



Product Summary

- Compressor and Turbine Stages Readily Viewable
- Ball Bearing Mounted Rotating Assembly Permitting Full Rotation
- Turbomachinery Components Reveal Actual Blade Geometries
- Reverse Flow Annular Combustor Can Clearly Visible
- Complete with Custom Storage and Transportation Case

Students will learn: Internal design and engineering details of a turbojet engine powerplant.

Description

The SR-30™ Cutaway is a full scale example of the actual operating power plant with portions of selected components removed to reveal the inner workings of the engine. Consisting of a centrifugal compressor, annular combustor and axial flow turbine, the SR-30™ engine is typical of the gas generator core found in turbofan, turboprop and turboshaft gas turbine engines.

With the SR-30™ Cutaway, the entire flow process from inlet to exit is traceable, matching the path the fluids take through an operating engine. The SR-30™ Cutaway facilitates the qualitative understanding of gas turbine fundamentals and establishes a foundation for more advanced study. The SR-30™ Cutaway complements the MiniLab™ Gas Turbine Power System. It is an effective teaching aid and will further the understanding of gas turbine engine operation.

Unlike other cutaways or display models, the SR-30™ Cutaway is meant to be handled and used for demonstration purposes. Hands on manipulation of the rotating assembly and the ability to conduct tactile exploration of the flow path enhance student learning. Supplied with a rugged, road style transportation case, the SR-30™ Cutaway may be safely transported and securely stored. A free, two year warranty is provided on the SR-30™ Cutaway engine.

Details

Dimensions

SR-30™ Cutaway: 14.5 x 11.0 x 8.0 inches
(37 x 28 x 20 cm)

As Shipped: 18.0 x 14.0 x 12.0 inches
(46 x 36 x 31 cm)

Weight

SR-30™ Cutaway: 10 lbs (5kg)
Storage Case: 23 lbs (10kg)
Combined: 33 lbs (15kg)



SR-30™ Cutaway has a free two year warranty on the entire system

© 2014

All SR-30™ Cutaway specifications are subject to change

Experimental Opportunities

- Gas turbine fundamentals.
- Mechanical operating principles.
- Detailed flow path analysis and visualization.
- Mass and volume flow calculations.
- Construction of blade angle, flow and vector velocity diagrams.
- Examination of typical jet engine manufacturing and construction techniques.

Purchase Specifications

- A complete, full-scale turbojet engine with portions of selected components removed to reveal the inner workings of the engine.
- Engine to utilize a centrifugal flow compressor, reverse annular flow combustor and an axial flow turbine stage.
- Engine to be of current manufacture and consisting of all new components.
- All components either vacuum investment cast or precision CNC machined.
- Engine sufficiently open and accessible to trace entire gas flow through all components.
- Rotating assembly capable of full rotation as in operating engine.
- To be of robust design and construction
- permitting hands on usage.
- Engine supplied with and displayable on clear acrylic mounting stand.
- To be supplied with a latchable aluminum ATA approved travel and storage case.
- Provided with a comprehensive teaching narrative.