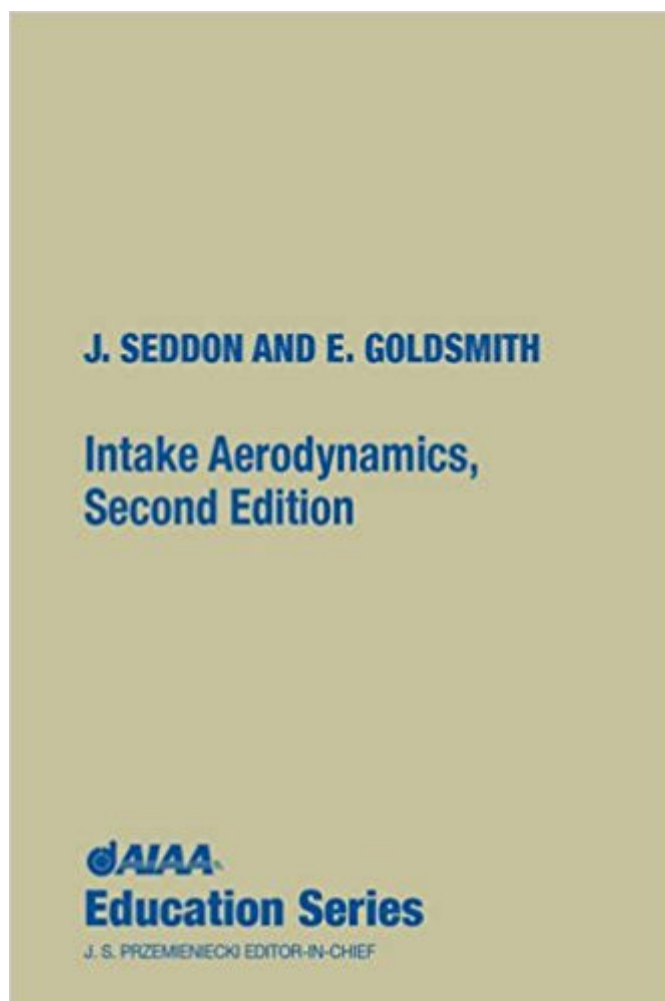


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# Intake Aerodynamics (Aiaa Education Series)



## Synopsis

Intake Aerodynamics, Second Edition presents new computational advancements and discoveries in intake aerodynamics. A companion volume to Practical Intake Aerodynamic Design, this important text considers the problem of airflow, both internal and external to air intake, as applied to civil and military aircraft. It covers the aerodynamics of subsonic and supersonic intakes in real flows, maintaining a progression through the transonic range. Also considered is the joint perspective of the airframe designer and the propulsion specialist in practical cases. Readers will gain insight into the fluid mechanics behind the deceleration of air from free stream to engine velocity, and an understanding of air compression and external drag in extensively revised chapters reflecting progress in the field. More than 300 drawings and diagrams help to illustrate the points defined throughout the book. Copublished with Blackwell Science Ltd

## Book Information

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## Customer Reviews

This Reference book is indispensable for aircraft engine design and aircraft conceptual design. The text addresses academic as well as experimental aerodynamics to various supersonic and subsonic engine intakes. It also provides design examples from existing operating aircrafts. The logical and historical oriented knowledge presented make this book a great added value. It is a prime specialized book in intake aerodynamics so that authors of aircraft conceptual design and aircraft engine design texts were referred to it as a prime source for engine intake design. The author takes

the reader insight experimental aerodynamics and empirical relations to designing a control schedule for ramps actuators and boundary layer bleed of a variable geometry supersonic intake, which is essential to set the control laws/logic of modern engines electronic controllers; like FADEC(Full Authority Digital Engine Control), EEC(Electronic Engine Control) or DECU Digital Engine Control Unit; for the fully rated engines as fighter engines or flat rating schedules for supersonic airliners throttle lever angle TLA position I recommend it for engine and aircraft designers and researchers seeking professionalism..

Very well book.

One of the most extensive volume devoted to the subject. The book is very rigorous, the mathematical level is well set out, being simple, advanced enough and limited to analysis aspects only. Quite impressive to me is the wide use of sketches, graphs and diagrams; they give a clear frame of physical phenomena occurring in "live articles". But the best of it is the description of solutions actually adopted in aircraft designs, to make the intake a workable "machine".

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