart'



For medium capacity applications where it is more practical to apply torque by a lever arm. Equipped with male square drive for easy fitting of adaptors.



For use with AFTI display or Advanced Force Gauge (AFG)

| Model | Part No. | Capacity | Sq Drive Male | L mm | H mm | Weight |
|-------|-----------|------------------------------|---------------|------|------|--------|
| TW15 | 873 - 003 | 15N.m/150kgf.cm/130lbf.in | 3/8" | 280 | 25 | 800g |
| TW60 | 873 - 005 | 60N.m/600kgf.cm/520lbf.in | 3/8" | 355 | 25 | 950g |
| TW150 | 873 - 006 | 150N.m/1500kgf.cm/1300lbf.in | 1/2" | 508 | 25 | 1200g |

Accuracy $\pm 0.5\%$ of full scale

Static Socket Extension - 'Smart'

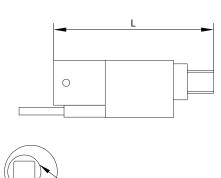


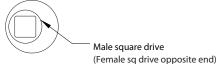
For low capacity applications, where space is limited. Fitted with male/female square drives for easy fitting of drivers.

For use with AFTI display or Advanced Force Gauge (AFG)

| Model | Part No. | Capacity | Sq Drive | L mm |
|-------|-----------|--------------------------|----------|------|
| SE3 | 871 - 201 | 3N.m/30kgf.cm/26lbf.in | 1/4" | 50.8 |
| SE6 | 871 - 202 | 6N.m/60kgf.cm/50lbf.in | 1/4" | 50.8 |
| SE10 | 871 - 203 | 10N.m/100kgf.cm/90lbf.in | 1/4" | 50.8 |

Accuracy ±0.5% of full scale



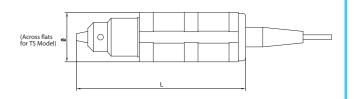


For use with AFTI display or Advanced Force Gauge (AFG)

Static Torque Screwdriver - 'Smart'



For low capacity applications. Used as hand-held devices or mounted in a bench stand. Not suitable for applications, which require multiple rotations of the sensor - use rotary torque transducers below.



For use with AFTI display or Advanced Force Gauge (AFG)

| Model | Part No. | Capacity | Drive | L mm | Ø mm | Weight |
|-------|-----------|--------------------------|--------------------------|------|------|--------|
| TS0.3 | 871 - 004 | 0.3N.m/3kgf.cm/2.6lbf.in | 3/8" sq male/3 jaw chuck | 143 | 43 | 660g |
| TS1.5 | 871 - 002 | 1.5N.m/15kgf.cm/13lbf.in | 3/8" sq male/3 jaw chuck | 143 | 43 | 660g |
| TS3 | 871 - 003 | 3N.m/30kgf.cm/26lbf.in | 3/8" sq male/3 jaw chuck | 143 | 43 | 660g |
| TS6 | 871 - 005 | 6N.m/60kgf.cm/53lbf.in | 3/8" sq male/3 jaw chuck | 143 | 43 | 660g |
| TS10 | 871 - 001 | 10N.m/100kgf.cm/90lbf.in | 3/8" sq male/3 jaw chuck | 143 | 43 | 660g |

Accuracy $\pm 0.5\%$ of full scale



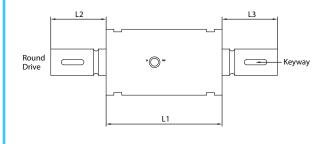
Rotary Torque Transducers - 'Smart'

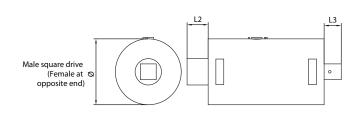
A complete range of sensors for measuring rotary torque. Suitable for dynamic torque applications with multiple revolutions (e.g. window-winder torque tools).

For use with AFTI display or Advanced Force Gauge (AFG)

| Part No. | Capacity | Drive | L1 mm | L2 mm | L3 mm | Ø mm | Max rpm |
|-----------|---|--|--|---|--|---|--|
| 877 - 020 | 2N.m/20kgf.cm/18lbf.in | 1/4" square | 70 | 16 | 10 | 40 | 1000 |
| 877 - 021 | 2N.m/20kgf.cm/18lbf.in | Ø 9mm round* | 70 | 28 | 28 | 40 | 5000 |
| 877 - 022 | 6N.m/60kgf.cm/53lbf.in | 1/4" square | 70 | 16 | 10 | 40 | 1000 |
| 877 - 023 | 6N.m/60kgf.cm/53lbf.in | Ø 9mm round* | 70 | 28 | 28 | 40 | 5000 |
| 877 - 024 | 15N.m/150kgf.cm/133lbf.in | 1/4" square | 70 | 16 | 10 | 40 | 1000 |
| 877 - 025 | 15N.m/150kgf.cm/133lbf.in | Ø 9mm round* | 70 | 28 | 28 | 40 | 5000 |
| 877 - 026 | 60N.m/600kgf.cm/530lbf.in | 3/8" square* | 70 | 24 | 13 | 50 | 1000 |
| 877 - 027 | 60N.m/600kgf.cm/530lbf.in | Ø 14mm round* | 70 | 28 | 28 | 50 | 5000 |
| 877 - 028 | 150N.m/15.3kgf.m/111lbf.ft | 1/2" square | 70 | 35 | 19 | 50 | 1000 |
| 877 - 029 | 150N.m/15.3kgf.m/111lbf.ft | Ø 19mm round* | 70 | 55 | 55 | 50 | 5000 |
| | 877 - 020 877 - 021 877 - 022 877 - 023 877 - 024 877 - 025 877 - 026 877 - 027 877 - 028 | 877 - 020 2N.m/20kgf.cm/18lbf.in 877 - 021 2N.m/20kgf.cm/18lbf.in 877 - 022 6N.m/60kgf.cm/53lbf.in 877 - 023 6N.m/60kgf.cm/53lbf.in 877 - 024 15N.m/150kgf.cm/133lbf.in 877 - 025 15N.m/150kgf.cm/133lbf.in 877 - 026 60N.m/600kgf.cm/530lbf.in 877 - 027 60N.m/600kgf.cm/530lbf.in 877 - 028 150N.m/15.3kgf.m/111lbf.ft | 877 - 020 2N.m/20kgf.cm/18lbf.in 1/4" square 877 - 021 2N.m/20kgf.cm/18lbf.in Ø 9mm round* 877 - 022 6N.m/60kgf.cm/53lbf.in 1/4" square 877 - 023 6N.m/60kgf.cm/53lbf.in Ø 9mm round* 877 - 024 15N.m/150kgf.cm/133lbf.in 1/4" square 877 - 025 15N.m/150kgf.cm/133lbf.in Ø 9mm round* 877 - 026 60N.m/600kgf.cm/530lbf.in 3/8" square* 877 - 027 60N.m/600kgf.cm/530lbf.in Ø 14mm round* 877 - 028 150N.m/15.3kgf.m/111lbf.ft 1/2" square | 877 - 020 2N.m/20kgf.cm/18lbf.in 1/4" square 70 877 - 021 2N.m/20kgf.cm/18lbf.in Ø 9mm round* 70 877 - 022 6N.m/60kgf.cm/53lbf.in 1/4" square 70 877 - 023 6N.m/60kgf.cm/53lbf.in Ø 9mm round* 70 877 - 024 15N.m/150kgf.cm/133lbf.in 1/4" square 70 877 - 025 15N.m/150kgf.cm/133lbf.in Ø 9mm round* 70 877 - 026 60N.m/600kgf.cm/530lbf.in 3/8" square* 70 877 - 027 60N.m/600kgf.cm/530lbf.in Ø 14mm round* 70 877 - 028 150N.m/15.3kgf.m/111lbf.ft 1/2" square 70 | 877 - 020 2N.m/20kgf.cm/18lbf.in 1/4" square 70 16 877 - 021 2N.m/20kgf.cm/18lbf.in Ø 9mm round* 70 28 877 - 022 6N.m/60kgf.cm/53lbf.in 1/4" square 70 16 877 - 023 6N.m/60kgf.cm/53lbf.in Ø 9mm round* 70 28 877 - 024 15N.m/150kgf.cm/133lbf.in 1/4" square 70 16 877 - 025 15N.m/150kgf.cm/133lbf.in Ø 9mm round* 70 28 877 - 026 60N.m/600kgf.cm/530lbf.in 3/8" square* 70 24 877 - 027 60N.m/600kgf.cm/530lbf.in Ø 14mm round* 70 28 877 - 028 150N.m/15.3kgf.m/111lbf.ft 1/2" square 70 35 | 877 - 020 2N.m/20kgf.cm/18lbf.in 1/4" square 70 16 10 877 - 021 2N.m/20kgf.cm/18lbf.in Ø 9mm round* 70 28 28 877 - 022 6N.m/60kgf.cm/53lbf.in 1/4" square 70 16 10 877 - 023 6N.m/60kgf.cm/53lbf.in Ø 9mm round* 70 28 28 877 - 024 15N.m/150kgf.cm/133lbf.in 1/4" square 70 16 10 877 - 025 15N.m/150kgf.cm/133lbf.in Ø 9mm round* 70 28 28 877 - 026 60N.m/600kgf.cm/530lbf.in Ø 9mm round* 70 24 13 877 - 027 60N.m/600kgf.cm/530lbf.in Ø 14mm round* 70 28 28 877 - 028 150N.m/15.3kgf.m/111lbf.ft 1/2" square 70 35 19 | 877 - 020 2N.m/20kgf.cm/18lbf.in 1/4" square 70 16 10 40 877 - 021 2N.m/20kgf.cm/18lbf.in Ø 9mm round* 70 28 28 40 877 - 022 6N.m/60kgf.cm/53lbf.in 1/4" square 70 16 10 40 877 - 023 6N.m/60kgf.cm/53lbf.in Ø 9mm round* 70 28 28 40 877 - 024 15N.m/150kgf.cm/133lbf.in 1/4" square 70 16 10 40 877 - 025 15N.m/150kgf.cm/133lbf.in Ø 9mm round* 70 28 28 40 877 - 026 60N.m/600kgf.cm/530lbf.in Ø 9mm round* 70 28 28 40 877 - 027 60N.m/600kgf.cm/530lbf.in Ø 14mm round* 70 28 28 50 877 - 028 150N.m/15.3kgf.m/111lbf.ft 1/2" square 70 35 19 50 |

Maximum axial force is 40N Maximum lateral radial force is 50N Accuracy ±1% of full scale * fitted with keyway





Basic Force Gauge

The Basic Force Gauge (BFG) is designed for easy operation and provides outstanding tension and compression measurement performance and reliability at an affordable price.

Constructed in a rigid yet lightweight aluminium housing, with its ergonomically attractive shape, the BFG can be used as a hand-held instrument, or alternatively it can be mounted to manual or motorised test stands to allow testing under more controlled conditions.

RS232, Mitutoyo, Analogue data output for easy data transmission 'Live' display mode for applications requiring loads to be continuously monitored Mecmesin Measurements made in N, kN, mN, lbf, ozf, kgf and gf with a sampling rate of 1000Hz Accurate to ±0.25% (AM) full-scale Captures peak readings in tension or compression RESET Rugged metal housing ideal for factory or BFG 50N Internal loadcell stud for quick and easy change of accessories and fixtures Loadcell stud 10-32 UNF male (5/16 UNC male BFG

outdoor use

1000N & 2500N)

BFG Specification Table

| Model | Part No | mN | N | kN | gf | kgf | ozf | lbf |
|----------|-----------|-------------|-------------|--------------|-------------|------------|-------------|--------------|
| BFG 10 | 853 - 410 | 10,000 x 2 | 10 x 0.002 | - | 1,000 x 0.2 | 1 x 0.0002 | 35 x 0.01 | 2.2 x 0.0005 |
| BFG 50 | 853 - 411 | 50,000 x 10 | 50 x 0.01 | - | 5,000 x 1 | 5 x 0.001 | 180 x 0.05 | 11 x 0.002 |
| BFG 200 | 853 - 412 | - | 200 x 0.05 | - | 20,000 x 5 | 20 x 0.005 | 720 x 0.2 | 44 x 0.01 |
| BFG 500 | 853 - 413 | - | 500 x 0.1 | - | 50,000 x 10 | 50 x 0.01 | 1,800 x 0.5 | 110 x 0.02 |
| BFG 1000 | 853 - 414 | - | 1,000 x 0.2 | 1 x 0.0002 | - | 100 x 0.02 | 3,500 x 1 | 220 x 0.05 |
| BFG 2500 | 853 - 417 | - | 2,500 x 0.5 | 2.5 x 0.0005 | - | 250 x 0.05 | 9,000 x 2 | 550 x 0.1 |

- Accuracy ±0.25% of full scale
- Calibration temperature 20C ±2C
- Operating temperature 10C 35C

easy-to-use robust ergonomic

KEY FEATURES:

- 6 capacities from ION up to 2500N
- Full unit conversion of displayed value
- Powered by 4 nickel metal hydride rechargeable batteries
- M5 mounting holes (57mm pitch) for test stand fixing
- Wide range of grips and fixtures



All models carry CE marking and are supplied in a robust carrying case with standard accessories and a calibration certificate traceable to UK national standards.



Top-load test



BFG with accessories

Compact Force Gauge+

The Compact Force Gauge+(CFG+) is a pocket-sized, lightweight force gauge designed for elementary tension and compression measurement. Powered by disposable AA batteries, the CFG+ is delivered with a Declaration of Conformity as standard. A Calibration Certificate is available upon request.



CFG+ Specification Table

| Model No. | Part No. | N | kgf | lbf |
|-----------|-----------|-----------|-----------|-----------|
| CFG+ 50 | 860 - 021 | 50 x 0.05 | 5 x 0.005 | 11 x 0.01 |
| CFG+ 200 | 860 - 022 | 200 x 0.2 | 20 x 0.02 | 44 x 0.05 |
| CFG+ 500 | 860 - 023 | 500 x 0.5 | 50 x 0.05 | 110 x 0.1 |

• Accuracy ±0.5% of full scale

Note: The following units are available on the majority of CFG+ models. Those that differ are marked by an asterisk with details given below:

kN*, N, mN, kgf, gf**, lbf, ozf

- * Not available on the CFG+ 50N
- **Not available on the CFG+ 200N or 500N



Drawer Testing



Accessories

Each Mecmesin gauge comes with a set of standard accessories to help perform basic tension or compression tests.

A wide selection of accessories exclusive to Mecmesin are available. See our Accessory datasheets for an extensive range of grips and fixtures, to enable you to complete thousands of different tests. Alternatively make use of our experienced team of engineers to provide a customised grip to solve your particular problem.



(304-006) - 110V 2-pin flat

| Α | 6mm Ø - 5/16 UNC thread (432-122) | F | 30mm long - 5/16 UNC (F-M) (432-008) |
|---|-----------------------------------|---|--|
| В | 6mm Ø - 10-32 UNF (F) (432-120) | G | 30mm - 10-32 UNF (F) to 10-32 UNF (M) (432-006) |
| C | 3.2mm Ø - 10-32 UNF (F) (432-118) | Н | 30mm - 10-32 UNF (F) to M6 (M) (432-007) |
| D | 19mm Ø - 10-32 UNF (F) (432-121) | 1 | Mains adaptor/charger (304-004) - 220V 2-pin round |
| F | 19mm Ø - 5/16 UNC (F) (432-125) | | (304-005) - 220V 3-pin square |

^{*} Part numbers shown in brackets

Table of standard accessories delivered with each gauge:

| Model | A | В | С | D | E | F | G | Н | I |
|-----------------------------------|---|---|---|---|---|---|---|---|---|
| AFG 2.5, 5, 10, 25, 50, 100, 250N | | | • | • | | | • | • | • |
| AFG 500N | | • | | • | | | • | • | • |
| AFG 1000 & 2500N | • | | | | • | • | | | • |
| | | | | | | | | | |
| BFG 10, 50, 200N | | | • | • | | | • | • | • |
| BFG 500N | | • | | • | | | • | • | • |
| BFG 1000 & 2500N | • | | | | • | • | | | • |
| | | | | | | | | | |
| CFG+50N | | | • | • | | | • | • | |
| CFG+ 200N | | • | | • | | | • | • | |
| CFG+ 500N | | • | | • | | | • | • | |

Service & Calibration

Mecmesin ensures all customers receive a high level of on-going service and support. This includes offering a prompt and cost-effective calibration service. Though calibrations can be completed in our comprehensive in-house facility, customers also have the option of our on-site calibration service.



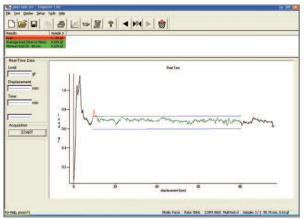
Additional Products

To enhance your testing capability, Mecmesin offers a number of additional products including.

Software

Emperor™ Lite

Emperor™ Lite is Mecmesin's powerful data-acquisition software, for use with its extensive range of force & torque measurement equipment. The software quickly and easily enables operators to perform in-depth analysis of measurements using a graphical trace of the test. User-selectable calculations provide instant results for key test parameters, allowing you to gain valuable quantitative information about the test samples.



Graphical representation of a peel test

- View test 'live' on PC screen
- Perform multiple calculations e.g. peak, minimum and average
- Easily identify and label critical measurement values and success/failure points during the test
- Summary test report with graphical traces

Grips

Mecmesin offers a wide range of grips and fixtures, to suit many types of application. For those with a specialised requirement, we can design and manufacture a customised fixture to match your specifications.



- Compression plates
- Test hooks
- Textile attachment grips
- Claw type grips
- Compression probes
- Wedge grips
- Flat-faced jaw grips
- Cam grips





Applications

Our range of digital gauges can be used in combination with our test stands to perform many different applications.

- Release-torque testing
- Compressive testing
- Deformation testing
- Medical Device testing



Fabric testing



Keypad testing



Peel testing

- Packaging testing
 - Tensile testing •
 - Textile testing •
 - Top-load testing •

sports

textiles

Mecmesin's range of testing equipment has been successfully used in a number of different industry sectors including.



safety

Support Services

Comprehensive network of international distributors

plastics

- 24 month warranty
- Website support
- Calibration, service & repair centre

pharmaceutical

- On-site installation and training
- Accessories
- Application support



testing to perfection

Over 30 Years Experience in Force & Torque Technology

Formed in 1977, Mecmesin Limited is today widely regarded as a leader in force and torque technology for quality control testing in design and production. The Mecmesin brand stands for excellent levels of performance and reliability, guaranteeing high quality results. Quality control managers, designers and engineers working on production lines and in research laboratories worldwide rely upon Mecmesin force & torque measurement systems for a range of quality control testing applications, which is almost limitless.

Visit us on the web at www.mecmesin.com



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