

FGV-XY DART 2.0 Digital Force Gauges

Digital Force Gauges with 180° reversible display & dual labeled keypad for both push, pull applications

The Series FGV-XY DART 2.0 Force Gauges combine a rugged, ergonomic and compact design to provide a complete force testing instrument. These instruments are utilized in a variety of applications such as, incoming quality inspection, finished goods testing, R&D or almost any portable or force stand testing requirement.

Onboard statistical calculations provide fast access to maximum, minimum, average and standard deviation data. Units include the free Toriemon USB software and USB cable allowing further data analysis on a PC. The 1,000 point memory allows for data exporting in real time or after testing is complete. In addition, the RS-232C and analog outputs provide the DART 2.0 with maximum communication flexibility. Models are available from 0.5 lbs to 200 lb ranges providing a large offering for various testing requirements. The 180° reversible display combined with the adjustable force direction and dual labeled keypad enable the FGE-XY to excel in both compression and tension applications in any direction.

Typical applications include wallboard, wire pull, wire crimps, trigger pull, brake pedal, aerospace ceramic, springs, food ripeness, corrugated paper strength, blister pack, medical component, muscle strength, ergonomic testing, adhesives, syringe plunger, needle sharpness and many more.



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Features

- 1000 Hz Sample Rate provides faster sampling producing better resolution and more accurate results
- Ideal for strict tolerances with its high accuracy $\pm 0.2\%$ F.S.
- Measure and record compression and tension tests- permits true "push-pull" testing
- 180° Reversible display and dual printed keypad allows usage as a portable gauge or mounted upside down on a test stand
- Maximum data collection flexibility with 3 outputs: USB, RS-232 & Analog Output
- 1 million operation load cell with superior overload protection provides a long-life, damage free product
- Rugged, ergonomic die cast aluminum construction allows usage on production floor
- On board statistics provides immediate results and analysis of test data
- Variable display response rate aids viewing readings
- Expanded memory for reviewing data points and transferring to PC/Laptop
- Built In Hi-Lo Comparator function provides user with easy 'Go-No Go' Testing
- Quick retrieval of peak measurement with a single push button
- Flexible user preference with one button selection of up to 4 engineering units
- Dual power capable with rechargeable battery or AC line voltage
- Field Calibration through keypad eliminates down time
- CE Mark



FGV-XY 2.0 Kit with
Standard Accessories

FGV-XY Specifications

FGV-XY Model	FGV-0.5XY	FGV-1XY	FGV-2XY	FGV-5XY	FGV-10XY	FGV-20XY	FGV-50XY	FGV-100XY	FGV-200XY
Capacity	8 oz 0.5 lb 200.0 g 2.000 N	16 oz 1 lb 500.0 g 5.000 N	32 oz 2 lb 1,000 g 10.00 N	5 lb 2.000 Kg 20.00 N	10 lb 5.000 Kg 50.00 N	20 lb 10.00 Kg 100.0 N	50 lb 20.00 Kg 200.0 N	100 lb 50.00 Kg 500.0 N	200 lb 100 Kg 1000N
Resolution	0.01 oz 0.001 lb 0.1 g 0.001 N	0.01 oz 0.001 lb 0.1 g 0.001 N	0.01 oz 0.001 lb 1 g 0.01 N	0.001 lb 0.001 Kg 0.01 N	0.01 lb 0.001 Kg 0.01 N	0.01 lb 0.01 Kg 0.1 N	0.01 lb 0.01 Kg 0.1 N	0.1 lb 0.01 Kg 0.1 N	0.1 lb 0.1 Kg 1N
Accuracy	±0.2% F.S.								
Display	4-Digit LCD, 0.5" (12 mm) high, Units 0.29" (7 mm). Reversible by the push of a button. Minus sign for tension								
Display Update	0.05, 0.1, 0.2, 0.3, 0.5, 1 sec								
Sampling Rate	1000 Hz								
Overload	200% of F.S. (200 lb.: 150% F.S.)								
Power	Rechargeable Ni-Cad battery or AC adapter/charger								
Output	Analog: ±1 VDC (through a 12 bit D/A converter) RS232C: Baud rate (19200, 9600, 4800, 2400 bps selectable), commands control USB: Allows communication between FGV-XY and Windows® PC Software with Toriemon USB via USB cable (included) Overload Comparator: Open-collector output (Max DC30V/5mA)								
Auto Power Shut-Off	Yes (not active if adapter/charge is in use)								
Battery Charge	12 hours (when fully charged)								
Recharge Time	Approximately 18 hours when fully discharged								
Temperature Range	32 - 104°F (0 - 40°C)								
Dimensions	5.8 x 3 x 1.5" (147 x 75 x 38 mm)								
Product Weight	Approx. 1 lb (450 g); FGV-200XY Approx. 1.1 lb (500 g)								
Package Weight	Approx. 2.4 lb (1.09 kg) for 0.5 lb and 1 lb ranges; 2.6 lb (1.12 kg) for 2 to 100 lb ranges; 2.75 lb (1.25 kg) for 200 lb range.								
Certification	CE								
Warranty	1 year								
Included Accessories	AC adapter/charger, carrying case, hook, chisel, flat head, notched head, hanger, cone head, thread Adapter, extension rod, USB cable. (Note: software available at www.shimpo.net for free download)								

Ordering Details

FGV-0.5XY	0.5 lb capacity digital force gauge
FGV-1XY	1 lb capacity digital force gauge
FGV-2XY	2 lb capacity digital force gauge
FGV-5XY	5 lb capacity digital force gauge
FGV-10XY	10 lb capacity digital force gauge
FGV-20XY	20 lb capacity digital force gauge
FGV-50XY	50 lb capacity digital force gauge
FGV-100XY	100 lb capacity digital force gauge
FGV-200XY	200 lb capacity digital force gauge
NIST-FG	NIST traceable certificate of calibration for ranges from 0.5 to 100 lbs
NIST-FG-HC	NIST traceable certificate of calibration for ranges 200 lbs to 1000 lbs
FGV-PT100 or FGV-PT200	100 lb or 200 lb capacity FGV-XY in ergonomic testing kit. Kit includes all of the standard FGV-XY accessories but comes with larger, heavy duty case and adds padded ERGO accessories, handle, and NIST traceable certificate

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Accessories

FG-M4ADP	Standard adapter set with M4 threads for ranges 0.5 lb and 1 lb. Includes: chisel, cone, flat head, notched head, hook, extension rod
FG-M4CL	Chisel adapter with M4 thread for ranges 0.5 lb and 1 lb.
FG-M4CN	Cone head adapter with M4 thread for ranges 0.5 lb and 1 lb.
FG-M4FL	Flat head adapter with M4 thread for ranges 0.5 lb and 1 lb.
FG-M4GV	Notched head adapter with M4 thread for ranges 0.5 lb and 1 lb.
FG-M4HK	Hook adapter with M4 thread for ranges 0.5 lb and 1 lb.
FG-M4RD	Extension rod adapter with M4 thread for ranges 0.5 lb and 1 lb.
FG-M6ADP	Standard adapter set with M6 threads for ranges 2 lb to 200 lb. Includes: chisel, cone, flat head, notched head, hook, extension rod
FG-M6CL	Chisel adapter with M6 thread for ranges 2 lb to 200 lb.
FG-M6CN	Cone head adapter with M6 thread for ranges 2 lb to 200 lb.
FG-M6FL	Flat head adapter with M6 thread for ranges 2 lb to 200 lb.
FG-M6GV	Notched head adapter with M6 thread for ranges 2 lb to 200 lb.
FG-M6HK	Hook adapter with M6 thread for ranges 2 lb to 200 lb.
FG-M6RD	Extension rod adapter with M6 thread for ranges 2 lb to 200 lb.
FG-09V120UC	Universal charger adapter for 120/240V AC
ERGO-KIT	Padded accessory kit for ergonomic testing
FG-HANDLE	Handle adapter for larger loads
FGV-ANALOG	Connection cable for FGV's +/-1 VDC analog output