

## 2.4 Power-plant, fuel and oil

Engine manufacturer: SOLO Kleinmotoren GmbH

Engine model: SOLO Typ 2350

Max. power, take-off: *Not applicable*

Max. engine rpm, take-off: *Not applicable*

Max. power, continuous: 20 PS / 15kW

Max. engine rpm, continuous: 4500 rpm

Max. cylinder head temperature: 275°C

Fuel: 2-stroke mixture from  
AVGAS 100LL or  
unleaded MOGAS min. 95 ROZ

Oil grade: Fuel-oil mixture 1:40  
2-stroke oil Castrol RS 2T,  
Castrol Super TT, Castrol TTS or  
Castrol Go!2T.  
If none of these oils is available,  
alternatively two stroke oil with the  
designation JASO FC can be  
used.





Propeller manufacturer: Alexander Schleicher GmbH & Co

Propeller model: AS2F1-2/L120-43-N2

## 2.5 Power-plant instrument markings

In the following table explains the meaning of the different lights of the power plant instrument:

Symbol	Green light	Yellow light	Red light
RPM	3700 to 4300 rpm	4300 to 4500 rpm	> 4500 rpm, continuous alarm, ignition is switched off

BAT	Flashes red: Battery voltage below 11,5 V		
	Green light: power-plant is extended		
	Flashes red, pulsing alarm: pay attention to LCD display! "EXTRACT": Engine lever was moved further than „Extract“- position without the engine being completely extended. "SWITCH R" or "SWITCH E": Time for extension or retrac- tion was too long, probably an end switch is faulty.		
	Green light: power plant is retracted		
	Yellow light: Valve between wing and fuselage tank is opened.		

With the power plant (partially) extended, a continuous alarm sound points to a limit being violated (rpm, fuel capacity). A pulsing alarm points to an error (see LCD display for explanation)

## 2.15 Fuel tanks

The only fuel to be used is fuel-oil mixture 1:40 consisting from:

40 parts AVGAS 100LL or unleaded MOGAS min. 95 ROZ  
and

1 part Castrol RS 2T, Castrol Super TT, Castrol TTS,  
Castrol ACT>EVO 2T or Castrol Power 1RS 2T

If none of these oils are available, alternatively two stroke oil  
with the designation **JASO FC** can be used.

Capacity of the fuel tanks:

	Liters	US Gallons
Fuselage tank:	6	1.58
Each wing tank (if installed):	approx. 3,5	0.92
Max usable fuel quantity in flight:	0,3	0.08

Placards repeat this information,  
in the cockpit:

Usable Fuel (Ltrs):	
Fuselage Tank	6 l
Each Wing Tank	

at the refuelling connection in the engine bay:

Super (min 95RON/ROZ) or Avgas 100 LL	
Mixing-ratio with 2-stroke oil Castrol RS 2T:	<b>1:40</b>
Other oils see Flight Manual section 2.4	
Fuel Capacity:	
Fuselage tank	= 6 Ltrs 1.58 US Gal.
if installed:	
Wing tank left	= <input type="text"/> Ltrs <input type="text"/> US Gal.
Wing tank right	= <input type="text"/> Ltrs <input type="text"/> US Gal.
Non usable fuel = 0,3 Ltrs 0.08 US Gal.	



**Fuselage**

Length	6,585 m	(21,6 ft)
Height at T-tail incl. tail wheel	1,3 m	(4,27 ft)
Cockpit width (inside)	0,64 m	(2,1 ft)
Cockpit height	0,8 m	(2,62 ft)

**Vertical Tail**

Height above tail boom top edge	1,2 m	(3,94 ft)
Surface area	1,0 m <sup>2</sup>	(10.76 ft <sup>2</sup> )
Airfoil Section	DU 86-131/30	

**Rudder**

Surface area	0,3 m <sup>2</sup>	( 3.23 ft <sup>2</sup> )
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**Horizontal Tail**

Span	2,85 m	(9,35 ft)
Surface area	1,0 m <sup>2</sup>	
Aspect ratio	8,22	
Airfoil Section	DU 92-131/25	

**Elevator**

Surface area	0,22 m <sup>2</sup>	
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**Airbrake Blades** (Schempp-Hirth-type, top surface only)

Length	1,10 m	( 3,61ft)
Surface area (both together)	0,36 m <sup>2</sup>	( 3.88 ft <sup>2</sup> )
Max. Height above wing top surface	0,165 m	(0,54 ft)

**Aileron**

Span	3,0 m	(9,84 ft)
Surface area (each)	0,267 m <sup>2</sup>	( 2.87 ft <sup>2</sup> )

**Masses (Weights)**

Span		18 m		15 m	
Empty mass	approx.				
glider		283 kg	622,6 lbs	270 kg	594 lbs
self-sustaining powered sailplane		322 kg	708,4 lbs	309 kg	679,8 lbs
Mass of non-lifting parts	max.	285 kg	627 lbs		
Cockpit Load	max.	124 kg	272,8 lbs		
Pilot Seat Load	max.	115 kg	253 lbs		
Loading of baggage compartment	max.	12 kg	26,4 lbs		
All-up mass <b>with</b> water ballast	max.	575 kg	1265 lbs	525 kg	1155 lbs
<b>without</b> water ballast	max.	462 kg	1016,4 lbs	450 kg	999 lbs
Max Wing loading	approx.	48 kg/m <sup>2</sup>	9,83 lbs/ft <sup>2</sup>	50 kg/m <sup>2</sup>	10.2 lbs/ft <sup>2</sup>
Min Wing loading	approx.				
glider		29 kg/m <sup>2</sup>	5,94 lbs/ft <sup>2</sup>	32 kg/m <sup>2</sup>	6,55 lbs/ft <sup>2</sup>
self-sustaining powered sailplane		33 kg/m <sup>2</sup>	6,76 lbs/ft <sup>2</sup>	36 kg/m <sup>2</sup>	6,76 lbs/ft <sup>2</sup>
Trim ballast (battery) in the fin	max.	6 kg	13,2 lbs		
Trim ballast in the water tank in the fin	max.	5 kg	11 lbs		

See also **Flight Manual** section 2!

Authoritative information about empty mass and useful load are documented in the weighing record of the A-record or in the mass and balance form in chapter 6.2 of the flight manual.

**Power Plant**

Engine Manufacturer	SOLO Kleinmotoren GmbH
Engine	SOLO 2350
Steady State	20 PS / 15 kW
max. permissible Endurance Speed	4500 RPM
max. Cylinder Head Temperature	275°C
Fuel	2-stroke mixture with AVGAS 100LL or Super Petrol unleaded min. 95 ROZ
Lubrication	Lubrication mixture and 2-stroke-oil according to Flight Manual, section 2.4
Propeller Manufacturer	Alexander Schleicher GmbH & Co.
Propeller	AS2F1-2/L120-43-N2

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(30)



(30) is reduced to half size.

This placard is affixed behind the backrest next to the viewing slot of the fuselage tank; location in accordance with the markings on the tank.

Fig. 9.2-2 Tank filler neck



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Super (min 95RON/ROZ) or Avgas 100 LL

Mixing-ratio with  
2-stroke oil Castrol RS 2T: **1:40**  
Other oils see Flight Manual section 2.4

Fuel Capacity:

Fuselage tank = 6 Ltrs 1.58 US Gal.

if installed:

Wing tank left =  Ltrs  US Gal.Wing tank right =  Ltrs  US Gal.

Non usable fuel = 0,3 Ltrs 0.08 US Gal.