

# DPST-5000M Digital Pitot Static Test Set

**“High Accuracy, Exceeds 91.411 FAR Specs, Light Weight with Indestructible Sensor and Display!”**

DFW Instrument Corporation



Cage Code # 3PTA2

## General Information

The Model DPST-5000 Digital Pitot Static Test Set is a precision test set with dual channel pressure controller, designed to provide regulated total (PT) pressure and static (PS) pressure outputs to simulate Altitude, Airspeed and Vertical Speed Parameters. The test set can also be used in a laboratory environments to calibrate Altimeters and Airspeeds in maintenance shops or in harsh hanger environments. The test set is compact, light weight and has a removable storage lid, which can fit in the overhead compartment on a commercial airliner.

## Standard Features

- Certified to perform Pitot Static FAR 91.411 and / or FAR 43 Appendix E certifications on fixed or rotary wing aircrafts.
- Precision microprocessor based with Honeywell sensors, accuracy to 0.02% ( $\pm 40$  ft. @ 55,000 ft.) of full range.
- Sun-light readable color display showing real instrument EFD presentation.
- The simple pop-up screens display the Altitude, Vertical Speed, Airspeed EPR and other measurements in various units of measure, including Ft, M, Kts, Km/hr, Mach, Ft/min, M/min, EPR (Pt/Ps), inHg, mb and psia. All readings are up-dated every 2 tenths of a second.
- Automatic pitot and static leak rate modes automatically perform calculations & system failures.
- Precision metering valves with protection shut off seats for maximum control rates.
- Ports have self sealing quick connections, which are color coated and keyed to protect the aircraft and test equipment from pressure loss or incorrect system connections.
- Internal pumps produce pressure and vacuum, which fill holding tanks for quick start ups and high performance rates. Exceeds 55,000 ft. of altitude, 15,000 ft./min VSI rate, and 600 knots of airspeed.
- Water resistance and temperature corrected for extreme flightline conditions.
- Smart AC power supply for safe flight line usage input voltages 85 to 264 VAC / 47 to 440 Hz
- Storm Case is rugged and constructed to meet applicable requirements of MIL-STD-810F and FED-STD-101C and is watertight, pad lockable and is made in the USA.
- Test set is equipped with quick connect fittings, 2 hoses (20 ft/ea) and a power cord (6ft).
- Calibration meets or exceeds the published specifications, which are traceable to the National Institute Standards and Technology "N.I.S.T".



**Dimensions**  
20"L x 15"W x 7"H  
25 lbs.

# Digital Manual Pitot Static Test Set

## DPST-5000M Performance Specifications

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### Absolute Pressure Performance

#### **Static Sensor:**

Range: 0.3 to 40 inHg abs.  
Accuracy: +/- 0.020 inHg FS  
Repeatability: +/- 0.150 inHg % span  
Drift: +/- 0.50 % inHg per year FS  
Overpressure: 200 % FS without damage

#### **Pitot Sensor:**

Range: 0.8 to 80 inHg abs.  
Accuracy: +/- 0.020 inHg  
Repeatability: +/- 0.150 inHg % span  
Drift: +/- 0.50 % inHg per year  
Overpressure: 200 % FS without damage

### Altitude Performance

Range: -1500 ft. to 55,000 ft.  
Resolution: 1 ft.  
Accuracy: ±5 ft. @ 0 ft.  
±45 ft. @ 35,000 ft.  
±125 ft. @ 55,000 ft.

### Rate of Climb Performance

Range: 100 ft./min. to 12,000 ft./min.  
Resolution: 5 ft./min.  
Accuracy: ±10 % of rate with a min. of 20 ft./min.

### Airspeed Performance

Range: 10 to 600 Knots  
Resolution: 0.5 Knots  
Accuracy: ±2 Knots @ 20 knots  
±1 Knots @ 100 knots  
±1.5 Knots @ 600 knots

### Mach Performance

Range: 0.0 Mach to 2.79 Mach  
Resolution: 0.001 Mach  
Accuracy: 0.020 Mach + 0.1 Mach  
for Ps = 29.921 inHg.

### EPR Performance

Range: 0.1 to 3.0 (Ps @ 30inHg)  
Resolution: 0.001  
Accuracy: 0.15 %FS PSI

### Pressure Medium

Dry Air

### Pressure Connections

Quick Disconnects (2 ea.)  
Safety Seal on Female Quick Connect

### Display Update Rate

Once Every 2 Tenths per Second

### Outputs

USB Port / Data Output / RS-485 (Additional Fees)

### Sensors

Honeywell Certified Sensors (NIST Traceable)

### Power Requirement

Input Range: 85 - 264 VAC  
Frequency Range: 47 Thru 440 Hz

### Environmental Specs

Temp. Operating: -40° C to +85° C  
Temp. Storage: -25° C to +60° C  
Humidity: 0% to 95% RH

### Warranty & Calibration

Warranty: 2 years (*parts & labor*)  
Calibration: Up to 1 year (*yearly calibration suggested*)

### RVSM Certification

Calibration / Trace to NIST  
Exceed FAA Accuracy FAR 91.411 Specifications

### Physical Dimensions

20" L x 15" W x 7"H Mil-STD810F

### Weight

25 Lbs.

### Case

Storm Case

### ORDERING INFORMATION

Mfg. Part Number: DPST-5000M

**Accessories Include:** Protection Quick Release Fittings,  
Hoses, Shipping Container and Operation Manual.

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