



## NEW RANGE OF INERTIAL SHAKERS

### INTEGRATING NEW TECHNOLOGIES

### FOR IN-FLIGHT CONDITIONS AND VARIOUS GROUND APPLICATIONS

## Newsletter # 8B

Best resolution: 1024 x 768 **Series EI 797 and EI 799**

The horizontal inertial shaker type EI 799 and the vertical inertial shaker type EI 797 deliver forces of 450 N. The shakers are powered by in-flight airborne three-phase, 115 V, 400 Hz amplifiers type A 520.

### Applications

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Air Refuelling Boom System (Courtesy EADS CASA)

## **Successful first flights of the new EADS Air Refuelling Boom System (ARBS)**

Madrid, 03 April 2006

On March 30, 2006 the first phase of the ARBS (Air Refuelling Boom System) flight test programme has successfully been completed after 3 years of development, where EADS CASA has completed the design and manufacture of this new generation refuelling boom. Preliminary results of the tests have shown the aircraft's handling qualities are not influenced by the boom installation.

[www.eads.net](http://www.eads.net)

To download the data sheet of the EI 797 inertial shaker, please follow the link: [Download PDF \(369 k\)](#)

To download the data sheet of the EI 799 inertial shaker, please follow the link: [Download PDF \(376 k\)](#)

## Series EI 20

During the preparation of vibration test, either for in-flight or ground, one of the main concerns is the correct position and wiring of triaxial accelerometers respecting X, Y and Z axes of the structure under test especially when the transducers are fixed inside a structure and different interfaces connections are used.

The 40 N inertial shaker type EI 20 was developed for this type of task. Local vibration in the X, Y and Z directions can be introduced by one engineer while he takes care of measuring the responses of the transducers.

The inertial shaker type EI 20 can be fixed on the structure or locally pressed to the structure under test.

To download the data sheet of the EI 20 inertial shaker, please follow the link: [Download PDF \(135 k\)](#)

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## **PRODERA IN-HOUSE PRODUCTS**

The products mentioned below are standard PRODERA products, fully operational.

**Our Design Team is at your disposal for special developments, either hardware or software**

### **GROUND VIBRATION TEST EQUIPMENT**

- Range of **Constant Force Modal Shakers (CFMS)** and **Current Controlled Amplifiers (CCA)**, **Modal Accelerometers** and **Conditioning Amplifiers**
- Multipoint excitation and acquisition system P-SYS-MODAL
- Latest version of P-WIN-MODAL software: the software calculates the modal parameters of a structure by using 4 different modal methods for increased accuracy
- Suspension systems for modal shakers and structures
- Shaker calibration systems certified according to NIST standard
- Modal software calibration device Strucsim-3-D

### **IN-FLIGHT TEST EQUIPMENT**

- P-FLIGHT-MODAL Flutter Prediction Software covering the sub, super and transonic ranges. Import data: GVT results or external
- P-FLUTTER-MONITORING: 32 channel Flutter Monitoring Software
- In-flight excitation equipment:
  - Pyrotechnical thrusters, ideal for multipoint synchronic in-phase or out of phase in-flight excitation
  - New range of inertial shakers and on-board 115 V / 400 Hz power amplifiers

### **Complementary Software and Systems:**

- Database management software

- Software solutions for FEM comparison
- PCM telemetry equipment

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