1 General

1.1 Introduction

The sailplane flight manual has been prepared to provide pilots and instructors with information for the safe and efficient operation of the DG-1000S glider.

This manual includes the material required to be furnished to the pilot by JAR Part 22. It also contains supplemental data supplied by the glider manufacturer.

1.2 Certification basis

This type of sailplane has been approved by the Luftfahrt-Bundesamt (LBA) in accordance with:

Airworthiness requirements:
JAR Part 22 „*Sailplanes and powered sailplanes*", change 5, issued 28th October 1995.

The Type Certificate No. 413 has been issued on March 12. 2002.

Category of Airworthiness: "Utility" or
„Aerobatic" with 18m span without waterballast and if the required equipment is installed.

1.3 Warnings, cautions and notes

The following definitions apply to warnings, cautions and notes used in the flight manual.

"Warning"	means that the non observation of the corresponding procedure leads to an immediate or important degradation of the flight safety.
"Caution"	means that the non observation of the corresponding procedure leads to a minor or to a more or less long term degradation of the flight safety.
"Note"	draws the attention on any special item not directly related to safety but which is important or unusual.

1.4 Descriptive data

The DG-1000S is a two-place high performance sailplane for training and cross country flying and in addition for aerobatic training.

The wings of the DG-1000S are made of carbon fibre reinforced plastics with a parting at y= 8,6m, there are four types of wing tips available with different spans:
A) Wing elongations with 20 m span with winglets
B) Wing tips with 18 m span without winglets
C) Wing tips with 18 m span with winglets
D) End plates for 17,2 m span

- Automatic hook ups for all controls.
- Comfortable seating and modern cockpit design similar to the DG-single-seaters - safety cockpit.
- Large 2 piece canopy for very good in-flight vision.
- Draught free canopy demist and 1 adjustable swivel air vent for each pilot.
- Sealed airbrake and landing gear boxes.
- Controls in each cockpit.
- All controls are operated with the left hand, which enables the right hand to remain on the control stick.

The DG-1000S is available with 3 different versions of the undercarriage:
A) Very high spring mounted retractable main wheel with disc-brake, tail wheel.
B) High spring mounted retractable main wheel with disc-brake, tail wheel and nose wheel
C) Fixed spring mounted main wheel with disc-brake, tail wheel and nose wheel.
The main undercarriages versions B and C are interchangeable.

Other characteristics:
Waterballast in the wings and in the fin are optional with 18m span and standard with 20m span.

Standard: A ballast-box is installed in the fin. It can be used to compensate the mass of the rear pilot and as a trim-possibility for heavy pilots.
Max. ballast capacity: 12 kg.

Option: 2 ballast boxes in the front cockpit. The trim-weights used for the trim-ballast box in the fin also fit into these ballast boxes.

Technical data				
Span	m	17,2	18	20
Wing area	m^2	16,3	16,72	17,53
Aspect ratio	/	18,15	19,38	22,82
Length	m		8,57	
Fuselage height	m		1,0	
Fuselage width	m		0,73	
Span of the horizontal tailplane	m		3,2	
Waterballast Wings	max. kg (l)		160	
Waterballast fin	max. kg		6,2	
Trim ballast fin	max. kg		12	
Empty mass with basic instruments*	approx. kg	407	411	415
Wing loading (with one Pilot 80kg)	approx. kg/m^2	29,9	29,4	28,2
max. take off mass (max. TOW)	kg	750	750	750
max. wing loading	kg/m^2	46,0	44,9	42,8
Aerobatics		unlimited Category „A“	unlimited Category „A“ (without winglets)	simple
max. TOW for aerobatics (cat. A)	kg	630	630	
max. speed	km/h	270	270	270

*Options will increase the empty mass accordingly!

1.5 three view drawing