

Propeller power and thrust comparison for Engines

engine 1		Kt power compared to engine 2:	
prop. Constant	<input type="text" value="1.2"/>	<input type="text" value="1"/>	0 %
Diameter inches	<input type="text" value="9"/>	notes	Example
Pitch inches	<input type="text" value="4"/>		engine 1: three bladed prop, engine two, 2-bladed prop, comparison for descisionmaking.
Rpm	<input type="text" value="1230"/>		Each engine can get it's own set of parameters, so they can be compared in static thrust and power output @ rpm
reduction efficiency	<input type="text" value="100%"/>		
Motor power	0		
prop power [W]	0	HP:0.00	
prop Thrust kg	<u>0.01</u>	lbs0.03	
lbs/hp	85.45	static-thrust0.02	lbs (with plane)
prop noise rpm limit	<u>16550</u>	=n-max for noise requirements	
pitch speed [ms]	<u>2.1</u>	km/h7.50	corrected prop constant
Disk load	0.973	naut. Mph4.0	1.196
Specific thrust lbs/hp	85.45		
engine 2		Kt	Fuselage drag estimator
Prop constant	<input type="text" value="1.2"/>	<input type="text" value="1"/>	Input drag: <input type="text" value="3"/>
Diameter inches	<input type="text" value="7"/>		bulky = 3 High wing trainer
Pitch inches	<input type="text" value="3"/>		normal = 2 aileron trainer
rpm	<input type="text" value="21000"/>		slim= 1 racer
reduction efficiency	<input type="text" value="100%"/>		
motor power [W]	321		
prop power [W]	321	HP:0.43	
prop Thrust kg	1.273	lbs2.80	free air prop
lbs/hp	6.51	static-thrust2.47	lbs (with plane)

prop noise rpm limit	<u>21279</u>	=n-max, tip @ 0.6 Mach	for noise requirements	
pitch speed [ms]	26.7			corrected prop constant
Disk load	167.81	km/h ^{96.0}		1.198
Specific thrust lbs/hp	6.51	naut. Mph ^{51.8}		