

# HP-18

A single-seat high-performance sailplane designed for construction in the home workshop environment. It features 90 degree flaps for landing. The wing is based on an aluminum box spar that also carries 200 lbs of water ballast. The wing ribs are 3/8" Klegecell foam, skinned with aluminum sheet. The forward fuselage is molded GRP, and the aft fuselage is conventional semi-monocoque.

## HP-18 Specifications

Span	49.2ft	15.0 m
Length	23.2ft	7.07 m
Height, ground to stab tips	48.0 in	1.22 m
Wing Area	113.0 sq ft	10.5 sq m
Aspect ratio	21.4	
Dihedral	2.3 degrees	

Flaps -10 to 90 degrees

Empty weight	470 lbs	213.2 kg
payload	300 lbs	136.1 kg
Water ballast	200 lbs	90.7 kg
Dry gross wt	770 lbs	349.3 kg
Ballasted gross wt	970 lbs	440 kg

Max airspeed,	rough air	120 mph	193 kph
	smooth air	150 mph	241 kph
	aerotow	120 mph	193 kph
	winch or auto tow	90 mph	145 kph

L/D Max	40:1		
Minimum sink,	656 lbs, 46 mph	1.8 fps	.55 mps
Stall speed	Flaps 0, 770 lbs	40 mph	64 kph
	Flaps 60, 770 lbs	35 mph	56 kph

