

SECTION 5

PERFORMANCE

		Page
5.1	INTRODUCTION	5-2
5.2	PERFORMANCE CHARTS	5-3
5.2.1	Airspeed Calibration	5-3
5.2.2	Stall Speeds	5-4
5.2.3	Wind Components / Crosswind Component	5-5
5.2.4	RESERVED	5-6
5.2.5	Takeoff Distance	5-7
5.2.6	Climb Performance / Altitude	5-8
5.2.7	Cruise Power Settings	5-9
5.2.8	RESERVED	5-10
5.2.9	Cruise Performance	5-11
5.2.10	Endurance Profile	5-12
5.2.11	Range Profile	5-13
5.2.12	Climb Performance after Balked Landing	5-14
5.2.13	Landing Distance	5-15
5.2.14	Noise Characteristics	5-16
5.2.15	RESERVED	5-17

<i>Document No.:</i>	<i>Issue:</i>	<i>Revised Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-100E	A.03	A.01	15.4.03	5-1

5.1 INTRODUCTION

The performance data in the following charts shows what to expect from the AQUILA AT01. The provided information serves as basis for the flight planning before every flight.

All data in the charts has been computed from flight tests with the aircraft and engine in good condition, and then transferred into ISA conditions (15°C and 1013,25 hPa at sea level).

The presented data are achieved with a good maintained aircraft and with average piloting techniques. The chart procedures were followed precisely.

Fuel flow data for cruise are based on the recommended RPM / manifold pressure setting at all altitudes. However, fuel flow and in result endurance with and without reserve is strongly dependent on engine condition, the surface quality of the aircraft, and meteorological conditions.

For a precise flight planning and to estimate the fuel required for the particular flight, all available information should be used and all influencing factors should be considered.

<i>Document No.:</i>	<i>Issue:</i>	<i>Revised Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-100E	A.03	A.01	15.4.03	5-2

5.2 PERFORMANCE CHARTS

5.2.1 Airspeed Calibration

The airspeed calibration considers the position error yet not the instrument error.

Assumption: Zero Instrument Error

Example: 120 KIAS = 118 KCAS

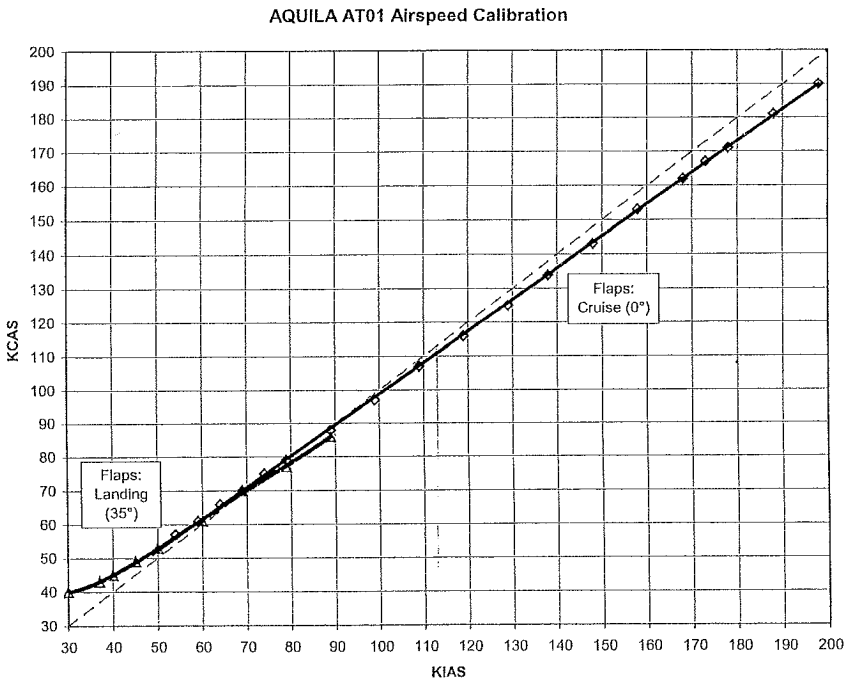


Fig.: 5.2.1 Airspeed Calibration

Document No.:	Issue:	Revised Issue:	Date:	Page:
FM-AT01-1010-100E	A.03	A.01	15.4.03	5-3

5.2.2 Stall Speeds

Conditions, in which the stall speeds were determined:

-
- Center of Gravity Location CG. = 31% MAC
- Takeoff Weight 750 (kg)

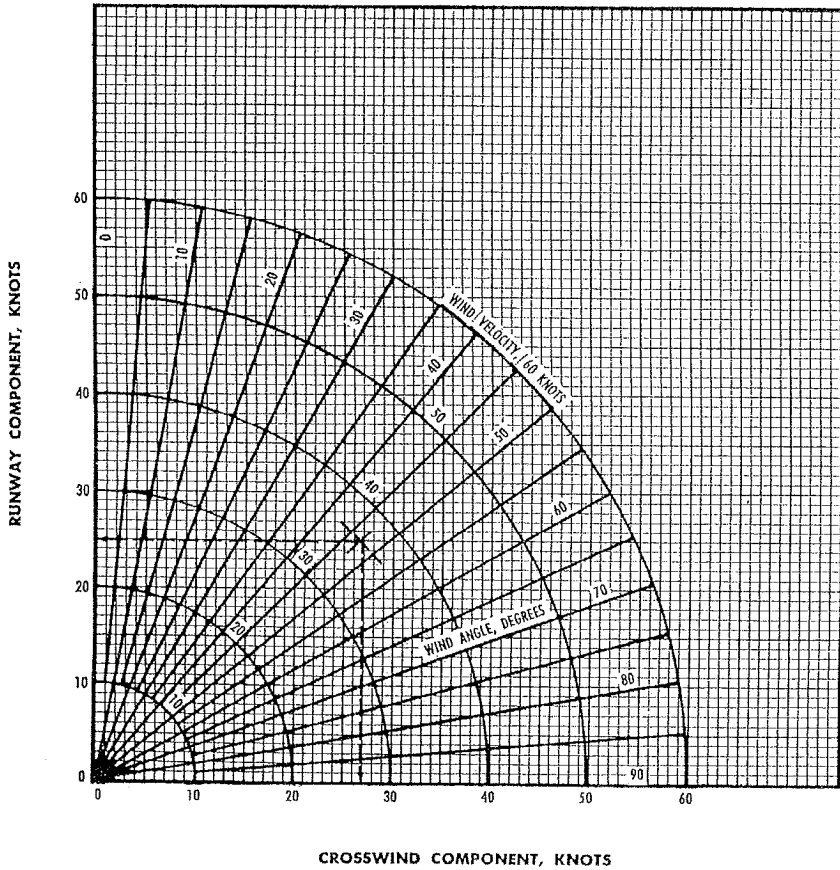
Power Setting	Flap Position	V _s	V _s
%	Position	KCAS	KIAS
75	Cruise	46	40
75	Takeoff	42	34
75	Landing	40	31
IDLE	Cruise	52	43
IDLE	Takeoff	47	40
IDLE	Landing	43	38

Tab.: 5.2.2 Stall Speeds in Straight-and-Level Flight

Document No.:	Issue:	Revised Issue:	Date:	Page:
FM-AT01-1010-100E	A.03	A.01	15.4.03	5-4

5.2.3 Wind Components / Crosswind Component

Maximum demonstrated crosswind component: 27 (km/h), 15 (Knots)



Document No.:	Issue:	Revised Issue:	Date:	Page:
FM-AT01-1010-100E	A.03	A.01	15.4.03	5-5

5.2.4 RESERVED

[Intentionally left blank]

<i>Document No.:</i>	<i>Issue:</i>	<i>Revised Issue:</i>	<i>Date:</i>	<i>Page:</i>
FM-AT01-1010-100E	A.03	A.01	15.4.03	5-6