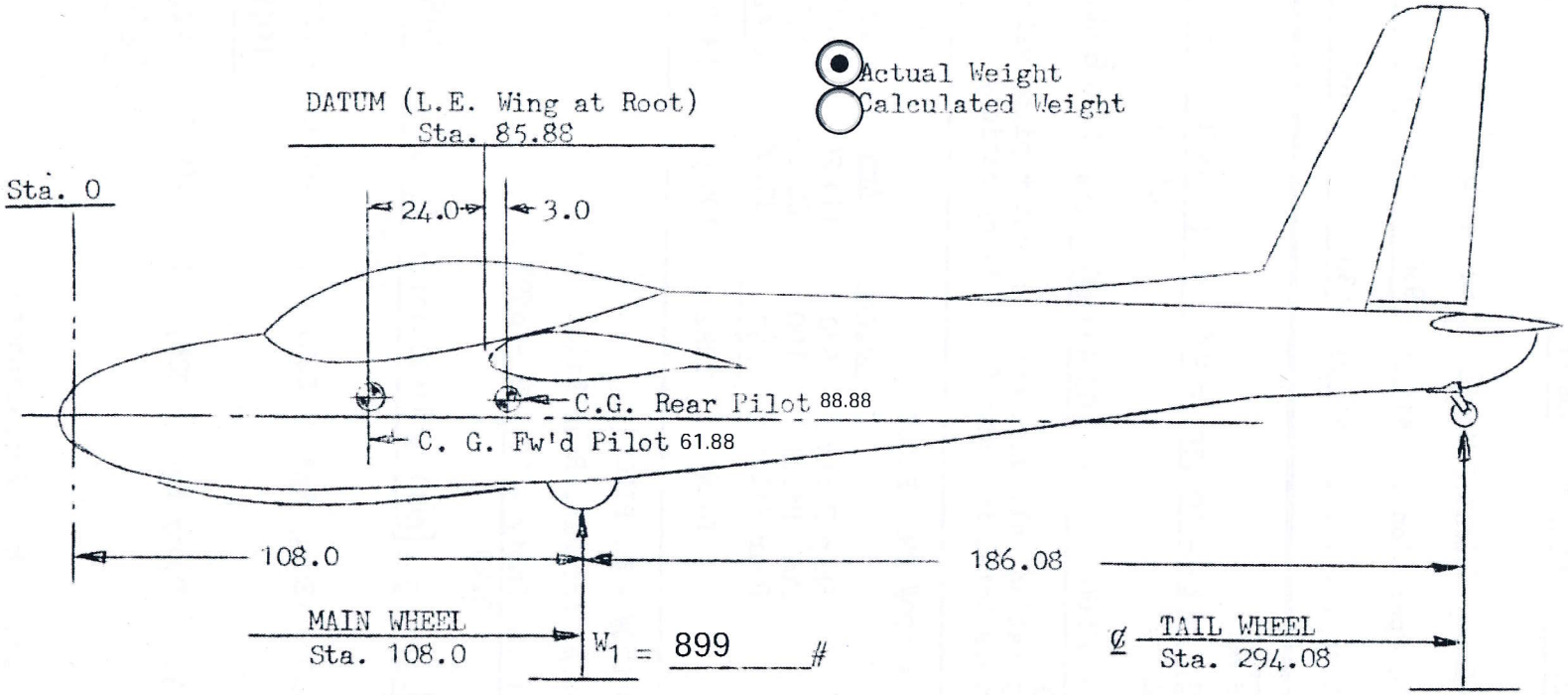
SCHWEIZER AIRCRAFT CORPORATION
ELMIRA, NEW YORK 14902

FORM I-4356-1
Rev. 6-65

WEIGHT & BALANCE, MODEL NO. SGS 2-32 SER. NO. 27 REG. NO. N9864E DATE: 24 Jul 2017



Empty Wt. = $W_1 + W_2$ = 899 + 31 = 930 #

Empty C.G. (Sta.) = $\frac{W_2 \times 186.08}{W_1 + W_2}$ + 108 = 6.20 + 108.0 = Sta. 114.20

SHIP AS WEIGHED INCLUDES EQUIPMENT LISTED ON I-4356-3

NOTES: See Glider Data Sheet No. G1EA - Fw'd Pilot C.G. at Sta. 61.88 - Rear Pilot C.G. at Sta. 88.88

CLASS I, HIGH PERFORMANCE: C. G. Limits at Maximum Weight (1340#), Sta. 101.08 to Sta. 105.18 or 15.2 to 1930" Aft Datum.
C. G. Limits at 1130 lbs. or less, Sta. 101.08 to Sta. 106.38 or, 15.2 to 20.50" Aft Datum.

CLASS II, UTILITY: C. G. Limits at Maximum Weight (1430#) Sta. 101.08 to Sta. 105.18 or 15.2 to 19.3" Aft Datum.
C. G. Limits at 1340 lbs. or less, Sta. 101.08 to 106.38 or, 15.2 to 20.5" Aft Datum.

SCHWEIZER AIRCRAFT CORPORATION
ELMIRA, NEW YORK 14902

FORM I-4356-2
Rev. 6-65

WEIGHT & BALANCE, MODEL SGS 2-32

SER. NO. 27 REG. NO. N9864E

USEFUL LOAD: = Max. Gross Weight -Empty Weight = Useful Load in lbs.

For Class I, High Performance Operation . . *1340 - 930 = 410 lbs

For Class II, Utility Operation . . . . . *1430 - 930 = 500 lbs.

MIN. WEIGHT PILOT - SOLO - FRONT SEAT:

$$\text{Pilot Weight} = \frac{\text{Empty Weight (C.G. Empty - 106.38)}}{44.50} = \frac{930 \times (114.20 - 106.38)}{44.50} =$$

$$\frac{\times 7272.60}{44.50} = 163.4\ (164)\ \text{lbs.}$$ If No Ballast used

(This formula valid for Class I operation only when empty weight + pilot weight does not exceed 1130#, weights above this total indicate Class II operation).

MIN. WEIGHT REAR PILOT, (ASSUMING A 100# FWD. PILOT):

	Weight	Arm	Moment
Ship Empty	930	114.20	106206
Fwd. Pilot	100	62.00	6,200
Rear Pilot	252	89.00	22428
Total	1282	105.17	134834

MAX. WEIGHT REAR PILOT, (ASSUMING 220# FWD. PILOT):

(Use lower weight from Step #1 or #2 for Max. Rear Pilot Wgt.)

STEP #1: Pilot Wgt. = $\frac{\text{Empty Wgt. (C.G. Empty - 101.08 - 8597}}{12.20} =$

$$\left[\frac{930 \times (114.20 - 101.08)}{12.20}\right] - 8597.0 = \left[\frac{(930 \times (114.20 - 101.08)}{12.20}\right] - 8597.0 = 295\ \text{lbs.}$$

STEP #2: Class I: Pilot Wgt. =*1340 - (Empty Wgt. + 220) = 1340 -(930 + 220) = 190 lbs.

Class II:Pilot Wgt. =*1430 - (Empty Wgt. + 220) = 1430 -(930 + 220) = 280 lbs.

* Maximum Gross Weight:1340# (For Class I, High Performance)
:1430# (For Class II, Utility)

Prepared by: Douglas Mueller A&P 2648931 IA Checked by: _____

Date: 24 Jul 2017 Date: _____

Weight and Balance Examples

These examples are not valid without Schweizer form I-4356-3 dated 24 JUL 2017

Class 1 High Perf @1130# or less — C of G range 101.08 – 106.38

	Weight	ARM	Moment
Empty Wt.	930	114.20	106206.00
Fwd. Seat	200	61.88	12376.00
Rear Seat	0	88.88	
Total	1130	**104.94**	11852.00

Class 1 High Perf MIN Rear Weight @1340# — C of G range 101.08 – 105.18

	Weight	ARM	Moment
Empty Wt.	930	114.20	106206.00
Fwd. Seat	266	61.88	16460.08
Rear Seat	144	88.88	12798.72
Total	1340	**101.09**	135464.80

Class 2 Utility MIN Rear Weight @1430# — C of G range 101.08 – 105.18

	Weight	ARM	Moment
Empty Wt.	930	114.20	106206.00
Fwd. Seat	226	61.88	13984.88
Rear Seat	274	88.88	24353.12
Total	1430	**101.08**	144544.00

Class 2 Utility MAX Rear Weight @1430# — C of G range 101.08 – 105.18

	Weight	ARM	Moment
Empty Wt.	930	114.20	106206.00
Fwd. Seat	80	61.88	4950.00
Rear Seat	420	88.88	37329.60
Total	1430	**103.80**	148485.60

Prepared by: Douglas Mueller A&P 2648931 IA

SCHWEIZER AIRCRAFT CORPORATION FORM I-4356-3

ELMIRA, NEW YORK 14902 6-65

MODEL SGS 2-32

Date: 24 JUL 2017

SER. NO. 27 REG. NO. N9864E

The Empty Weight as shown on I-4356-1 includes the following equipment:

ITEM NO.	EQUIPMENT INSTALLED	WEIGHT	STA.	MOMENT
A.	Fixed Ballast pcs. Lead (48# Max.) (Dwg. #32919D)		2.70	
1.	Airspeed Indicator		37.00	
2.	Sensitive Altimeter		37.00	
3.	Magnetic Compass		37.00	
4.	Variometer Winter 0-1000'		37.00	
5.	Dual Seat Belt & Shld'r Harness – Rear		102.00	
6.	Wing Tip Wheels, (2)		112.00	
7.	12v Battery		35.00	
8.	Trig-21 Transponder		37.00	

PREPARED BY: Douglas Mueller A&P 2648931 IA

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

G1EA Revision 5 K & L Soaring, LLC SGS 2-32 November 29, 2010

GLIDER DATA SHEET NO. G1EA

This data sheet which is a part of type certificate No. G1EA prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder — K & L Soaring, LLC
5996 State Route 224
Cayuta, New York 14824

Type Certificate Holder Record — Schweizer Aircraft Corporation
County Airport, P.O. Box 147
Elmira, New York 14902

I - Model SGS 2-32, 2 PCLM, Approved June 19, 1964

Type — Class I, High Performance
Class II, Utility

Airspeed limits (CAS)

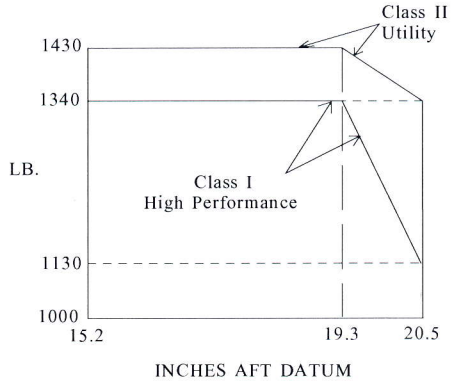
	Class I High Performance	Class II Utility
Vne-Glide or dive, dive brakes open	158 m.p.h.	139 m.p.h.
Vne-Glide or dive, dive brakes closed	150 m.p.h.	139 m.p.h.
Vta-Airplane tow	120 m.p.h.	110 m.p.h.
Vtaw-Auto-winch tow	86 m.p.h.	86 m.p.h.

C.G. range

Class I, High Performance
(+15.2) to (+20.5) at 1130 lb. or less
(+15.2) to (+19.3) at 1340 lb.

Class II, Utility
(+15.2) to (20.5) at 1340 lb. or less
(+15.2) to (+19.3) at 1430 lb.

Straight-line variation between points given.



Maximum weight — Class I, High Performance: 1340 lb.
Class II, Utility: 1430 lb.

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No. seats	Class I, High Performance:		2 (1 at -24) (1 at +3)			
	Class II, Utility:		3 (1 at -24) (2 at +3)			
Baggage	None					
Control surface movements						Limits
	Stabilator (trailing edge)	Up	19 1/2°	Down	9 1/2°	+0°, -3°
	Stabilator tab					
	Anti-servo	Up	36°	Down	22°	
	Trim	Up	6°	Down	7°	+ 2°
	Rudder	Left	39°	Right	29°	+ 1°
	Aileron	Up	29°	Down	13°	+0°, -3°
	Dive Brakes	Top Up	85°	Bottom		± 5°
				Down	85°	
Serial nos. eligible	2 and up					

Specifications Pertinent to All Models

Datum	Wing leading edge at root
M.A.C.	41.17 in. (L.E. of M.A.C. 4.87 in. aft of wing leading edge at root)
Leveling means	Two brackets on right side under aft deck
Certification basis	CAR 5 effective February 15, 1956, Amendment 5-1 effective May 3, 1962, and Basic Glider Criteria Handbook, 1962. Date of Application for Type Certificate June 5, 1962. Type Certificate No. G1EA issued June 19, 1964.
Production basis	None
Equipment:	The basic equipment as prescribed in the applicable airworthiness regulations (See certification basis) must be installed in the aircraft for certification.

NOTE 1. Suitable placards to cover the various pilot and passenger weights must be installed in full view of the pilot as determined from the manufacturer's weight and balance report.

NOTE 2. The following placards must be installed in full view of the pilot:

(a) "Solo front seat only."

(b) "Class I, High Performance

Max. glide or dive, dive brakes open	158 m.p.h.
Max. glide or dive, dive brakes closed	150 m.p.h.
Max. aero tow	120 m.p.h.
Max. auto-winch tow	86 m.p.h.

(c) "Class II, Utility

Max. glide or dive	139 m.p.h.
Max. aero tow	110 m.p.h.
Max. auto-winch tow	86 m.p.h.

Instrument flight prohibited."

NOTE 3. Glider characteristics are suitable for instrument flight, and the glider may be so approved for Class I, High Performance, provided that minimum equipment required by Civil Air Regulations for IFR flight is installed and operable. Flight in clouds permissible when altimeter and turn-and-bank indicator are installed.

NOTE 4. Auto-winch towing permitted provided recommendations in SGS 2-32 Pilot's Handbook are observed.

NOTE 5. Approved safety belt and shoulder harness required for each occupant.

...END...