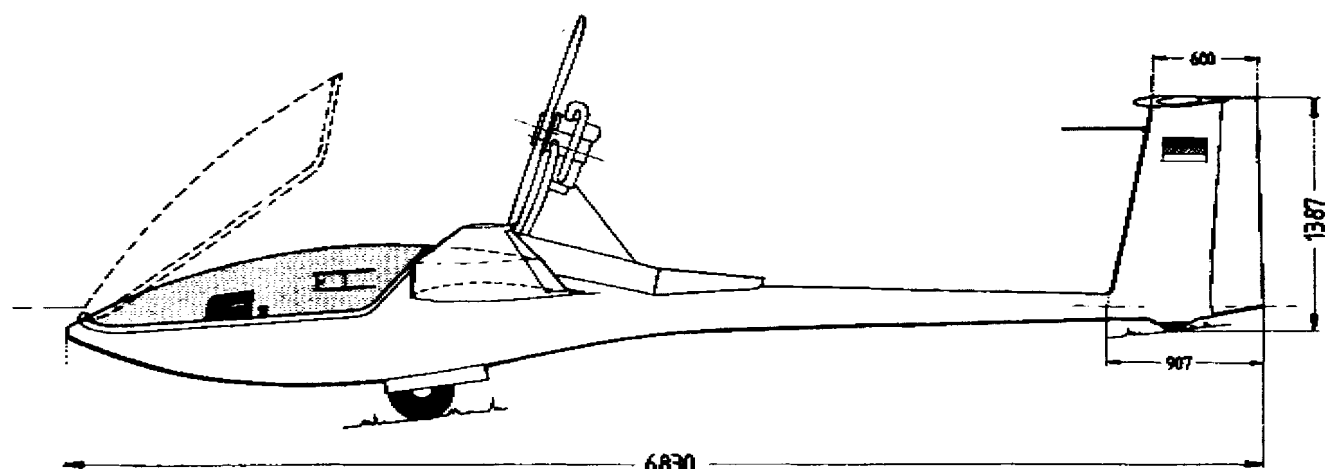


# DG-600M Evolution 18 Meter Self-Launcher Announced.



This modified version of the DG-600M first flew on May 21, 1990. According to Wilhelm Dirks, there is a marked decrease in sink rate in high speed flight. The production model incorporates flapperons in the 18M tip extension. There is no rate of roll impairment. This ship is the first 18M high-performance sailplane on the market available as a pure sailplane or self-launcher using the Rotax 275 engine.

## Self-Launching Sailplane Pilot's Assn.

### NEWSLETTER

SEPTEMBER-OCTOBER 1991

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#### *In Memoriam.*

Alan Greer lost his life on Sep 14, 1991 shortly after taking off from New Castle Gliderport Virginia during practice day for Region 4 South Soaring Championships. The local newspaper reported Greer's Ventus CM struck a 70-foot high voltage line and flipped inverted. Alan was on the Board of Directors of SLSPA. He was active in competitive events and an enthusiastic supporter of powered sailplane activities. We will all miss him and our heart felt sympathy goes out to his wife Gail and their three children.

#### **1992 Activities Schedule....**

March 5-7 SSA Convention/Charlotte, NC  
June 16-25 15M Nationals/Minden, NV  
June 30-Jul 9 Sports Class Nationals/Ephrata, WA  
July 7-16 Open Class Nationals/Hobbs, NM  
July 21-30 Standard Class and Auxiliary Powered Nationals/Littlefield, TX

#### Competition Rules Changes for 1992:

1. Speed Only P.O.S.T. Task (includes Sports Class)
2. Optional use of clock cameras.
3. 9 lb wingloading limit for Std Class-Reg. and Nat.

4. Use of compass interface for contest flying.

#### **WINDROSE NEWSLETTER AVAILABLE...**

SLSPA member John Walkling is the editor of the Windrose Newsletter and is doing a fine job of publishing the latest information on home-building this unique self-launcher. If you are interested in knowing more about this ship and gathering info on building tips, contact John at 10000 Hampshire Dr. Knoxville, TN 37922 615-966-0884. *Yes John, I have sent a copy of the SLSPA Newsletter to your membership. Ed.*



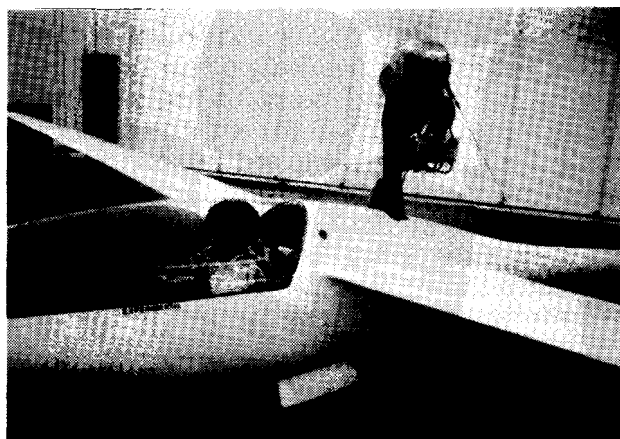
#### **APPLEBAY SELF-LAUNCHING ZIA...**

One of four built. Complete with engine, trailer, instruments, current annual and recent modifications by George Applebay. Contact Jack Young at 208-342-7357 Boise, ID \$12,500. (This is a rare opportunity to own a true self-launcher with an L/D of 25:1, pusher configuration and tricycle gear.)

## ALCOHOL IN FUEL:

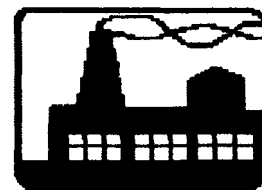
PIK-20E owner Jack McKenney reports: "A lot of us have been running super no-lead for many years. It's been my standard fuel for eight years and I have had no problems. Recently some areas are adding alcohol to the fuel with possible harmful effects to carbs and fuel systems. The supplier of the additive oil I use suggested a simple test which I have tried and it seems to be a good idea. Use a small circular bottle with constant diameter about 8" tall. Put a mark on the bottle about halfway up and fill water to that mark. Fill to the top with suspect gasoline and shake well. After the bubbles settle, if the apparent water level is above the original mark, you have alcohol in the gas since it absorbs water and raises the apparent level."

Jack continues: "Recent years have seen the arrival of German self-launchers that were not designed for the Western U.S. altitudes and temperatures. If we are to continue to enjoy the relatively modest effects of FAA regulations and insurance rates, we have to get serious about operating fully WITHIN the takeoff limitations of our equipment. My PIK-20E Flight Manual has a table of performance as a function of gross weight and density altitude. The effects of flap settings, field roughness and wind are also specified. Hopefully such data is supplied for other self-launchers. I recently received a packet on a new self-launcher and there was no mention of the fact that I could never get off the ground in Taos, NM."



Don Burmingham of Duarte, CA recently took delivery of a 1985 PIK-20E. Don said he found the ship listed in Trade-A-Plane at a very reasonable price. The airframe has under 150 hrs and the Rotax 505 engine less than 15 hrs. In the photo Don is seen running the engine for the first time at High Country Soaring.

## FACTORY REPORTS...



SCHLEICHER: Waibel reports the 18 meter ASH 26E will be fitted with a two-cycle engine with over 35 HP.

He also reports that the ASH 27 will not be offered with an engine. Production start-up of these two new ships is unknown as of this writing.

### GLASER-DIRKS:

#### DG-400 Service Information Bulletin 8-22-91:

Provides information and hardware needed to install a revised fuel tank drain valve that is removable so a new hose can be fitted more easily.

#### DG-400 TN 826/25:

Provides instructions for: 1. Propeller shaft inspection, modification (machining) and replacement (if cracks found) for all DG-400s. 2. Modification of screwed connection of rear propeller mounting plate. 3. Exchange of top fuel hoses every 3 years. The date for accomplishment is Oct. 30 1991 and will most likely be moved ahead due to parts availability. Write the factory for Drawing 4M29 which shows in detail the attachment of the prop shaft/bearings and prop support arms. It is suggested that new prop shaft bearings be installed when completing this TN.

#### Note:

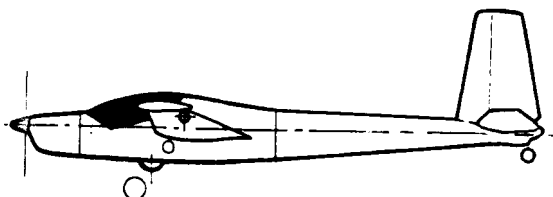
When replacing fuel lines ALWAYS flush the lines clean PRIOR to attachment to the carbs. Grit and dust in the new lines can cause carb. needle valve problems.

#### Ball-Bearing Tailwheel:

Several DG-400 pilots have installed a ball bearing tailwheel available from Schempp-Hirth (used on Ventus) and found it to be very satisfactory in eliminating the wear associated with the plastic wheel hole in the current tailwheel used. The factory is looking into making such a wheel standard equipment for DG-400.

## AEROTECHNIK:

The Dealer, Moravia reports the new L-13 SE Vivat fixed engine motorglider (2-place) can now be imported with only 5% duty. The Vivat has a 4-cycle, 4-cylinder in-line engine made by Walter Mikron. For more information contact: MORAVIA Inc. P.O. Box 942 Thunderbay, Ontario, Canada P7C 4X8 807-475-5113/FAX: 807 475-9587



## SELF-LAUNCH OR TOW?

1991 was not a banner season for motorglider safety. Self-launching takeoffs in high temperature conditions especially at high elevations above sea level claimed 2 ships and one life. Knowing what to expect during takeoff requires the pilot to be aware of ten critical factors:

1. Density Altitude
2. Runway Temperature
3. Field Altitude
4. Runway Surface
5. Runway Gradient
6. Wind Component
7. Length of Runway and Height of Obstacles.
8. Wing Span/Takeoff Weight and Wing Loading.
9. Convective Conditions
10. Engine HP output

### Sample Situation for DG-400 15 Meters@Max Gross:

1. Density Alt: 7,381' msl
2. 86F (30C)-Runway Temp.
3. 4,900' msl-Field Altitude
4. Dry Grass-Runway Surface
5. Level-No runway gradient
6. Calm-Wind
7. 2,500' Runway Length
8. 15 Meters and 1,058 lbs (max gross)
9. Weak Convective Conditions
10. 80% of sea level rated power=34.4 hp output at 6,000 rpm. (Rotax 505 rated at 43 hp.)

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According to the pilot's handbook, it will require a takeoff ground run of 951' to lift off and a total of 1,270' to clear a 50' obstacle. This is an acceptable situation, PROVIDING the engine is properly tuned and attaining at least 6,000 rpm during the takeoff run. Abort takeoff distance down the runway should be 1,250' to provide adequate stopping distance. In other words, if you are not off the ground one-half way down this grass strip---abort.

#### Variables:

Again, according to the pilot's handbook, a hard surface runway will shorten the takeoff run to 856'. Add a 5.4 kt headwind and the ground run is reduced to 618'. If 17 meter tips are installed and the weight reduced to 1,014 lbs., the takeoff run is reduced to 702' with 1,115' needed to clear the 50' obstacle using the original takeoff conditions.

~ The whole scenario is dependent on a lift off speed of 49KIAS and proper transition from -4 to + 6 flap

Other critical variables are :

- a. Main wheel air pressure
- b. Cross wind
- c. Slow application of takeoff power
- d. Rough runway surface
- e. Poorly tuned engine
- f. Sink during and after liftoff

Any and all of the above can drastically lengthen the takeoff roll and reduce the climb performance after liftoff.

The best policy is to assume nothing and compute your takeoff run before each flight, especially when operating out of a strange field. Establish an abort plan for each takeoff and stick to it!!

Now, it's your turn.....

1. Get out your pilot's handbook and compute your birds takeoff performance using the above factors or those for your particular field.
2. If you do not have a DENSITY RATIO CHART, send SASE to SLSPA and we will send you one. Then you will KNOW what your density altitude and engine power output is.
3. If you fly with a SOLO engine, tune it as per Schempp-Hirth Service Bulletin 825-1.
4. If you fly with a Tillotson Carb., make sure your main jets are the correct ones for your field altitude.
5. If you fly with a Mikuni carb., make sure you understand how to tune it without over leaning.
6. If you are at maximum gross weight, be prepared for a longer than usual runway run and launch with all the runway you can get in front of you.
7. If you are thinking about taking off with a tailwind...forget it.
8. If it is a convective day with lots of lift (and sink) around, be prepared for sink after lift off.
9. If you are launching in wave conditions, be prepared for a rough ride and lots of turbulence as in some locations the runways are right under the rotor.
10. If you are uncertain about any of the above.. TAKE A TOW. Just because your friend in the same type of bird got airborne just ahead of you does not mean you will!! Have fun and observe the Pilot's Handbook to the letter.