

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

G1NM
RYSON
ST-100
July 1983

TYPE CERTIFICATE DATA SHEET NO. G1NM

This data sheet which is a part of type certificate No. G1NM prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Ryson Aviation Corporation
548 San Fernando Street
San Diego, California 92106

Model ST-100 (Self-Launching (Powered) Glider Utility Category and Glider High Performance Category), approved July 29, 1983.

Engine	Teledyne Continental Motors 0-200-A		
Fuel	80/87 octane (min. grade aviation gasoline)		
Engine limits	Sea level static:		
	takeoff		2750 RPM (100 hp)
	maximum continuous		2750 RPM (100 hp)
Propeller and propeller limits	(a) Hoffman HO-V62-R/170Y		
	(b) Pitch Control Mech. No. VP20-588		
	(c) Spacer No. VP20-580		
	(d) Spinner - Ryson P/N 40-011-33		
	(e) Pitch settings measured at 25 in:		
	full diameter of 67 in		
	Low	16.0° ± 1.0°	
	High	20.5° ± 1.0°	
	minimum diameter of 64 in		
	Low	17.5° ± 1.0°	
	High	22.0° ± 1.0°	
Airspeed limits (CAS)	Reduce Vno 1 knot per 1000 ft of altitude above sea level		
	All Glider Categories		
	Maneuvering - Va		108 knots (124 mph)
	Maximum structural cruising - Vno		122 knots (140 mph)
	Never exceed - Vne		140 knots (178 mph)
	Flaps extended - Vfe		108 knots (124 mph)
C.G. range	All weights and categories + 51.74 to + 56.54 in aft of datum (28% MAC to 38% MAC)		
Leveling means	Upper longeron		
Maximum weight		TAKEOFF	LANDING
	Glider utility	1750 lb	1702 lb
	Glider high performance	1650 lb	1650 lb
No. of seats	Maximum 2 Front seat at F.S. + 89.0 Rear seat at F.S. +123.0		
Minimum Crew	One		

Page No.	1	2
Rev. No.	-	-

Datum	Front face of engine firewall (F.S. +50.00)	
Maximum Baggage	20 lb at F.S. +144.0	
Fuel capacity	Two wing tanks, total 32 US gal (30 US gal usable) at F.S. +98.0	
Oil capacity	6 US quarts (Max.) at F.S. +39.0	
Control surface movements	Position of flap/aileron	Differential aileron available
	-12 degrees(up)	+7 degrees(dwn) to -27 degrees(up)
	0 degrees(neutral)	+18 degrees(dwn) to -27 degrees(up)
	+8 degrees(dwn)	+18 degrees(dwn) to -20 degrees(up)
	*+60 degrees(dwn)	+18 degrees(dwn) to -20 degrees(up)
	*Note: For this position the flap only is down 60 degrees. The aileron is limited to 8 degrees down.	
	All movements within $\pm 1^\circ$	
Serial Nos. eligible	S/N 001 and above	
Certification basis	The Model ST-100 is certificated as a self-launching (powered) glider. It meets the applicable requirements of:	
	1. Basic Glider Criteria Handbook, dated 1962.	
	2. FAA Advisory Circular AC 21.23-1, dated. January 12, 1981.	
	3. Part 36 of the Federal Aviation Regulations effective December 1, 1969, as amended through Amendment 36-12.	
Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for certification.	

- NOTE 1. Current weight and balance data together with list of equipment included in the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.
- NOTE 2. Operational Limitations. This self-launching (powered) glider is approved for day VFR only. FAR Part 91 establishes the minimum required instrumentation and equipment for this operation. Flight into known icing conditions is prohibited.
- NOTE 3. Ryson Aviation Corporation FAA Approved Airplane Flight Manual and FAA Approved Glider (Powered) Flight Manual, Report No. 100, incorporate a list of required placards, current weight and balance data, and equipment list.
- NOTE 4. The ST-100 is eligible for an Airworthiness Certificate as a self-launching (powered) glider under this data sheet, or as an airplane under Data Sheet A7NM, or an airplane/self-launching (powered) glider.

...END...