

Motorized Programmable Force Test Stands

Shimpo Instrument's advanced Motorized, Programmable Force Test Stands combined

with our line of top quality force gauges, provide a complete force measurement system capable of handling the most precise testing applications. Their all steel construction makes them remarkably rugged while performing with precision. Programming capabilities provide the versatility to tackle a multitude of applications. Two modes of operation, single or continuous cycling allow for a single precise test or repetitive, consistent results. User selectable high and low force set points through RS232 interface or directly through the force gauge allows the test stand to stop at specific force loads while displaying and outputting the displacement. These motorized stands are offered in a wide range of force capacities in both vertical and horizontal configurations and are available in both standard and ultra-slow speeds.



**Series FGS-100PV
Vertical Motorized Test Stand**



**Series FGS-100PX
Horizontal
Motorized Test Stand**

Features

- 5 user programmable set points for speed, distance and stop time permit customized testing
- Compatibility with nearly all manufacturers' force gauges enables flexibility in testing applications
- Analog voltage output of displacement allows graphing and analysis of data on computer
- Manually adjustable upper and lower limits restricts movement, allowing for precise testing
- All gauge functions can be communicated through stand via RS232 interface allowing easy operation and data download
- Compact, modular design reduces weight, footprint and cost of stand



**FGS-250PV Motorized
Test Stand Shown with
Optional Force Gauge**

Horizontal & Vertical Motorized Test Stand Specifications

| | | | | |
|-----------------------|--|---------------|---|--|
| Model | FGS-100PXH | FGS-100PXL | FGS-100PVH | FGS-100PVL |
| Operation Orientation | Horizontal | | Vertical | |
| Capacity | 110 lb (50 kg) | | | |
| Travel Speed | -100PXH: 0.79 - 19.69 inch/min (20 - 500 mm/min); -100PXL: 0.19 - 4.72 inch/min (5.00 - 120 mm/min); -100PVH: 1.57 - 15.74 inch/min (40 - 400 mm/min); -100PVL: 0.39 - 3.93 inch/min (10 - 100 mm/min) | | | |
| Stroke | 5.5" (140 mm) | | | |
| Vertical Clearance | N/A | N/A | 2.4 - 7.1" (61 - 181mm) 5 steps, 1.18"/step (30 mm/step) | 2.4 - 7.1" (51 - 181 mm) 5 steps, 1.18"/step (30 mm/step) |
| Display | Four digit LED, 0.41" high (10.5 mm), Reads in inches (0.01 resolution) or millimeters (0.1 resolution) | | | |
| Operating Mode | Manual (MANU), Jogging (JOG), Single (SING), Continuous (CONT), Program (PROG) | | | |
| Time Delay | 0 through 5 second delay between direction change | | | |
| Power | 120 VAC, 60 Hz | | | |
| Product Weight | 40 lb (18 kg) | 40 lb (18 kg) | 42 lb (19 kg) | 42 lb (19 kg) |

FGS-250PV Programmable Motorized Test Stand Specifications

| | | | |
|--------------------------------------|---|------------|------------|
| Model | FGS-250PVL | FGS-250PVM | FGS-250PVH |
| Operation Orientation | Vertical | | |
| Capacity | 500 lb, 250 kg, 2,500N | | |
| Travel Speed | -250PVL: 0.49 - 4.92 inch/min (12.5 - 125 mm/min); -250PVM: 1.97 - 19.70 inch/min (50 - 500 mm/min); -250PVH: 5.12 - 49.23 inch/min (130 - 1250 mm/min) | | |
| Stroke | 31.10" (790 mm) | | |
| Display | Four digit LED, 0.41" high (10.5 mm), test stand can change English to metric | | |
| Operating Mode | Manual (MANU), Jogging (JOG), Single (SING), Continuous (CONT), Program (PROG) | | |
| Communication | Gauge: FGV, FGV-H. To PC: RS-232C (Baud rate: 9600bps, data length: 8 bit, stop bit: 1 bit, parity: none) | | |
| Limit Switch Repeatability | -250PVL: $\pm 0.0006"$ (0.015 mm) at max. speed; -250PVM: $\pm 0.0016"$ (0.04 mm) at max. speed; -250PVH: $\pm 0.0036"$ (0.092 mm) at max. speed | | |
| Zeroing Feature Repeatability | -250PVL: Max. 0.015" (0.383 mm) at max. speed; -250PVM: Max. 0.065" (1.649 mm) at max. speed; -250PVH: Max. 0.172" (4.355 mm) at max. speed | | |
| Deflection | 0.033" (0.85 mm) at max, capacity | | |
| Power | 120 VAC, 60 Hz | | |
| Product Weight | -PVL: 115.7 lb (52.5 kg); -PVM: 115.7 lb (52.5 kg); PVH: 126.8 lb (57.5 kg) | | |

Ordering Details

| | |
|-------------------|---|
| FGS-100PXH | Horizontal Motorized Test Stand with standard speed and 110 lb (50 kg) capacity |
| FGS-100PVH | Vertical Motorized Test Stand with standard speed and 110 lb (50 kg) capacity |
| FGS-100PXL | Horizontal Motorized Test Stand with low speed and 110 lb (50 kg) capacity |
| FGS-100PVL | Vertical Motorized Test Stand with low speed and 110 lb (50 kg) capacity |
| FGS-250PVL | Vertical Motorized Test Stand with low speed and 500 lb (250 kg) capacity |
| FGS-250PVM | Vertical Motorized Test Stand with standard speed and 500 lb (250 kg) capacity |
| FGS-250PVH | Vertical Motorized Test Stand with high speed and 500 lb (250 kg) capacity |

Accessories

| | |
|-----------------------|---|
| UNI-PLATE | Gauge mounting plate for FGS-100 Series Stands |
| FGV-FGS250P | Interface cable for FGS-100 & FGS-250 force test stands |
| FGS-ANALOG | Analog output cable for force test stands |
| FG-250PV-RS232 | RS-232 Communication cable from FGS stand to computer |
| FG-HORIZ-ADAP | Grip adapter for horizontal test stands |

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