DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A7NM
RYSON
ST-100

TYPE CERTIFICATE DATA SHEET NO. A7NM

This data sheet which is a part of Type Certificate No. A7NM 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 (Airplane Normal Category, Airplane Utility Category, and Airplane Acrobatic Category), approved July 29, 1983.

Engine
Teledyne Continental Motors O-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) Hoffmann HO-V62-R/107Y
(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 airplane 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
Airplane normal	1750 lb	1702 lb
Airplane utiltiy	1750 lb	1702 lb
Airplane acrobatic	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
Datum	Front face of engine firewall (F.S. +50.0)
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 ± 1°

Serial Nos. eligible	S/N 001 and above
Certification basis	The Model ST-100 is certificated as an airplane. It meets the applicable requirements of: 1. Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended through Amendment 23-20 with the exception of FAR 23.1323 (Exemption No. 3551 dated June 28, 1982). 2. 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. The airplane 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 an airplane under this data sheet, or a self-launching (powered) glider under Data Sheet G1NM, or as an airplane/self-launching (powered) glider.

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