



2.1 Introduction

Section 2 includes operating limitations, instrument markings and basic placards necessary for the safe operation of the aircraft, its engine, standard systems and standard equipment. Limitations for optional systems and equipment are shown in Section 9 and in Supplements.

2.2 Airspeed

Airspeed limitations at MTOW and their operational significance are shown below:

Speeds (for aircraft at 472.5 kg)		CAS/EAS in km/h (Calibrated)	IAS ² in km/h (Indicated)	Remarks
VNE	Never Exceed Speed	224		Do not exceed this speed in any operation. ($V_{NE} = .9 \times V_D$)
Vc	Maximum structural cruising speed	201		Do not exceed this speed except in smooth air, and then only with caution. ($V_C = V_{RA} \leq .9 \times V_{NE}$)
VA	Maneuvering Speed	146		Do not make full or abrupt control movement above this speed, because under certain conditions the aircraft may be overstressed by full control movement.
VFE	Maximum Flap Extended speed	130		Do not exceed this speed with flaps extended.
Vs1	Stall Speed	73		Stall speed without flaps
Vs0	Stall Speed	63		Stall speed with flaps extended

¹ Symbols and Speeds applicable to aircraft operating in compliance with LTF-UL (2003) standards.

² **Indicated Airspeed (IAS):** As airspeed indicators and pitot tubes and lines can vary slightly from one aircraft to another, color markings and IAS (at sea level and standard pressure) should be checked and measured for every aircraft (enter appropriate IAS in the column provided above).

Enter Revision 0.1 of this page and the next (2-1 and 2-2) in the Flight Manual of the Zodiac CH 601 XL and note the substitution on the "Record of substitution" (page ii) at the front of the manual.



2.3 Airspeed indicator markings

Airspeed indicator markings and their color-code significance are shown below:

Color Markings	Symbols (defined by LTF-UL)	CAS/EAS in km/h (Calibrated)	IAS ² in km/h (Indicated)	Significance
White Arc	$V_{SO} \times 1.1$ to V_{FE}	70 - 130		Flap Operating Range
Green Arc	$V_{S1} \times 1.1$ to V_{RA}	80 - 201		Normal Operating Range
Yellow Line	V_A	146		See note below ³ ($\sqrt{n_1} \times V_{S1}$ or $2 \times V_{S1}$)
Yellow Arc	V_C to V_{NE}	201 - 224		Maneuvers must be conducted with caution and only in smooth air.
Red Line	V_{NE}	224		Never Exceed Speed. Maximum speed for all operations.

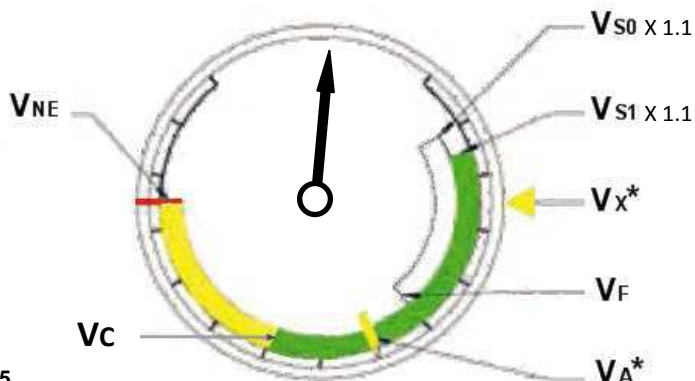
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³ **More about V_A :** V_A is defined as $V_{S1} \times \sqrt{n_1}$ (LTF-UL 335.1). In plain language, V_A is the maximum speed at which the controls may be fully (and smoothly) deflected in calm air as long as n_1 (4 "g") is not exceeded. Since most aircraft are not equipped with a "g" meter, **full** deflections "for fun" should be avoided; remember that aerobatics are prohibited in ultralights.

**Markings required on ASI
for German LTF-UL compliance.**

(Requirements in other countries may vary).



Source: Lufttüchtigkeitsanweisung
LTA-Nr.: LSG 05- 008 Datum der Bekanntgabe: 06.07.05

Document Reference:
Notice No: ZE-2009-03

Date of issue:
July 31, 2009

Revision: 0.1
Replaces: Z601XLFMEN:2-2

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