

MPS-24

Air Data Test Set

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PRECISION FLIGHT LINE DIGITAL AIR DATA TEST SET

The DMA MPS-24 provides a complete air data test and envelope generation capability for troubleshooting and certification of aircraft pitot-static systems.

The MPS-24 is easy and fast to use by both experts and first time users. A single operator in the aircraft cockpit using a multifunction hand controller with a LCD display can perform testing and troubleshooting. All air data functions are simultaneously displayed; constant screen or menu changes are not required.

The MPS-24 ADTS exceeds all current requirements for test envelope generation specifications for military and commercial fixed and rotary wing aircraft including RVSM requirements. It uses precision vibrating element transducers for maximum accuracy of all altitude and airspeed parameters.

PROGRAMMABILITY

Up to 30 test user programmed routines can be entered and stored in onboard memory to cover custom or commonly used air data test requirements and airline work cards. Routines

FEATURES

- Accuracy ± 3 ft at sea level
- Exceeds RSVM accuracy requirements
- Lightweight hand held control; intuitive data entry supports first time users
- Simultaneous display of all functions; screen or menu changes not required
- Low maintenance design; industry exclusive 5000 hour pump guarantee
- Low power consumption



SAFETY

Key MPS-24 design features protect test set and instruments under test.

A pressure condition of Ps greater than Pt is prevented in both manual and automatic operation. With loss

of power the test set circuit is safely isolated and can be manually vented preventing instruments and test set damage. Pre-set factory or user programmed safe limit factors prevent damage of instruments under test. Universal power supply prevents connection mistakes. The hand controller or other input devices can be switched during testing without loss of control.

MULTIPLE CIRCUIT ISOLATION

The MPS-24 can be optionally configured to control isolation of up to four static and four pitot circuits remotely using the hand controller. AN, quick disconnect or other customer required fittings are optionally available.

CALIBRATION

Calibration can be performed quickly and



simply by software adjustment of four coefficients. No mechanical adjustments are required. Calibration factors are password protected.

STANDARD SPECIFICATIONS

Operating temperature range, from 0°C to +50°C

Control capability on load volumes (cu. in.) - Static: 0 to 250, Pitot: 0 to 100.

(*) abbreviations: C = civil; M = military.

Parameter	Range (*)		Resolution		Accuracy	
	Measure	Control	Meas.	Contr.	Measure	Control
Altitude(ft)	-2,000 +80,000	-2,000 +65,000 (80000 ext pump)	1	1	±3 @ SL ±5 @ 30,000 ±20 @ 60,000	±2
Altitude slew rate (ft/min)	C: 0 to 6,000 M: 0 to 30,000	C: 0 to 6,000 M: 0 to 30,000	25 > 1000 5 < 1000	25	25±1% of reading	±2%
Airspeed (kt)	C: 10 to 830 M: 20 to 1,000	C: 10 to 830 M: 20 to 1,000	1 < 50 0.1 > 50	0.1	±0.5 @ 50 ±0.1 @ >500	±1
Ultra Low Speed funct.	ULS: 2 to 200		0.1 > 20		ULS:±0.001 inHg	
Mach No.	0 to 4	0 to 4	0.001	0.001	< 0.002	±0.002
Airspeed slew rate (kt/min)	0 to 700	0 to 700	10	10	10±1% of reading	±5%

FUNCTIONS

Pressure/vacuum generation
Automatic leak check
Controlled venting to ambient
Altitude/airspeed input
Static/total pressure input
Altitude/ Airspeed rate input
Mach Number input
Plus:
EPR generation
TAS temperature correction
Offset correction
Automatic leak test

DISPLAY AND KEYPAD

Integral display and keypad in splash and shock protected hand-held terminal.
LCD with backlighting displays all test parameters.

CALIBRATION

One year interval, performed using software

PHYSICAL SPECIFICATIONS

Weight: 33 kg (70 lb.)
Dimensions: L 20", W 12", H 17.5"
Control cable 60 ft (20 meters)

ENVIRONMENTAL

Waterproof and shockproof
CE compliant

POWER SUPPLY

Universal—all world and aircraft currents

WARRANTY

Unit one year
Pumps 5000 hours

OPTIONAL CONTROL SOFTWARE

Windows based PC control software
Windows based PC calibration software

OPTIONS

Lightweight HDPE plastic case w/wheels
Wireless remote control terminal
Roll around cart with 8 hours battery
28 VDC power supply
150 ft (50 m) extension control cable

INTERFACE PORTS (RS232 Standard)

IEEE-488 GPIB
ARINC 429 and ARINC 629
MIL-STD-1553 interface

Note: --- Specifications subject to change ---

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