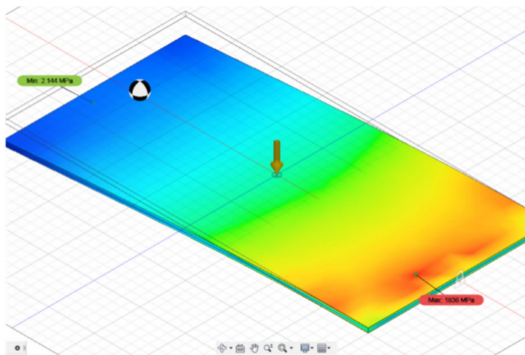
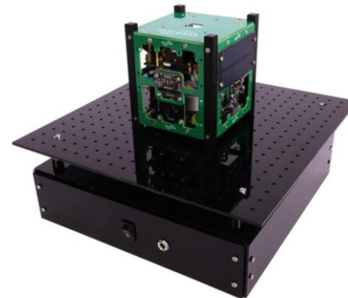
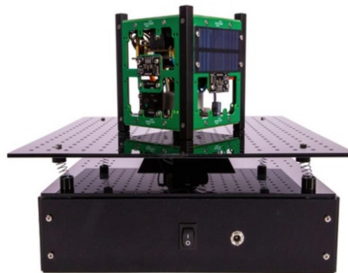




Introsat Educational Kit. Mechanical structures



The set expands Introsat™ constructors, includes the "Mechanical Structures" theme group.

It is used for conducting master classes and classes on the basics of designing, as well as for preparing for competitions.

The kits allow you to study individual techniques and methods of design, designed to withstand loads and the impact of an aggressive environment, allow you to assemble simple test benches and a system of deployable solar panels for a CubeSat satellite.

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The content of the course and the completion of the basic set allow you to conduct theoretical and practical classes, including:

- 🔧 Studying the external factors of outer space;
- 🔧 Carrying out the strength analysis of the load-bearing elements of the satellites;
- 🔧 Simulation of loading and optimization of the satellite design using CAD programs (CAD not included);
- 🔧 Assembling a prototype shaker for vibration testing of the power elements of a prototype rocket fairing;
- 🔧 Assembling a CubeSat 2U prototype solar panel drop-down satellite;
- 🔧 Testing CubeSat 2U solar panel deployment system;
- 🔧 Assembling a pressure chamber prototype (assembly kit sold separately);

PC or laptop is required to work with this kit.

3D modeling classes require CAD licenses (Fusion 360 or equivalent recommended).

Education Experience:

- ✓ Space flight factors,
- ✓ designing with load calculations,
- ✓ vibration tests of spacecraft,
- ✓ load-bearing elements of spacecraft structures,
- ✓ deployment of solar batteries

Engineering Skills:

- Structure design,
- 3D modeling,
- Durability/strength calculations

Hardware and Materials:

- 🔧 **A set of rails and body panels for the apparatus f/f CubeSat 2U,**
- 🔧 **a set of demonstration power elements (frames, layout stringers, material for the manufacture of the shell of the head fairing),**
- 🔧 **a set of components for assembling the shaker (side walls, cover, movable platform, lodgment, vibration motor, block power supply, switch, spring dampers),**

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- ✚ A set of additional components for assembling a stand for opening solar panels (transistor, fishing line, nichrome thread, elastic tape),
- ✚ A set of tools and fasteners for working on stands

