



Our goal at **Wings of Freedom** is to make your experience with us a pleasurable one. With over 17 years in manufacturing and customer service you can be assured that we will provide you with professional service and care whether you are taking delivery of a RTF or Building your very own Kit... we will be here for you.

The Phoenix 103 is a combination of many ultralights brought together. In Mythology the story tells us every time the Phoenix bird is reborn from the ashes it comes back to life stronger than its previous life. We believe at Wings of Freedom LLC we have accomplished this task. The Phoenix 103 offers true freedom. The kind of freedom that you get from flying a True FAR-103 aircraft, yet providing you with the option to build as an E-LSA and have the stability and control of a conventional aircraft. Priced right and built right we believe that once you have taken to the air in a Phoenix 103...

You are going to Love it!!!



Wings of Freedom LLC
150 Christian Ave
Hubbard, OH 44425

Phone 330-534-5548 Fax 888-344-7054
contact@wingsoffreedomaviation.com
www.wingsoffreedomaviation.com

Phoenix-103



Prices for 2014 include all these Standard Features...

Standard Features: Complete Airframe; Hirth F23, 50 hp. Dual CDI, with 2 Blade Wood Propeller; 5-gal Fuel Tank; Tiny-Tach/hr, Halls Air Speed Indicator; 6" Nylon Wheels; Windscreen; Flaps (0-30 degrees); Four Point Restraint System; Stainless Steel Push/Pull Cables with Yoke Control; and Choice of Fabric or Dacron Covers with many color options.

Specifications:

Configuration	Single-place
Empty Weight	254 lbs
Gross Weight	650 lbs
Wingspan	26' 10"
Length	17'
Height	6' 10"
Wing Area	124 ft ²
Wing Loading	4.8 lb/ ft ²
Power Loading	15 lb/hp
Engine	Hirth F-23 50 hp
Reduction Drive	Belt Reduction 2.5:1
Rate of Climb	900-1,100 fpm
Take-Off & Landing Distance	100-200 ft (depending on gross weight)
Propeller	Maximum diameter 66"

**Complete Kit
\$15,666**

**Real Building
Time
80-150 hrs.**

Flying

It...

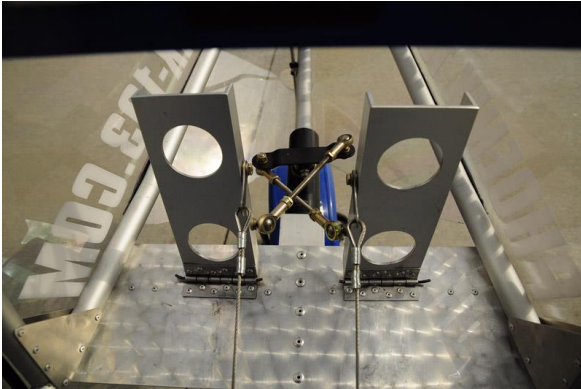
PRICELESS

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Here are some extra pictures



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Phoenix 103 Kit with out engine and propeller \$9598.00

Engine Options

Hirth F-23 50hp. Dual Carb, Dual CDI, Air Cooled, Belt Drive	\$5300.00
Hirth 2702 40hp. SC, Dual CDI, Fan Cooled, Belt Drive	\$4400.00
Kawasaki 440 40hp. SC, SCDI, Air Cooled, Belt Drive	\$4200.00
Rotax 447 40 hp. SC, SCDI, Fan Cooled, B Gear Box	\$3900.00
MZ-201 45hp. SC, Dual CDI, Air Cooled, Belt Drive	\$4400.00

Accessories for Engines, Brakes, Propellers and Much More

Ready to Fly (includes engine brake in & test flown)	\$3500.00
Motor Mount Plate and Exhaust Routing for all Engines	\$300.00
Ultra Red Top Battery, Box & Ignition Switches	\$200.00
Electric Starter for Rotax & Kawasaki	\$450.00
2-Blade Tennessee Wood Propeller 66x32 RH	\$468.00
2-Blade Tennessee Wood Propeller 60x28 LH	\$425.00
2-Blade Powerfin Composite Propeller	\$657.00
3-Blade Powerfin Composite Propeller	\$866.00
Bottom Ribs for Dacron Covers	\$180.00
Stick Control (w/exch) Coming Soon	\$125.00
Tinted Windscreen (w/exch)	\$50.00
Streamline Strut Covers	\$275.00
Aluminum struts	\$375.00
Mechanical Disk Brake set for any size wheel	\$275.00
Mechanical Drum Brake set for any size wheel	\$125.00
6" Hegar Alum. wheels w/ Hydraulic Brakes (w/exch.)	\$600.00
6" Aluminum wheels and tires (w/exch.)	\$75.00
8" Tundra Aluminum wheels and tires (w/exch.)	\$150.00
Wheel Pants set for nose and mains	\$350.00
Wheel Nose Fender	\$50.00
BRS Recovery System (600 lbs. soft pack) with S/H	\$3649.00
Fabric Covering and any two color paint on Ready to Fly	\$1500.00
Will exchange 1.7oz Fabric and paint for Dacron at	N/C
Custom paint jobs and instrument panel work (call for quote)...	

Note: Pricing does not include crating and shipping cost. Call for a shipping and handling quote and to confirm current prices. Fill out the enclosed order form and return to **Wings of Freedom LLC** either by mail or fax.

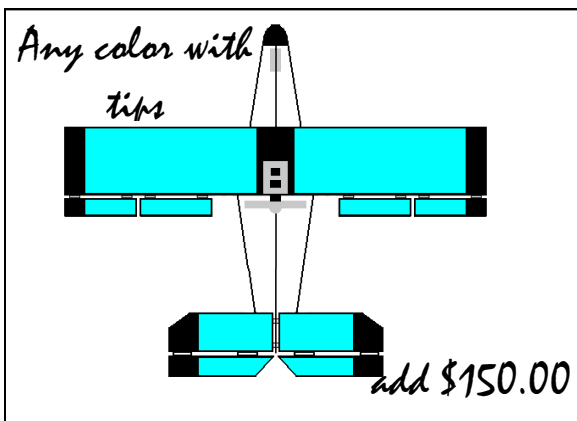
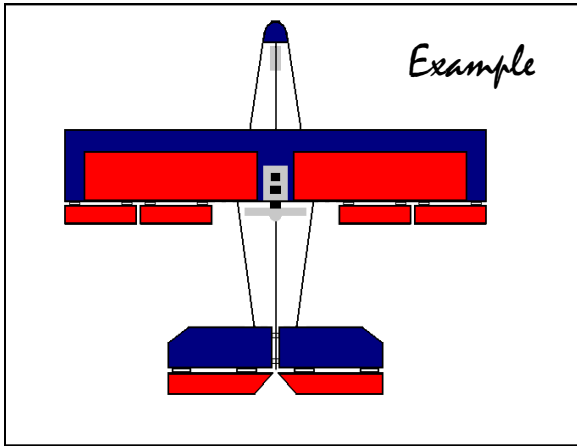
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Dacron Color Selection

Be the Creator and Mix and Match any two Colors and Create your very own Design...



White

Silver

Black

Red

Orange

Yellow

Gold

Green

Aqua

Turquoise

Blue

DK-Blue

Pink

Purple

Phoenix-103

Limitations V Speeds:

These speeds may vary depending on owner/operator adjustments.

Wings of Freedom LLC recommends that factory adjustments should not be modified.

Vne	75 mph	Never exceed speed
Va	50 mph	Design maneuvering speed
Vfe	70 mph	Maximum flap extend speed
Vy	45 mph	Best rate of climb speed
Vx	40 mph	Best angle of climb speed
Vsi	28-34 mph	Stall speed clean (depending on gross weight)
Vr	30 mph	Rotation speed
	15 mph	Maximum cross wind component (depending on pilot experience)
	25 mph	Recommended maximum wind speeds (depending on pilot experience)
	45 degrees	Maximum bank angle
	30 degrees	Maximum pitch up or down

Normal Take-Off:

Use full throttle, accelerate to 30 mph, rotate, and climb at Vy 45 mph. Clear all obstacles. Accelerate to cruise flight.

Short Field Take-Off:

Use 10 degrees of flaps, use full power, accelerate to 30 mph, rotate, and climb at Vx 40 mph. Clear all obstacles. Accelerate to Vy 45 mph. Resume cruise.

Cruise Flight:

Which ever engine is chosen flight cruise will be between 45-63 mph.

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Descent:

Reduce Power as needed. Fly 45-50 mph. Use flaps as needed (0-30 degrees).

Normal Landing:

Enter pattern at 50 mph on downwind. Reduce speed to a minimum of 40-45 mph from base to final. Apply flaps as needed. Wheels touch down 30 mph. Hold nose wheel off until elevator control is reached. Apply brakes as needed

Short Field Landing or Over an Obstacle:

Enter pattern at 50 mph on downwind. Add 30 degrees of flaps, as needed when landing strip assured (with 30 degrees of flaps, speed will dissipate very quickly). Reduce speed to minimum 40 mph from base to final. Wheels touch down 30 mph. Hold nose wheel off until full elevator control is reached. Apply brakes as needed.

Cross Wind Landing:

Normal landing using cross wind landing techniques.

Stalls:

Reduce speed to 28-34 mph (depending on gross weight). Stall will break straight forward when coordinated. Use normal stall recovery techniques.

Spins and Aerobatic Flight are PROHIBITED!