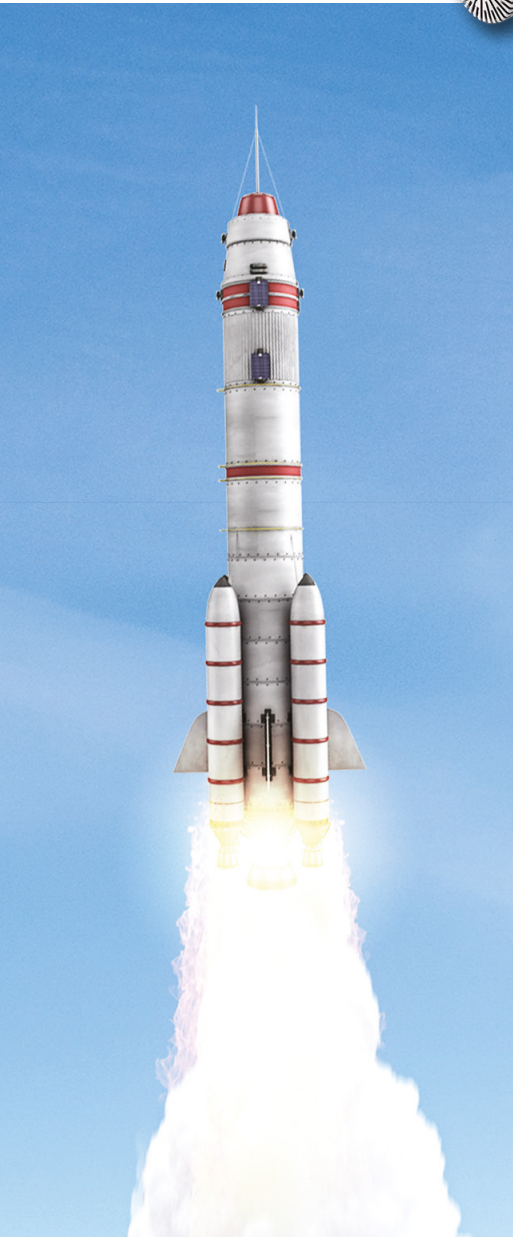


Acoustic Sensors for Aerospace & Defense

For reliable and repeatable measurements
the first time, every time



GRAS
An Axiometrix Solutions Brand

Test requirements and conditions don't get much tougher. Neither do our microphones.

GRAS acoustic sensors are built tough and durable for all your aerospace applications.

All industry applications bring their own challenges, but aerospace testing can be one of the harshest, pushing microphones to their limits. And there are always new test requirements for the constantly changing technologies that are quickly becoming mainstream. At GRAS, we know that often you only have one chance to record data, so having the right equipment is vital to obtaining reliable data.

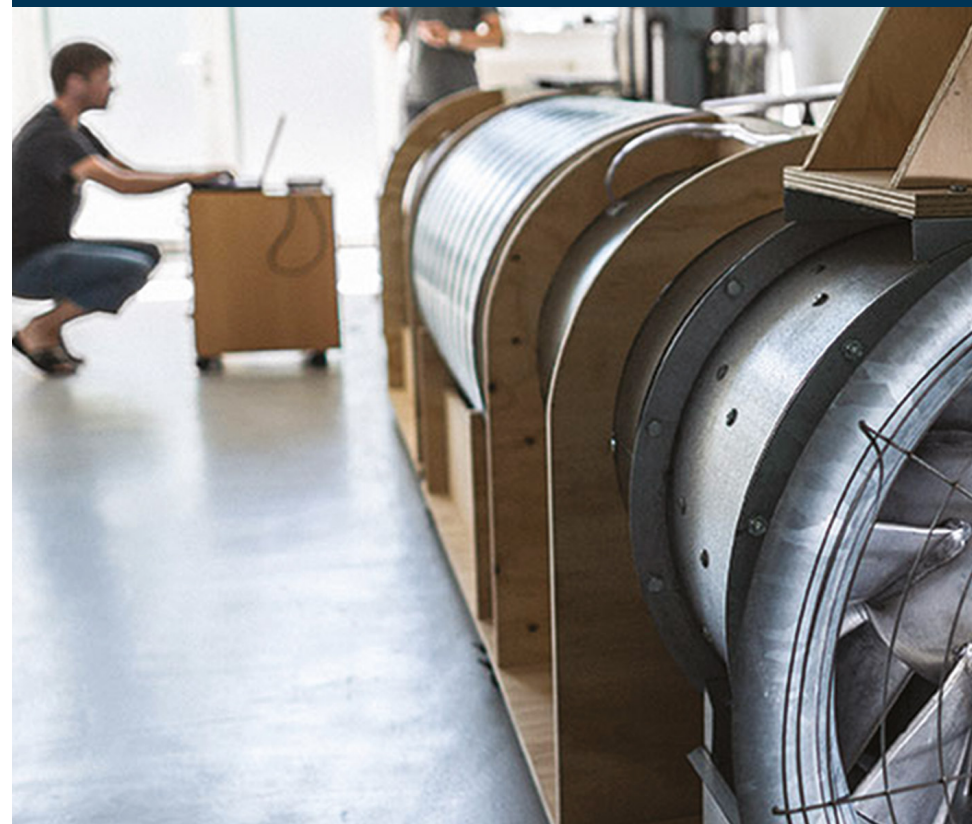
Shorter time-to-market requirements, new and complex technologies, and more pressure to "get it right the first time" in the testing phase, only makes your selection of acoustic sensors even that much more important.

Windtunnels are typically used to develop and confirm aerodynamic designs at a significantly reduced cost compared to full-scale flight testing. As an R&D engineer, you need reliable and repeatable data. The only way of achieving that is by using reliable microphones. That's why GRAS offers a wide range of acoustic sensors and rugged measurement microphones designed to endure the demanding requirements of extreme aerospace testing.

At GRAS, we have developed a wide range of acoustic sensors and rugged measurement microphones designed to help you reduce engine noise to help you meet aircraft noise certification standards. Our world-class equipment is suitable in all types of applications, including inflight measurements, fly-overs, acoustic vertical testing and land-based rigs.

Traditional approaches to testing often involve significant costs in both capital equipment and labor. With the industry moving toward returning to supersonic commercial flight, you need accuracy, flexibility and reliability in your test equipment. Only GRAS can offer you measurement microphones and acoustic sensors so you can collect high quality data while reducing test labor costs.

In the near future, we will see UAV's, sUAV's, drones and on-demand aviation vehicles providing services in cities across the world. As these technologies develop, so too will be the need for even more demanding acoustic testing. Trust GRAS to be the leading edge of your measurement chain.



We have the acoustic sensors to fit your aerospace application.

GRAS is the leading global provider of high quality, durable and reliable test microphones and is dedicated to finding new and better ways to measure aeroacoustics. From standard microphones, customized sensors, flyover arrays or microphones for extreme sound pressures, GRAS has the right products to help you develop tomorrow's flying machines today.

1/4" CCP Flush-mount Microphone Set

4 to 70 kHz | 44 to 166 dB(A) | -20 to 150°C

1/8" CCP Pressure Standard Microphone Set

6.5 to 70 kHz | 52 to 174 dB(A) | -30 to 70°C

1/2" CCP Pressure Standard Microphone Set

3.15 to 20 kHz | 25 to 150 dB(A) | -20 to 150°C

1/4" CCP Precision Surface Microphone, High Pressure

5 to 70 kHz | 56 to 178 dB(A) | -70 to 200°C

CCP Ground Array Microphone Kit

3.15 to 20 kHz | 22 to 150 dB(A) | -20 to 150°C



A Partner You Can Trust

For nearly two decades, GRAS has been at the forefront of developing a full range of acoustic sensors for aerospace and defense engineers by working closely with the leading manufacturers around the world. Today, GRAS offers the widest selection of acoustic sensors in the industry. We are always working to design and manufacture cutting-edge acoustic sensors that will provide you with the most reliable data—the first time and every time.

For more information about how GRAS can help with your aerospace and defense industry acoustic testing, please contact us today.

gras@grasacoustics.com

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Acoustic Sensors

GRAS Sound & Vibration

Skovlytoften 33, DK-2840 Holte, Denmark

Tel: +45 4566 4046

www.grasacoustics.com



Trust our experts for calibration and repair services for all microphone brands.

All GRAS products are tested thoroughly before being shipped from our manufacturing facilities in Denmark. However, all acoustic sensors should be calibrated on a regular basis to ensure accuracy and repeatability of measurements. When utilizing the GRAS US Calibration Lab, all calibration data is traceable to the world's largest laboratories: NPL, PTB & NIST. Calibrations are done individually and reported on calibration charts that document the precision of each microphone.

If you require accredited calibration of a GRAS product—or of any brand—count on the GRAS North American Calibration Lab to provide you with concise, dependable calibration and repair services.

Please contact us for more information on our calibration and repair services.

gras@grasacoustics.com

About GRAS

GRAS is a worldwide leader in the acoustic sensor industry. We design and manufacture state-of-the-art measurement microphones for industries where acoustic measuring accuracy and repeatability is of utmost importance in R&D, QA and production.

This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, and consumer electronics. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect and trust.

[Read more at grasacoustics.com](http://grasacoustics.com)

