



# PRODUCT LINE CATALOG



**Global Provider of Test & Measurement Services**



# ABOUT RAPTOR SCIENTIFIC

Raptor Scientific is a leading provider of engineering, testing and measurement services, including the design and manufacture of world-class mass properties, air data test technology, pressure, temperature, torque and force measurement instruments, and radar cross section measurement instruments.

# LEADING TECHNOLOGY FOR MISSION CRITICAL APPLICATIONS

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We offer an extensive range of test and measurement capabilities, including Mass Properties, Radar Cross Section, Air Data Test Systems, Pressure, Temperature, Torque and Force measurement instruments, and Igniter Circuit Testers for developers of high-performance systems for whom failure is not an option. Our groundbreaking solutions offer the highest level of accuracy, safety, and exceptional product reliability.

## Groundbreaking Solutions

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Raptor Scientific has a proven record of providing cutting-edge, highly complex solutions, with an engineer-to-engineer market strategy ensuring solutions meet highly customized needs. Our comprehensive solution set covers diverse platforms and applications with complementary solutions and multiple value-added features. Raptor's unmatched design engineering expertise balances innovation and profitability.

## Why Raptor Scientific?

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Raptor's unmatched performance, product offerings, testing expertise, and aftermarket services combined with a "culture of support" provide customers with vital feedback and guidance.



Mars Perseverance Rover on Raptor Scientific custom Weight and CG instrument



# OUR PRODUCTS

## Avionics Systems

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Our line of Air Data Test Sets (ADTS) and Air Data Calibrators (ADC) offers our commercial and military customers a common equipment approach for testing pitot static and air data applications. Our off-the-shelf solutions can be customized to fit most customers' requirements. This provides significant cost savings and enhanced logistical support benefits for almost any program.

## RF Systems

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Our integrated measurement systems are highly capable, portable, and easy to operate. Our integrated measurement systems utilize radar technology to measure and help maintain the radar signature of the customer's asset. Our products are used throughout the life cycle of stealth assets, from research and design through manufacturing and extending to the operational environment.

## Mass Properties

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Raptor Scientific is the premier provider of mass properties instruments and services utilized in mission-critical applications. Our unmatched engineering expertise, combined with superior testing and aftermarket services deliver industry-leading precision capabilities. We have sold more moment of inertia and center of gravity instruments than any other company, offering the most accurate instruments in the world.



Our products are proudly  
manufactured in the USA

## Igniter Circuit Testers

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Raptor Scientific designs and manufactures igniter circuit testers approved by the US Department of Defense for failsafe measurement of mission-critical components, like squibs, bridge-wires, explosives, missiles, or rocket ignition. Our igniter testers come in single-channel and purpose-built multi-channel models for testing simple electronics paths to complex multi-path circuits.

## Pressure, Air and Temperature Systems

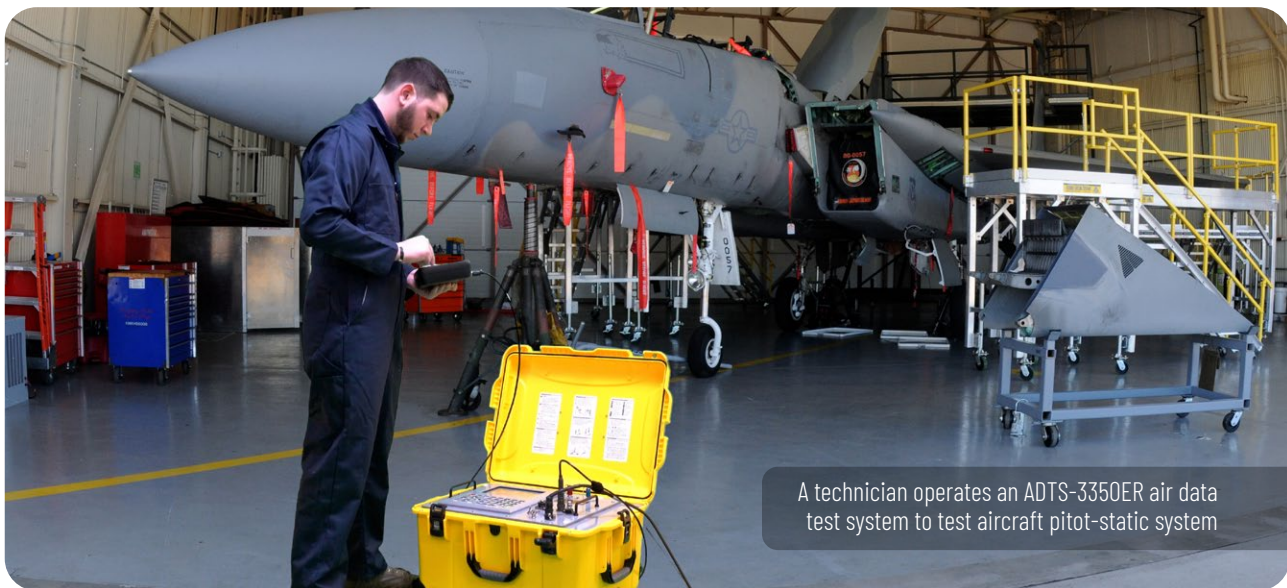
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The accuracy and durability of our pressure, temperature, torque, and force instruments are relied upon in the punishing environments encountered by the DoD, NASA, and other clients worldwide. Our portable instruments are housed in rugged cases designed to withstand prolonged exposure to the conditions encountered in shipboard, submarine, hangar, and outdoor environments.

## Torque and Force Calibrators

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Self-contained, semi-automated, multi-functional calibrators, which provides a rapid, highly accurate and safe means for calibrating and testing a wide variety of torque and force measuring instruments. These calibrators allow the ability to calibrate all types of torque wrenches, torque multipliers, force gauges, cable tensiometers and cable testers throughout stand ranges.



A technician operates an ADTS-3350ER air data test system to test aircraft pitot-static system

# AVIONICS TEST SYSTEMS

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## **Air Data Calibrators (ADC)**

The ADC Series are industry-leading air data calibrators capable of controlling and measuring altitude and airspeed pressures to the highest degree of accuracy. Our calibrators utilize high-precision transducers with proven long-term stability for our customer's air data applications.

## **Flightline Pitot Static Test Sets**

The ADTS Series are portable, ruggedized, self-contained Air Data Testers capable of accurately controlling and measuring altitude and airspeed pressures. These test sets are used to calibrate, test, and troubleshoot aircraft Pitot and Static systems and instrumentation on the flight line. The control and measurement ranges and accuracy of these test sets meet or exceed requirements for nearly all commercial and military aircraft test applications.

## **Air Data Calibration Test Systems**

The Air Data Calibration Test System ADCTS-1000 Series is a high-precision advanced Secondary Air Data Calibration system. The ADCTS Series is self-contained in a highly maneuverable rack enclosure which is perfect for calibration and avionics labs and instrument shops. An Air Data Calibrator is at the heart of each ADCTS-1000 and can perform manual or automated tests and calibration for a variety of air data equipment. We can tailor any system to meet customer-specific needs to support commercial and military requirements.

## **Air Data Support Equipment**

Raptor Scientific offers a range of flightline and laboratory support equipment for our calibrators and test set series. These include hose assemblies, pitot static adapters and kits, line switching manifolds, universal and fixed power supplies, pressure and vacuum sources.





ADC-2500V3  
Air Data Calibrator



ADC-2550 Air  
Data Calibrator



Benchtop  
Power Supply



ADTS-3350ER Air  
Data Test Set



Pitot Static Breakout Box  
with Line Switching Unit

## Product

## Part No.

### Flightline Air Data Test Sets

ADTS-3350ER Air Data Test Set  
ADTS-3300JS Air Data Test Set (F-15)  
ADTS-3250 Air Data Test Set (2-channel)  
ADTS-3250 Air Data Test Set (3-channel)  
ADTS-2000 Air Data Test Set  
TTU-205D Pressure-Temperature Test Set  
TTU-205J Flight Control System Test Set

ADTS-3350ER  
ADTS-3300JS  
ADTS-3250-2W  
ADTS-3250-3W  
ADTS-2000  
18910480000  
200317658-30

### Air Data / Pressure Calibrators

ADC-2522 Air Data Calibrator  
ADC-2530 Air Data Calibrator  
ADC-2550 Air Data Calibrator  
ADC-2550V3 Air Data Calibrator  
ADC-2555 Air Data Calibrator  
ADC-2575 Air Data Calibrator  
ADC-2500 Air Data Calibrator  
ADC-2500V3 Air Data Calibrator  
Precision Pressure Controller Monitor

ADC-2522  
ADC-2530  
ADC-2550  
ADC-2550V3  
ADC-2555  
ADC-2575  
ADC-2500  
ADC-2500V3  
18905810000

### Benchtop / ATE Air Data Test Sets

ADTS-1530 Air Data Test Set  
ADTS-1555 Air Data Test Set  
ADTS-1575 Air Data Test Set  
F-16 I-AIS Air Data System

ADTS-1530  
ADTS-1555  
ADTS-1575  
TVCS-5500-16

### Ground Support Equipment

Line Switching Unit (LSU) Series  
Pitot Static Adapter Kit Series  
Pitot Static Adapters

TVCS-LSU-PTX-PSX  
TVCS-PSK-XXX  
- varies by aircraft -

### Lab Support Equipment

Power Supply, Fixed 115VAC 400Hz  
Power Supply, Universal  
Pressure Source Series (115/220V)  
Vacuum Pressure Unit, benchtop  
Vacuum Pump Source Series (115/220V)

TVCS-PS-1350  
TVCS-PS-1351  
ADC-2500-PRES-XXX  
VPU-1000  
ADC-2500-VAC-XXX

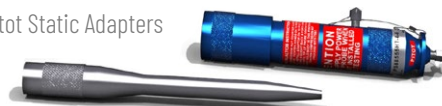
## Services

ISO17025 Accredited Calibration Services  
Repair & Overhaul Services  
Training

## Part No.

SV-CAL  
SV-RPR  
TRNG

Aircraft Pitot Static Adapters



# CALIBRATORS & TESTERS

## Pressure / Vacuum Calibrators

calibration and test of pressure and vacuum measurement instruments including Oxygen Clean, gauges and systems.

## Torque & Force Calibrators

Calibration of torque and force measurement tools and instruments up to 20,000 ft-lbs.

## Temperature Calibrators

Precision dry well temperature calibrators. Range from -40°F to 1200°F.

## Instrument Cleaning & Contamination Prevention

Gauge cleaning kits, super pressure fittings and Oxygen clean rated equipment.

## Test Chambers

Safety Test Chambers for proof and burst testing, depth gauge calibration and other specialized applications.

## Tachometer Testers

Calibrators for checking RPM indicators, Tachogenerators 4200 Regulus Temperature Calibrator and optical hand-held tachometers.



3461-1-104 Portable Calibration System



4200 Regulus Temperature Calibrator



Nomad™ Digital Pressure Gauge

Model 3750 Hand Pump



3112 Portable Live Pressure Tester



3714 Portable Torque Calibrator



3510 Safety Test Chamber

3689A Precision Pressure Standard



Model 3566  
Tire Gauge  
Tester

3666 High  
Pressure  
Calibration  
System



## Product

## Part No.

### Pressure Calibrators

3112 Portable Live Pressure Tester	3112-100-2000
3540 Portable Gauge Tester	3540-1-1
3461 Portable Calibration System	3461-1-1
3461 Portable Calibration System, Oxygen Clean	3461-1-104
3689A Precision Pressure Standard	3689A

### Tire Gauge Calibrators

3566 Tire Gauge tester	3566-1-1
3665 Tire Gauge Calibrator	3665-1-1

### Nitrogen Pressure Amplifiers (10,000 PSI)

3194 Portable Pneumatic Amplifier	3194-F
3666 Automatic Pressure Calibration System	3666-10K-3

### Hydraulic Pressure Calibrators

3712 Hydraulic Pressure Calibrator Kit	3712-1-1
3712 Hydraulic Hand Pump	3712-4-3
3750 Portable Pressure Calibration Kit, w/ gauges	3750-001-001
3750 Hand Pump (vacuum, pneumatic, hydraulic)	3750-011-001

### Dry Block Temperature Calibrators

3604A Portable Temp Calibrator High Temp	3604A-1-101
3605A Portable Temp Calibrator Low Temp	3605A-1-101
4200 Portable Temp Calibrator -Dual Power	4200-001-001

### Tachometer Test Set

3800 Tachometer Test Set (120V or 220V)	3800-001-XXX
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### Torque, Force and Tension Calibrators

3695 Torque and Force Bench (20,000 lb-ft)	3695-1-1
3714 Portable Torque Calibrator (250 lb-Ft range)	3714-1-250
3714 Portable Torque Calibrator (500 lb-Ft range)	3714-1-500
3615 Cable Tensiometer Calibrator	3615-1-1

### Test Chambers

3681 Vacuum/Low Pressure test chamber	3681-1-1
3510 Safety Test Chamber	3510

### Instrument Cleaning Systems

3646 Instrument Cleaning System	3646-1-1
3646 Instrument Cleaning System, Oxygen Clean	3646-1-104

# PHYSICAL PROPERTIES

## Weight and Center of Gravity (CG) Measurement Devices

26 standard models that can assess large spacecraft over 35,000 lbs down to bullet-sized objects of a few grams and millimeters.

## Moment of Inertia (MOI) Measurement

Capable of measuring a wide range of object sizes and weights and can measure MOI to better than 0.1%.

## Full Mass Properties

Instruments combine CG and MOI measurements with the world's most accurate technology.

## Dynamic Balancing

Measure Product of Inertia (POI) as well as Center of Gravity (CG) in both static or dynamic modes. Configurations accommodate explosion-proof and vacuum environments.

## Gimbal Balancing

We create the only comprehensive set of machines for gimballed platforms, such as those used in sensor suites and guided projectile seekers.

## Moment Weight Scales

Test the balance and moment weight of blades, fans and engine turbines with the extraordinary sensitivity of our single-axis or multi-axis measurement devices.

## Fixtures and Accessories

We fabricate custom-made adapters and positioning fixtures for all types of objects.

## Igniter Circuit Testers

Safe measurement of firing circuits in mission-critical components and complex systems.



Product of Inertia Spin Balance



KSR Center of Gravity Moment of Inertia Series



Gimbal Balance Machine

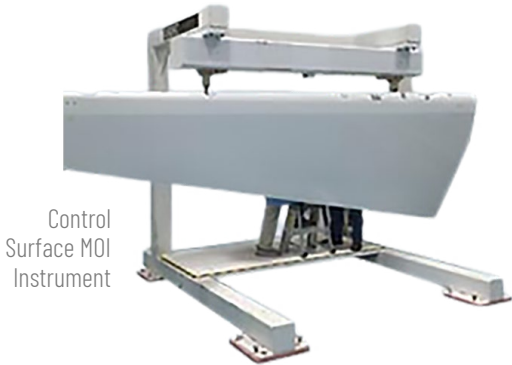


XR Moment of Inertia Instrument

XKR Small Payload Moment of Inertia Instruments



Igniter Circuit Testers



Control Surface MOI Instrument



CST-100 Starliner Spacecraft capsule on Raptor Scientific custom Weight and CG instrument

## Product

- Air Bearing
- Center of Gravity
- Fixture
- Full Mass Properties
- Gimbal Balance
- Igniter Circuit Tester
- Moment of Inertia
- Multi-Axis Moment Weight
- Product of Inertia
- Single-Axis Moment Weight
- Upgrade
- Weight & Center of Gravity

## Code

- FG-AB
- FG-CG
- FG-FXT
- FG-KSR
- FG-GB
- FG-ICT
- FG-MOI
- FG-MMW
- FG-POI
- FG-MW
- FG-UPG
- FG-WCG

## Services

- Basic Support
- Calibration
- Factory Service
- Field Service
- Lease, Igniter Circuit Tester
- Lease, Mass Properties Instrument
- Measurement Service
- Misc Repair
- PM and Engineering Services
- Service, Igniter Circuit Tester
- Training

## Code

- SP-BS
- SP-CAL
- SP-FV
- SP-FS
- LE-09
- LE-08
- SP-MSRMT
- SP-MR
- SP-PM
- SV-ICT
- TRNG

# RF SYSTEMS

## **InfiniScan Max**

The InfiniScan Mechanically Assisted, or MAX, system variant leverages metrology-grade location tracking and built-in automation for highly accurate and repeatable aperture formation. The MAX system RF Head leverages the WaveCore source/receive module to cover the frequency range of 2-18 GHz, coupled with a custom-designed antenna to collect both horizontal and vertically polarized data. The incorporation of automation to control the aperture formation and maintain true desired observation geometry greatly improves measurement performance over traditional methods.

## **InfiniScan Handheld**

The handheld unit employs the WaveCore microwave transceiver which contains all the RF electronics and antennas to cover the frequency range of 2 - 18 GHz. Simple user controls and an on-board display allow the user to operate all functions of the software to calibrate the radar, align to the target, measure the target, and view the data which was collected.

## **InfiniScan Backpack Unit**

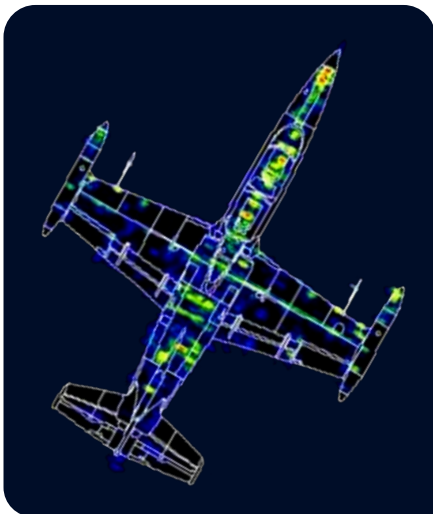
The backpack unit has a padded waistband and shoulder straps as well as a hard-shell enclosure that houses custom electronics to provide power and communication signals to the handheld unit. Ruggedized and latching circular connectors and a custom cable are the only interfaces between the backpack and handheld unit. An auxiliary circular connector provides access to additional signals such as Ethernet, USB, and VGA.



InfiniScan (HH2)  
on Mobility Kit B



InfiniScan MAX  
with Band 3



## Product

## Part No.

HH1, High Performance Workstation	DK51000D
HH1, Rugged Workstation	DK51001D
HH1, TEMPEST Workstation	DK51002D
HH2, High Performance Workstation	DK52000D
HH2, Rugged Workstation	DK52001D
HH2, TEMPEST Workstation	DK52002D
MAx, Band 3	DK53000D
MAx, Band 2, Band 3, Mini-MAx	DK53004D
Modernization Upgrade, SCI-2k, LS11	RFS-3KA
Modernization Upgrade, SCI-2k-B2A	RFS-3KB
InfiniScan Transmitter Set	DK10100D
InfiniScan Alignment Wand	DK01422D
Analysis Workstation, High Performance, Handheld	DK10310D
Analysis Workstation, Rugged, Handheld	DK10300D
Analysis Workstation, TEMPEST, Handheld	DK10301D
Analysis Workstation, Rugged, MAx	DK10321D
Analysis Workstation, TEMPEST, MAx	DK10322D
System Referencing Set A	DK10200D
System Referencing Set B	DK10201D
Mobility Kit B, Base	DK10002D
Mobility Kit B, HH1	DK10002D-01D
Mobility Kit B, HH2	DK10002D-02D
Mobility Kit B, HH1 & HH2	DK10002D-03D
Sensor Payload, Band 2, IPS	DK01423D
Sensor Payload, Band 2, no IPS	FA01423D
Sensor Payload, Band 3, IPS	DK00787D
Sensor Payload, Band 3, no IPS	FA00787D
Sensor Payload, Band 3, no IPS, no pan	FA00501D-01D
Sensor, Band 3, no IPS	FA00370D
Sensor Payload, Band 4, IPS	FA00450D
Camera, Sensor add-on	DK00914D
RFS-R3 Rotator	CC10100D
Control Interface	FA00175D
Sensor Interface Cable	FA00176D
Foam Column Support, RFS-R3	FA00177D
InfiniScan Mini-MAx	FA13001D

# RAPTOR SCIENTIFIC®

## RAPTOR SCIENTIFIC PRODUCT LINES



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Berlin, CT 06037



**+1 (860) 829-0001**

CAGE: 52892



### Raptor Scientific - Avionics Systems

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Peterborough, NH 03458



**+1 (603) 924-5922**

CAGE: 1A9E1



### Raptor Scientific - RF Systems

7950 National Drive  
Livermore, CA 94550



**+1 (925) 443-9001**

CAGE: 1K9E2



### Raptor Scientific - Pressure Temperature

6421 Independence Avenue  
Woodland Hills, CA 91367



**+1 (818) 887-5460**

CAGE: 13859

Visit us online at [www.raptor-scientific.com](http://www.raptor-scientific.com) to learn more.