

THE



AND FLYER

SPECIFICATIONS

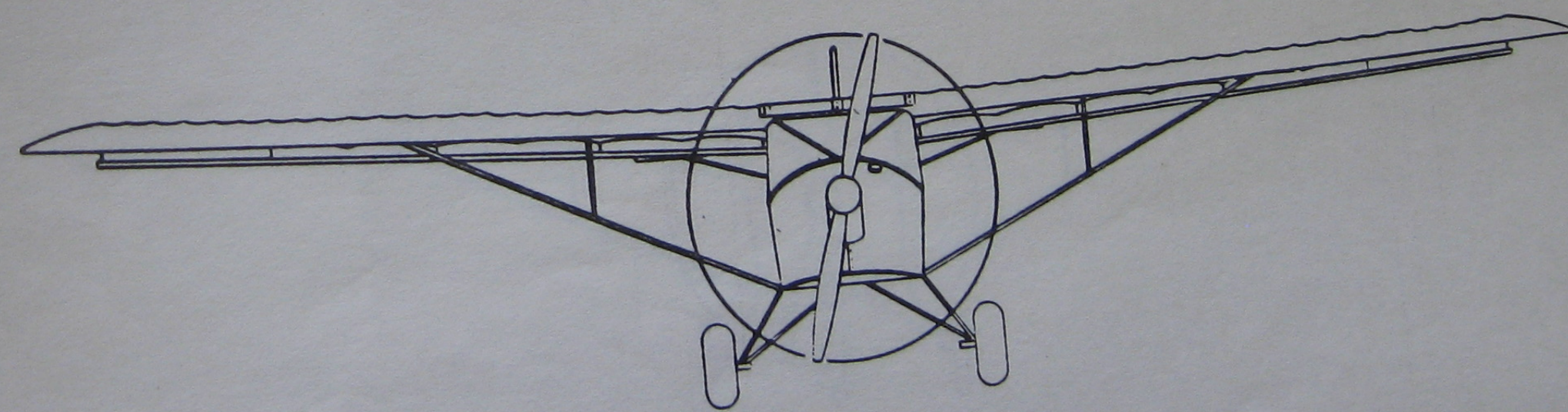
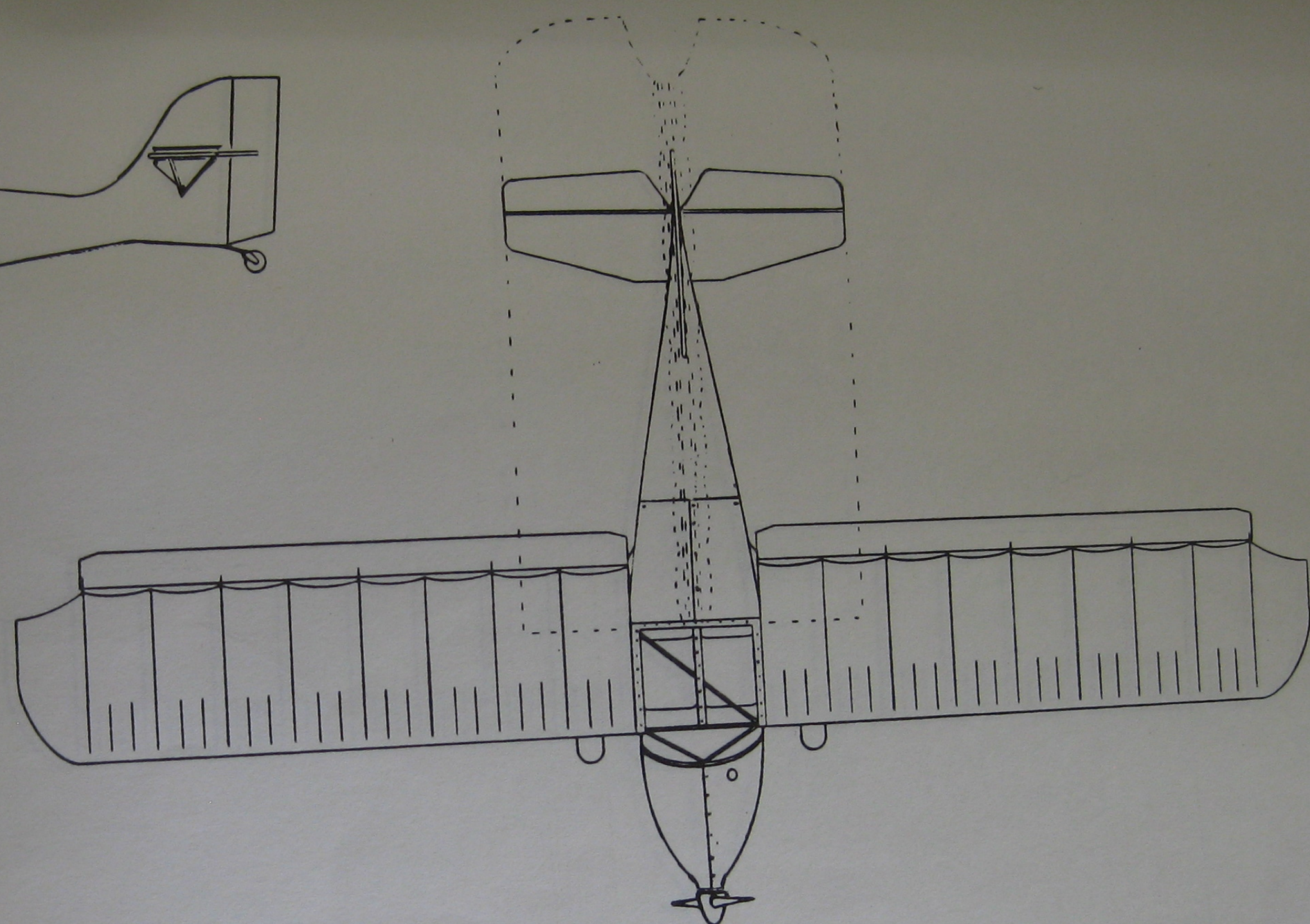
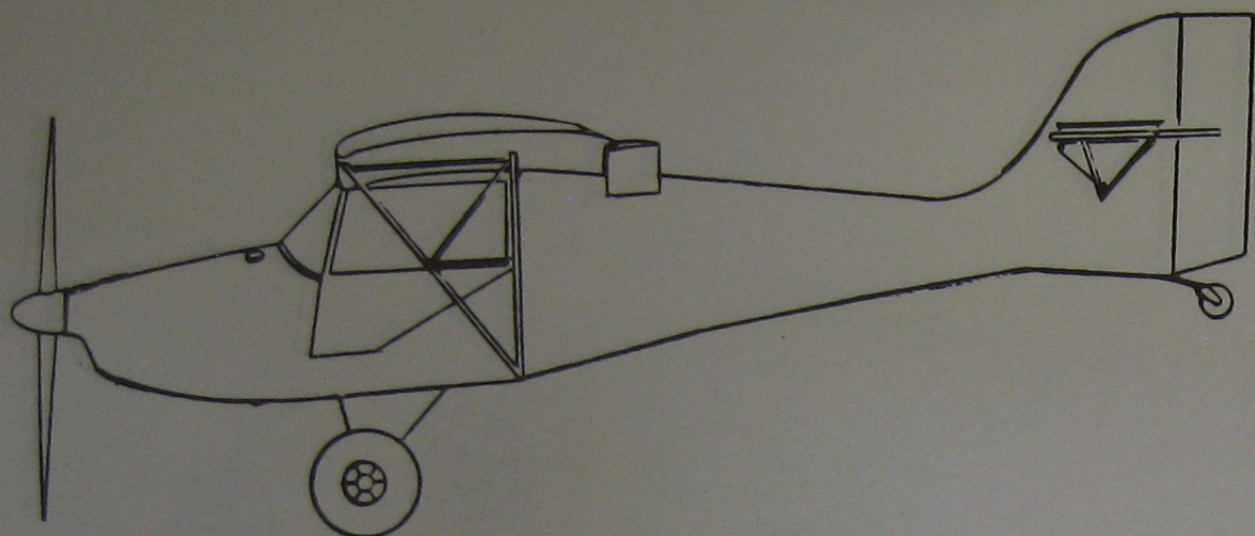
Wing span	29 ft 10½ in
Wing area	122.46 sq ft
Chord of wings	42 in
Chord including flaperons	52 in
Aspect ratio	7.29
Wing loading @ 850 lbs. gross	6.94 lbs
Length	17 ft
Length w/wings folded	19 ft 9½ in
Width w/wings folded	7 ft 9½ in
Height	67 in
Empty weight (depending on finish & options)	340-380 lbs
Gross weight	850 lbs
Useful load (depending on empty weight)	470-510 lbs
Gross weight (kits with wing extensions)	764 lbs
Fuel capacity	9 gal
Fuel consumption	1.5-3 gal/hr
Range	300 miles
Engine	43 hp Cuyuna 430RR
Gear reduction	3.2:1 planetary
Propeller (wood)	72 in fixed pitch

PERFORMANCE

	<u>Solo</u> <u>580 lbs</u>	<u>Dual</u> <u>850 lbs</u>
Cruise speed	80 mph	80 mph
Stall speed	25 mph	32 mph
Stall speed (@ 764 lb gross wt. 30 mph)		
Never exceed speed	90 mph	90 mph
Rate of climb	1400 fpm	960 fpm
Best rate of climb speed	32.5 mph	42 mph
Best angle of climb speed	35 mph	45 mph
Take-off roll	75 ft	200 ft
Over 50' obstacle	275 ft	450 ft
Landing roll	100 ft	150 ft
Service ceiling	19000 ft	12000 ft

*All performance figures are based upon sea level conditions and subject to change without notice due to product improvement.

*All performance data was derived from flight testing the tri-gear. The taildragger performance is slightly increased.



DATE: 6/14/91

survey of flight operations and maintenance problems of
140 questionnaires and received 40 responses for a re-
the names from a listing of FAA a/c registered as
ar old so it I probably missed

marks
d fac
submit

res
ing
it
plet

m a
f t
awa
nor

**

i

PERFORMANCE

All performance figures are based upon sea level conditions and are subject to change without notice due to product improvements.

AVID FLYER STOL

	Solo	Dual
	580 lbs	850 lbs
Cruise speed	85 mph	85 mph
Stall Speed	25 mph	32 mph
Stall Speed @ 764 lbs gross wt. 30 mph		
Never exceed speed	90 mph	90 mph
Rate of climb	2250 fpm	1400 fpm
Best rate of climb speed	35 mph	45 mph
Best angle of climb speed	32.5 mph	42 mph
Take-off roll	50 ft	110 ft
Over 50' obstacle	150 ft	340 ft
Landing roll	100 ft	150 ft
Service ceiling	28000 ft	17500 ft
Climb angle	45 degrees	28 degrees

AVID FLYER SPEED WING

	Solo	Dual
	580 lbs	850 lbs
Cruise speed	110 mph	110 mph
Stall speed	33 mph	40 mph
Never exceed speed	125 mph	125 mph
Rate of climb	2100 fpm	1375 fpm
Best rate of climb speed	57 mph	60 mph
Best angle of climb speed	52 mph	55 mph
Take-off roll	125 ft	300 ft
Over 50' obstacle	250 ft	500 ft
Landing roll	400 ft	600 ft
Service ceiling	20000 ft	15000 ft

AVID AMPHIBIAN

	Solo 800 lbs	Gross 1200 lbs
Cruise speed	75 mph	75 mph
Stall speed	25mph	33 mph
Never exceed speed	80 mph	80 mph
Rate of climb	1650 fpm	940 mph
Best rate of climb speed	35 mph	46 mph
Best angle of climb speed	33 mph	43 mph
Take-off roll (land)	100 ft	300 ft
Take-off roll (water)	180 ft	756 ft
Over 50' obstacle	250 ft	600 ft
Landing roll (land)	350 ft	500 ft
Landing roll (water)	300 ft	275 ft
Service ceiling	20625 ft	11750 ft



POPULAR OPTIONS

- ° 3 PIECE COWLING WITH HIDDEN RADIATOR
- ° ELLISON MIXTURE CONTROL CARBURATOR
- ° AIRCRAFT QUALITY HYDRAULIC BRAKES
- ° LONG RANGE WING TANKS
- ° OVERSIZE BUSH TIRES & TAILWHEEL
- ° ELECTRIC STARTER

C G info on Avid Flyer N 430WT

Tested on Prototype gross 843 lbs.
 Pilot /passenger 425 lbs.
 Forward CG 11.185
 Aft CG 14.562

EMPTY

Main Left	108 lbs	x 5	=	+900	
Main right	180 lbs	x 5	=	+900	
tail	20 lbs	x 145	=	2900	
	<u>380</u>			<u>4700</u>	

$$\frac{TM}{TW} = \frac{4700}{380} = 12.36 \text{ CG}$$

125 lb pilot & 9 gal fuel in main

	380 lb			4700	
Pilot	125 lb	x	+17	=	2125
Fuel Main	52.6 lb	x	-10	=	- 526
	<u>557.6</u>				<u>6299</u>

$$\frac{TM}{TW} = \frac{6299}{557.6} = 11.29 \text{ CG}$$

400 pilot, 1 gal fuel main, & 6 gal wing tanks

	380			4700	
pilot/pass.	400	x	+17	=	6800
Main fuel	5.8	x	-10	=	- 58
Wing tank	34.8	x	+7	=	243.6
	<u>820.6</u>				<u>11685.6</u>

$$\frac{TM}{TW} = \frac{11685.6}{820.6} = 14.24$$



AVOID FLYER

BY LIGHT AERO INC

Builder WINGS AN THINGS
Address 7459 FENTON RD
N. BLOOMFIELD OHIO
N# 430 WT Serial # 145
Empty Wt 380 Gross Wt 850 Date 6/23/85
Engine Model # 430R HP 43
Model CUYUNA Serial # 20878

EXPERIMENTAL AMATEUR BUILT AIRCRAFT



BOMBARDIER-ROTAX GMBH
MOTORENFABRIK

A-4623 Gunskirchen - Austria
Telefon: (0 72 46) 271-0*, Telex: 25 546 bomrot a
Telegrammadresse: Bombrotax Gunskirchen



- 24 -

Engine Data Type ROTAX 532 UL

Description: Two-cycle, two-cylinder rotary valve engine, oil-in-fuel lubrication, liquid-cooled with integrated pump

Cylinder: 2 light alloy cylinders with cast-iron sleeve

Bore and Stroke: 72 mm x 64 mm

Compression Ratio: 12,6

Displacement: 521,2 c.c.

Ignition Unit: BOSCH-flywheel magneto-generator SCP2 12V 140W

Ignition Timing: 1,96 mm (18°) B.T.D.C.

Contact Breaker Points Gap: 0,3 mm - 0,4 mm

Break-away Gap: 8 mm - 17 mm

Spark Plug: B8ES

Rotary Valve: 924 200

Rotary Valve Timing: $\alpha = 132^\circ$, closes $\beta = 52^\circ$ ATDC
opens $\gamma = 132^\circ$ BTDC
See illustration page 4

Carburetor: 2 x BING 36

Fuel Pump: MIKUNI

Starter: rewind starter or
rewind starter and electric starter p.t.o. side
(reduction gear can not be used) or
electric starter, magneto side without rewind starter

Fuel: Gasoline, octane number not below MON 83 or RON 90

Lubrication: Super-two-stroke-oil; mixing ratio 1 : 50 (2 %)

Weights: Engine without carburetor, radiator and fuel pump: 26 kg
Carburetors with rubber flanges and clamps: 1,9 kg
Exhaust system with screws: 3,9 kg

Performance: 64 HP/47 kW at 6500 rpm (US-version)

08/11/2015 00:01

Changes without notice

Dezember 1986