DMA-Aero General Catalogue

- **Laboratory ADTS**
- **Pitot-Static Adapters**
- **Ultra Compact ADTS**
- **2 or 3 Channel ADTS for Smart Probes**

**Air Data Test Sets**

and

**Aircraft Ground Support Equipment**

- **Angle Protractors**
- **Tachometer Testers**
- **3 Axis Tilt Tables**
- **Transfer Standards and Automated Calibration Systems**
DMA’s Air Data Test Sets provide the accuracy, long term stability and low cost of ownership demanded by the world’s leading aircraft manufacturers, repair stations and operators.

The MPS49 shown includes 3 channels to cover Ps, Pt and Angle of Attack (AoA) for Smartprobe testing capability.

The test sets are all digitally controlled. The local display and keypad provide an intuitive user interface for the operator. For remote control locations such as the flight deck, various options are available including hand held duplications of the front panel interface and comprehensive touchscreen units. Wi-Fi, Bluetooth and other computer orientated options are available for connecting to PCs, tablets or the MPSRW.

With over 70 years experience in the design and manufacture of Air Data Test Sets, DMA offer an extensive range of RVSM compliant testers for aircraft leak testing, troubleshooting and full certification.

The wide range of Air Data Test Sets form the core of DMA’s product range. Constant innovation and improvement with unique features such as battery backup has placed DMA amongst the top Air Data Test Set manufacturers in the world.

With a wide range of base models and an extensive complement of options the ADTS are ideal for all pitot-static test requirements. All test sets meet the stringent requirements for RVSM certification testing. DMA also design and manufacture a wide range of pitot-static adapters and full kits of associated hoses and fittings for a wide range of aircraft. The list is constantly expanding.
## Feature Table

### CURRENT MODELS

<table>
<thead>
<tr>
<th>TYPE NO</th>
<th>MPS43B</th>
<th>MPS45/45HF</th>
<th>MPS49</th>
<th>MPS46/46H/56</th>
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</thead>
<tbody>
<tr>
<td>Range/Type</td>
<td>Ultra Compact</td>
<td>Extended Range</td>
<td>Extended Range</td>
<td>Laboratory</td>
</tr>
<tr>
<td>Accuracy</td>
<td>RVSM</td>
<td>RVSM</td>
<td>RVSM</td>
<td>RVSM +</td>
</tr>
<tr>
<td>AoA Channel</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Size</td>
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<td>✗</td>
<td>✗</td>
<td>2U high (MPS56 3U)</td>
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<tr>
<td>Range Alt</td>
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<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Pump Capacity</td>
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<td>✗</td>
<td>✗</td>
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<tr>
<td>Pump Warranty</td>
<td>1,500 hours / 2 Years</td>
<td>5,000 hours / 4 Years</td>
<td>5,000 hours / 4 Years</td>
<td>MPS46P: 5,000 hours / 4 Years</td>
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<tr>
<td>Vacuum Hold Down</td>
<td>✓</td>
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<td>✓</td>
<td>✗</td>
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<td>4+4 Isolate</td>
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<td>2+2 Isolate</td>
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<td>Option</td>
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<tr>
<td>Keyboard</td>
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<tr>
<td>Hand Terminal</td>
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<td>✗</td>
</tr>
<tr>
<td>Wi-Fi</td>
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<td>Option</td>
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</tr>
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<td>Bluetooth</td>
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<td>Ethernet</td>
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<td>USB Port</td>
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</tr>
<tr>
<td>USB Control</td>
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<tr>
<td>Alt. Encoder</td>
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<td>GPIB IEEE488</td>
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<tr>
<td>ARINC 429</td>
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<td>Option</td>
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<tr>
<td>Battery (hours)</td>
<td>✗</td>
<td>✗</td>
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<tr>
<td>28VDC</td>
<td>✓</td>
<td>Option</td>
<td>Option</td>
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<tr>
<td>Software</td>
<td>ADWIN</td>
<td>ADWIN</td>
<td>ADWIN</td>
<td>ADWIN36 as Option</td>
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<tr>
<td>Weight</td>
<td>10 lbs</td>
<td>33 lbs</td>
<td>33 lbs</td>
<td>22 lbs (MPS46P 27 lbs)</td>
</tr>
</tbody>
</table>

### HERITAGE PRODUCTS

In special circumstances DMA are able to manufacture the Heritage instruments shown below to support our Customers who wish to continue using these legacy products due to ongoing commitments.

<table>
<thead>
<tr>
<th>MPS27C</th>
<th>MPS31C</th>
<th>MPS34C</th>
<th>MPS35C</th>
<th>MPS36</th>
<th>MPS43</th>
<th>MPS39C/40C</th>
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</thead>
<tbody>
<tr>
<td>2 Channel Flightline ADTS</td>
<td>2 Channel Flightline ADTS</td>
<td>2 Channel Flightline ADTS</td>
<td>2 Channel Flightline ADTS</td>
<td>2 Channel Laboratory ADTS</td>
<td>2 Channel Compact Flightline ADTS</td>
<td>3/4 Channel Flightline ADTS</td>
</tr>
</tbody>
</table>

### NOTES

- ✗ = min, ✗ ✗ ✗ ✗ = max
- 1 The MPS45HF provides higher flow rates for large system volumes
- 2 The MPS46H and MPS56 provide higher flow rates
- 3 1,500 hours or 2 years, whichever comes first
- 4 5,000 test set running hours or 4 years, whichever comes first
- 5 USB port for USB memory device to store results and download test programs
- 6 Available via the MPSMON Touchscreen Remote Terminal
- 7 Allows control of the ADTS from a PC via USB
- 8 Uses supplied USB to RS232 control cable to provide USB control capability
- 9 Gray Code Altitude Device Read-out
- 10 1 hour+ operation from internal battery. EPU6 available to extend MPS43B battery life
- 11 Control software included. ADWIN is DMA designed Ps/Pt control software
ACCURACY ACHIEVED BY THE END OF SELF TEST
The use of precision transducers together with pressure and temperature characterization result in high accuracy without any significant warm-up time at all operating pressure values.

INTUITIVE INTERFACE
All the test sets are easy to use by both experts and first time users with all the important air data functions simultaneously displayed.

EXCLUSIVE 5,000 HOUR PUMP LIFE WARRANTY
The low maintenance internal pressure and vacuum pumps run only on demand extending the pump life and reducing power consumption. In all but the MPS43 series, these pumps carry a 5,000 hours (4 year maximum) industry exclusive warranty.

AUTOMATIC CONTROL OF 3 OR 4 INDEPENDENT PRESSURES
The MPS49 offers independent control of 3 pressures – static and pitot for altitude and airspeed and additionally Angle of Attack (AoA) to test those aircraft equipped with the Smart Pitot probes. The MPS40C is a 4 channel test set with 2 AoA channels.

INTERNAL BATTERY FOR SAFETY AND VERSATILITY
Many of the test sets are equipped with internal automatically recharged batteries for two or four hours full operation. These also provide a seamless auto switch over emergency power supply.

FLEXIBLE MULTIPLE LINE SWITCHING
Independently addressable output ports can be configured to control up to 12 lines of isolation controlled from the keypad. This multiple line switching permits fast and safe closing of the lines to isolate leaking channels or for functional testing of systems such as over speed switches. The MPS45 can control up to 8 static and 4 pitot lines and the MPS49 can control up to 4 static, 4 pitot and 4 AoA lines.

BUILT IN SAFETY LIMITS FOR UUT PROTECTION
Key DMA design features protect both the test set and instruments under test. Preset or user programmed safe limits protect the UUT.

LOW POWER CONSUMPTION
The careful consideration during the design ensures low power consumption giving minimal heat generation internally which consequently results in high reliability and accuracy.

HAND TERMINAL, WIRELESS OR COMPUTER CONTROL
The front panel keypad and display or the remote hand terminal provide the versatility needed for flight line or laboratory operation. The instrument can also be controlled via a wireless Bluetooth connection or from a PC using DMA designed specific Ps/Pt testing software, ADWIN.

AIRCRAFT AND CONTROL INTERFACES
The ARINC 429 interface receives data from the aircraft’s ARINC 429 bus and displays it alongside the associated test set parameters. The IEEE488 interface allows full control of the test set over the IEEE488 GPIB interface. An RS232 interface is provided as standard. A USB to RS232 cable is available.

ALTIMETER READ-OUT DEVICE
Gray code encoded data from altitude devices can be displayed alongside altitude data on the test set display.

GROUND PROXIMITY WARNING COMPUTER
This option integrates GPW testing by generating a voltage output equivalent to the radio altimeter output.

AUTOMATED CALIBRATION
Calibration, performed by software, is fast and simple since no mechanical adjustments are required. Calibration factors are password protected for security.

PITOT-STATIC ADAPTERS
Available singly or in comprehensive kits, DMA design and manufacture pitot-static adapters for a wide range of aircraft types. The list of available adapters is continuously growing.

PRESSURE AND VACUUM GENERATORS
The EPSR2 provides pressure and vacuum supplies for the laboratory test sets. Available in rack mount or table top versions.

The DMAKV2 provides vacuum for static adapter hold down.

CONTROL OPTIONS
The MPSRC handheld remote control, the MPSRE touch screen remote terminal, the MPSMON table-top touch screen remote terminal or the MPSRW wireless/bluetooth terminal provide alternative forms of remote control for the Air Data Test Sets. An ATEX certified terminal is also available.

EPU6 POWER UNIT
The EPU6 is an external power unit which extends the battery life of the MPS43B to 6 hours. The EPU6 can be recharged whilst powering the MPS43B.

ADAPTER KIT INCORPORATING MPS43B
Kits feature the vacuum hold down fixtures on the Static adapters together with the vacuum hose to allow the DMA air data tester to provide the vacuum source.

MPS43B WITH EPU6

MPSRC

MPSRE

MPSRW

EPSR2

DMAKV2
Ground Test Equipment

ULTRA COMPACT AUTOMATIC AIR DATA TEST SET MPS43B
The MPS43B is a unique instrument offering first class capabilities in terms of precision and performance. The rugged, lightweight and remarkably small enclosure meets the demanding requirements of the aerospace industry, while offering cost and ownership benefits unmatched by alternatives.

- Full automatic control for Altitude & Airspeed
- Ps to 55,000 ft, Pt to 550 kts, ROC to 6,000 ft/min
- Fully RVSM compliant with 12 months recalibration period
- Integral pressure and vacuum pumps with 1500 hour warranty
- Powered by AC, 28VDC or 1 hour+ operation from internal battery
- User programmable safety limits and test programs
- Vacuum Port holds DMA Adapters to fuselage
- Weighs just 10 lbs., carry to the cockpit
- Wired and wireless remote terminals available
- Option of extra 3 x Ps & 3 x Pt outputs on rear side

PRESSURE CALIBRATION STANDARDS
The MM14-BW digital automatic pressure calibration system combines high technology and comprehensive features to allow easy calibration of pressure systems such as Air Data Test Sets.

- Better than 25ppm accuracy
- Automatic calibration in aircraft pitot and static ranges
- High Performance Primary Standard pressure balance
- Integral Transfer Standard
- Pressure and Vacuum pumps included

MINIATURE TRANSFER STANDARDS
The PAMB10H and PAMB11H precision pressure indicators provide transfer standard accuracy in single or dual channel units.

- Single channel PAMB10H
- Dual channel PAMB11H
- High accuracy transfer standards
- Color touch screen display and control
- Ultra low drift
- Ultra high sensitivity
- Sensors unaffected by gaseous pressure media (Air or Nitrogen)

DIGITAL TACHOMETER TESTERS
The BCE14/15 provide simultaneous testing of up to three tachometers and indicators used with turbine engines.

- Range: 0 - 12,000 RPM
- Reading accuracy: ± 1 RPM
- Speed stability ± 0.1%
- Up to 3 independent drives
- Selectable safety limits
- "Y" or "Δ" resistive loads

TILT TABLES
Various models of Tilt Table are available providing very accurate position and motion control for testing and calibrating attitude/heading and inertial reference units.

- 3 Axis capability, X, Y & Z
- High accuracy
- Independent settings for each axis
- Control by internal computer or PC
- Safety limits
- Fast zero position finder

ANGULAR PROTRACTORS
Electromechanical devices to measure the relative rotation between movable surfaces.

- Goniometric scale and/or angular position sensor with 0.01 deg. resolution.
- Transversal misalignment up to 0.8 inch (20 mm)
- Multi-channel computer controlled read-out system
- Screw or suction fixing plates
About DMA-Aero

DMA-DEO

DMA-Aero design and manufacture Aviation Ground Support Equipment (AGSE) such as; RVSM Air Data Test Sets, fly-by-wire flight control surface movement analyzers, tachometer test sets, tilt tables and equipment designed to customer specifications. This equipment is used worldwide by overhaul bases, civil airlines and general aviation.

DMA-Aero traces its establishment via D. Marchiori s.r.l. back to 1938. As a growing US company DMA-Aero is committed to continual product improvement to meet the needs of today’s aviation industry.

FACILITIES

The DMA-Aero facility is located close to the local airport in Danbury Ct. with plenty of room for expansion.

D. Marchiori, is based in Aprilia, close to Rome, Italy, convenient to the International Airports of Fiumicino and Ciampino. This is a large purpose built facility and all activities associated with design, development and manufacture are carried out here.

Both facilities have an internationally traceable Calibration Laboratory to the highest level of precision.

WORLDWIDE AGENTS

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<thead>
<tr>
<th>AFRICA</th>
<th>EUROPE</th>
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<td>Various countries</td>
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<table>
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<table>
<thead>
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<tbody>
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<td>Australia</td>
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</tr>
<tr>
<td>New Zealand</td>
<td>Tunisia</td>
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</table>

Ongoing development results in specifications being subject to change without notice

SERVICES

The range of instrumentation products manufactured by DMA-Aero are all supplied with manuals to enable the Owner to undertake Calibration, Maintenance and Repair within their own organization if they so wish.

For those Users who prefer to have the equipment Calibrated, Maintained or Repaired by DMA-Aero, all returned equipment will be fast-tracked to reduce the time spent away from the operator to an absolute minimum.

DMA-Aero offers training courses for operator’s staff if the decision is made to carry out service activities within their own organization.

Lists of Recommended Spare Parts can be supplied to enable the operator to stock parts within their organization for rapid response.

DATA SHEETS

Individual data sheets are available for most products. Please inquire using the contact details below.

Data sheets can also be downloaded from our website www.dma-aero.com.

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