

BEECHCRAFT DUKE
GROSS WEIGHT INCREASE
VORTEX GENERATOR KIT

60/A60/B60

PERFORMANCE SPECIFICATIONS

	Factory Performance	BLR Performance	The BLR Difference
Max. Ramp Wt.	6814	7004	+190
Gross Takeoff Wt.	6775	6965	+190
Min. SE – V_{mc}	85	77	-8
Min. SE – Flaps 15°	N/A	71	N/A
Stall clean – V_s	82	77	-5
Stall dirty – V_{so}	76	70	-6
Liftoff – V_{lof}	94	82	-12
Liftoff – Flaps 15°	N/A	76	N/A
Short Fld Approach	99	78	-21

Speed shown in KIAS

Weight shown in pounds

Notes:

1. Company test data and FAA-Approved numbers. See AFMS for certified performance.
2. Stall speeds are certified at new gross weight, forward CG and zero thrust.
3. V_{mc} is certified at light weight, aft CG and windmilling propeller.
4. V_{lof} = V_{mc} + 5 KIAS; Short field is 1.15 x V_{so} & V_{ref} = 1.3 x V_{so} at maximum landing weight.
5. Kit installation time is approximately eight man-hours, plus airspeed dial face change.
6. Kit includes comprehensive installation manual, FAA-Approved Flight Manual Supplement, 98 vortex generators, templates, adhesive, paint, dial faces and all necessary documentation, including serialized Supplemental Type Certificate (STC).
7. Funds quoted in US dollars, plus shipping & handling.

FAA- & CAA-Approved
STC#SA5761NM

BLR VORTEX GENERATOR TECHNOLOGY

SAFETY ♦ PERFORMANCE ♦ PROFIT

Vortex Generators have become the standard value-added performance modification in general, commercial and military aviation today. Boundary Layer Research, Inc., is the industry leader in the design, testing and certification of this airflow technology and its associated benefits. Additionally, BLR is known for its exceptional worldwide customer service and dealer support.

Discovered over 60 years ago by the British, the benefits of this airflow technology were brought to the commercial market in 1987. Most of the men and women on the engineering and flight test team which pioneered the practical application of this discovery are associated now with Boundary Layer Research. Company President Bob Desroche flew the first Baron-equipped prototype during its initial development, certified the majority of the models now available and is still designing, testing and certifying new models today.

All kits consist of small highly engineered aluminum tabs that are glued onto the wing aft of the leading edge in very precise locations. Installations on twin-engine aircraft incorporate VGs on the vertical tail for improved rudder authority and many kits utilize riveted strakes to improve the airflow around the engine nacelle and wing attach intersections. Various kits incorporate additional aft body strakes and/or small delta fins to create much needed airflow modification.

Each model-specific kit is designed to optimize the airflow over the wing. The VGs energize the airflow by spinning it into tiny vortices which travel over the wing and compress the boundary layer. This compression delays the onset of a stall by forcing airflow separation further aft along the wing chord, thus allowing the wing to achieve a higher angle of attack before actual stall separation occurs. A pronounced stall buffet occurs as a result of controlled separation, and when complete separation does occur it is designed to be docile.

As a result of each kit's installation, operators realize immediate benefits. Many models receive a certified increase in useful loads, each receives much improved aileron response in all flight configurations especially leading into and throughout the stall, as well as a virtual elimination of V_{mc} for twins due to it's being reduced to or below the stall speed. Low speed performance is achieved with no measurable loss of speed in cruise flight on properly rigged aircraft.

- ⇒ **Increased useful load (most models)**
- ⇒ **Elimination of V_{mc} (most models)**
- ⇒ **Increased aileron effectiveness in all flight configurations**
- ⇒ **Shorter takeoffs and landings with steeper climbouts and approaches**
- ⇒ **Decreased tire and brake wear**
- ⇒ **No speed loss in cruise flight on properly rigged aircraft**
- ⇒ **Approved for known-icing aircraft**
- ⇒ **Easy one-day installation**
- ⇒ **No Weight and Balance revision required**
- ⇒ **No additional maintenance required**
- ⇒ **FAA-Approved with an STC for each model**

CALL 1-800-257-4847