



Air data boom, HondaJet,
Credit: Honda Aircraft Company, Inc.

SpaceAge Control

Air Data Sensing

Small Aircraft Special Edition S164A(NC)

Established in 1968, SpaceAge Control provides performance-leading air data sensing products within an ISO9001:2000 / AS9100B-compliant quality system. Located in Palmdale, California USA near Edwards AFB, the Skunk Works, and Mojave-based Scaled Composites, SpaceAge Control's high-precision and durable products are used by over 300 entities spanning the globe including aircraft manufacturers, flight research organizations, systems suppliers, racing teams, and R&D institutions.

Angle of Attack Sensor for Small- and Mid-Sized Aircraft

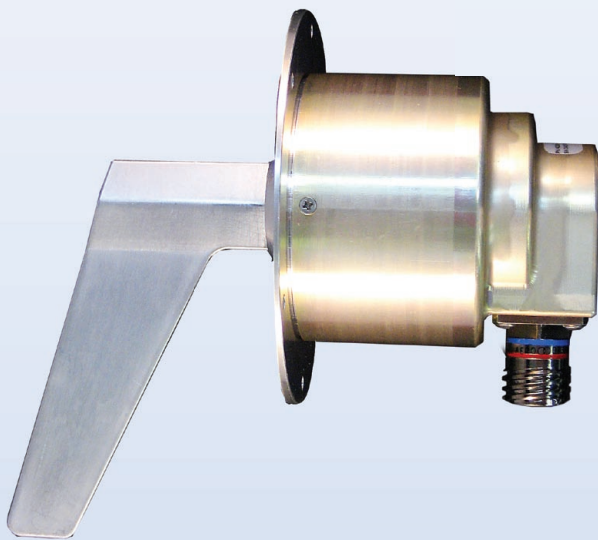
Low power draw and low mass meet specific requirements of commuter, business, and general aviation aircraft.

Small- and mid-size aircraft now benefit from lower power requirements and smaller size of the 4470-01 angle-of-attack (AOA) sensors from SpaceAge Control. Designed specifically to meet the needs of commuter, business, and general aviation aircraft, the 4470-01 AOA sensors provide:

- **100 W maximum power requirement (in-flight, continuous)**
- **1 lb. (454 g) weight maximum**
- **Deicing capability per TSO-C16A and BSI 2G-135 (Section 8.7.2)**
- **Electrical angle of -30 to +45 degrees**
- **User-specified electrical angles optionally available**
- **Heated vane and sensor case**

The products are a direct off-shoot of the SpaceAge Control's 30+ year heritage in producing angle of attack sensors for flight test aircraft. The products provide data to angle-of-attack indicators, stall warning computers, and stall prevention systems.

"Customers asked us to supply an airflow sensor designed with smaller size, lower weight, and, most critically, lower power draw", stated Thomas M. Anderson III, CEO. "To date, the 4470-01 product has exceeded the design requirements to include a severe deicing test based on TSO C16a requirements."



4470-01 angle of attack sensor provides small- and mid-sized aircraft airflow sensing with low power draw and low mass.



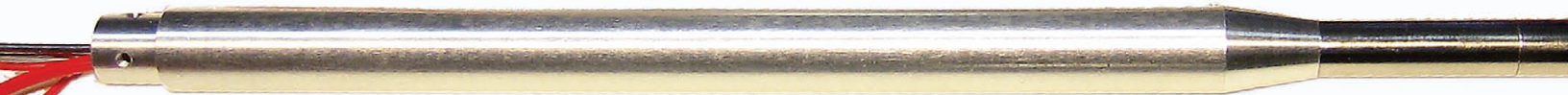
Air data boom, Super King Air, Credit: USAF



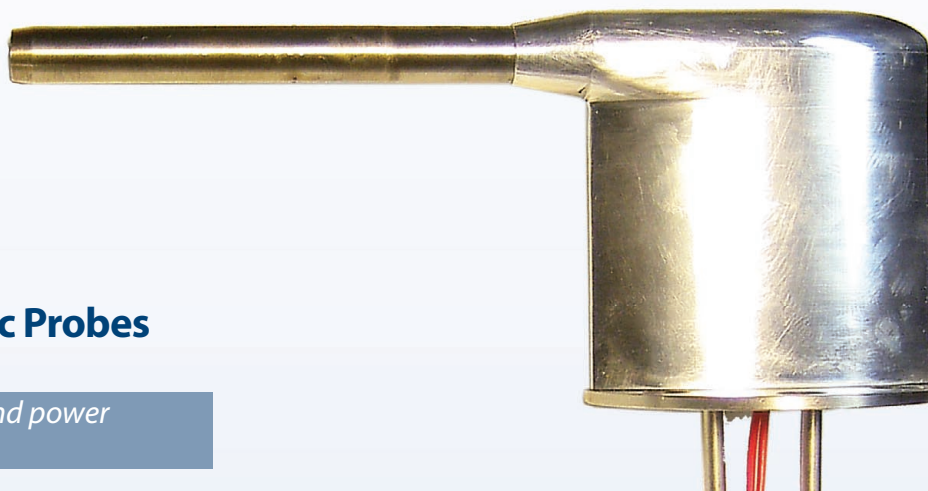
Air data boom, Northrop Grumman Firescout VTUAV, Credit: Northrop



Air data boom, Pilatus PC-21, Credit: Pilatus



The 4207-XX pitot and pitot-static probes are offered in L and straight configurations for small- and mid-sized aircraft and UAVs. Products shown near actual size.



4207 Pitot and Pitot-Static Probes for Light Aircraft

Air data probes reduce mass, size, and power worries for avionics engineers.

Avionics engineers have less to worry about with the 4207-series pitot and pitot-static probes from SpaceAge Control. Designed specifically for the unique needs of small- and mid-sized aircraft, the 4207 probes have low power requirements, small size, and low mass, all at an affordable price.

Today's smaller aircraft have much larger electrical power requirements due to increased avionics and other systems. But, smaller engines and space constraints cause avionics engineers to rigorously analyze the "power budget" for their systems. The 4207 probes significantly reduce the impact of air data systems on the aircraft's power budget.

In addition, smaller aircraft and UAVs have critical cost budget to adhere to. The 4207 product line was designed with affordability in mind.

"We are happy to have the first 4207 probes shipping to light jet and UAV users," said Ryan Beebe, Operations associate at SpaceAge Control. "These products literally take a huge load off of aircraft designers, both in terms of power requirements and mass reduction."

The product is also one of the first small aircraft-focused products to enter into qualification against the more demanding FAA TSO C16a requirement that increases de-icing requirements.

Key 4207 probe features include:

- **low power consumption: 55 Watts continuous for 4207-01 and similar (67% less current than AN-style probes)**
- **low mass: as low as 0.24 lbs. (109 grams)**
- **small size: 0.313 inch (7.9 mm) probe tip diameter**
- **L and straight designs for fuselage, wing, nose, and tail mounting**
- **specific models meet FAA TSO C16a requirements**
- **proprietary total port severely restricts contaminants and water**
- **proprietary high-output, regulated heater for full deicing (not only moisture clearing)**

The 4207 probes are the first in a series of miniature air data products available from SpaceAge Control.

Other new products measure air temperature, angle of attack, and static air pressure.



The 4207-XX pitot and pitot-static probe shown in the L-shaped configuration that is most suitable for fuselage and wing surface mounting.



Air data probe, Terrafugia Transition, Credit: Terrafugia



Air data boom, Diamond Aircraft D-Jet, Credit: Diamond Aircraft



Air data probe, BAE SYSTEMS Herti 1A, Credit: BAE SYTEMS



Pitot Tubes and Pitot-Static Tubes Provide Industry-Standard AN5812 and AN5814 Interface

Air data probes give customers plug-and-play functionality with lower power and lower mass.



Air data boom, Cirrus Design Vision SJ50, Credit: Cirrus Design

Avionics engineers needing AN5812-mount pitot tube and AN5814-mount pitot-static tube compatibility but requiring the latest in low power, low mass, and small size technology can now specify SpaceAge Control 4380-type air data probes. Unlike legacy-design AN-type products, the new 4380 and 4420 series probes meet FAA TSO C16a deicing requirements.

Small and mid-sized aircraft have much larger electrical power requirements due to increased avionics and other systems. But, smaller engines and space constraints cause avionics engineers to rigorously analyze the "power budget" and "mass budget" for their aircraft. The 4380 and 4420 series air data probes significantly reduce the impact of air data systems on the aircraft's power and mass budgets.

The 4380 series pitot probe has mechanical compatibility with the AN5812 design.



The 4420 series pitot-static probe has mechanical compatibility with the AN5814 design.

Key features of the 4380 and 4420 series air data probes include:

- provide mechanical interchangeability with AN5812- and AN5814-type probes
- low power consumption: 45 watts continuous (65% lower than AN5812 probes with superior icing protection)
- low mass: 0.24 lbs. (91 grams) (65% lower than AN5812 probes)
- small size: 0.314 inch (8 mm) probe tip diameter
- optional heated strut on L-shaped designs to meet FAA TSO C16a deicing requirements
- optional industry-standard D38999 miniature connector to replace AN3115 connector
- proprietary total port severely restricts contaminants and water and provides for unprecedented low power consumption.
- proprietary high-output, self-regulated heater for full in-flight deicing (not only moisture clearing)
- short lead times: ship dates of 30 days or less

The products mount in precisely the same fashion as the AN-type probe being replaced, making STC and other certification processes simpler and faster.

Technical Information Request

To obtain technical information on the products below, check the items you are interested in and return this form via:

- fax **+1-661-273-4240**
 - e-mail **s164@spaceagecontrol.com**
 - or mail **SpaceAge Control, 38850 20th Street East, Palmdale, CA 93550 USA**
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- | | |
|---|---|
| <input type="checkbox"/> 4470 angle of attack sensor | <input type="checkbox"/> 4222/4454 air temperature sensor |
| <input type="checkbox"/> 4207 pitot and pitot-static probes | <input type="checkbox"/> 4447 static pressure ports |
| <input type="checkbox"/> 4383 air data probe | <input type="checkbox"/> 100100 trailing cone |
| <input type="checkbox"/> 4512 air data probe | <input type="checkbox"/> 4380 pitot probe |
| <input type="checkbox"/> 4420 pitot-static probe | <input type="checkbox"/> 101100 subminiature air data probe |

Or, send an e-mail or fax message with your contact details.



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