

Sheet1

CALULATION OF CHORD PITCH ANGLE FOR VARIOUS COMMERCIAL PROPS

Prop description	Diameter	pitch inches	C @ 75%	angle degrees
-----2-blade 150 hp				
2bl Thorp for 150 hp O-320	74	62	174.36	19.57
2bl? Tiff for 150 hp	62	75	146.08	27.18
2bl Catto recommend for 150 hp	70	68	164.93	22.41
2bl Hertzler for 150hp	65	76	153.15	26.39
2bl Unk 150hp O320 for LEZ	62	75	146.08	27.18
2bl Hertzler for 150hp	65	80	153.15	27.58
-----2-blade 160 hp			0.00	#DIV/0!
2bl my Kent-Ez prop for 160 hp	65	79	153.15	27.29
2bl my LSE prop for 135? hp	64.75	77.7	152.56	26.99
2bl Catto for 160 hp	70	70	164.93	23.00
2bl Catto for 160 hp RV4	70	72	164.93	23.58
2bl Hertzler for 160 hp	65	80	153.15	27.58
2bl Hertzler for 160 hp	66	78	155.51	26.64
2bl Catto recommend for 160 hp	70	70	164.93	23.00
2bl Catto recommend for 160hpRV4	70	72	164.93	23.58
2 bl my busted prop for RV4 160hp	68	78	160.22	25.96
-----3 blade for 150 hp			0.00	#DIV/0!
3bl Catto for 150 hp RV4 174tas/8K	66	72	155.51	24.84
-----3 blade for higher hp			0.00	#DIV/0!
3bl Catto for 175 hp RV6 (emph. Climb)	66	72	155.51	24.84
-----2 blade 180 hp			0.00	#DIV/0!
2bl Sens. For 180hp Cozy	70	87	164.93	27.81
2bl Sens. For 180hp Cozy	70	85	164.93	27.26
2bl Unk for 180 hp CZ	67	73	157.87	24.82
2bl Hertzler for 180 hp	66	78	155.51	26.64
2bl LSE for 190 hp LEZ (Blackler)	68	92	160.22	29.86
2bl my expr prop	67	80	157.87	26.87
-----2bl for 200hp			0.00	
*2bl Hertzler for 200hp (Becker+ others)	66	78	155.51	26.64
2bl Unk for 200 hp CZ	68	77	160.22	25.67
2bl Unk for 200 hp CZ	68	78	160.22	25.96
2bl Catto for 200 hp CZ	66	76	155.51	26.05
2bl Unk for 200 hp CZ	68	77	160.22	25.67
-----3-blade for 180 hp			0.00	
3bl my Perf prop (C-IV) preMod – 26.7 a	64	76	150.80	26.75
3bl my Perf prop (c-IV) postMod	61.25	81.7	144.32	29.51
3bl Perf Prop for 180hp Cozy	64	76	150.80	26.75
3bl Perf Prop for 180hp Cozy	64	72	150.80	25.52
3bl for Cozy 180hp	68	72.41	160.22	24.32
3bl Catto for 180hp EZ	64	82	150.80	28.54
-----3bl for 200 hp				
3bl Catto for 200 hp	66	68	155.51	23.62
----- 2 and 3 blade for 135 hp			0.00	
2bl Varieze for O-290	56	70	131.95	27.95
2bl Unk for 135 hp LEZ	60	76	141.37	28.26

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2bl Sterba for 135 hp LEZ	60	74	141.37	27.63
2 bl B&T for 135 hp LEZ	58	67	136.66	26.12
2bl Ted for 135hp LEZ	58	72	136.66	27.78
3bl Catto for 135 hp LEZ	58	66	136.66	25.78
Whirlwind rec 20-21deg pitch angle O-320				
Whirlwind rec 22-24deg pitch angle O-360				

Note: Hertzler quotes pitch from the flatside. Add about 2.5 deg to get chord pitch

Note: with my airfoils, flatside angle is about 2.5 deg less than chord angle.

* 2bl Sliver bullet w/ prop extension, prop and ext bolts, belleville washers weighed 23 lbs. MT pr

Long-ez said to get 174KTAS

Good prop!
not enough prop for 160 hp, overspeeds

Nat in Cozy NL: low static but good cruise RPM
Nat in Cozy NL: ditto, as good as his Perf Prop

Zeitlin found it too sluggish, repitched to something else.

pitch OK, tips too thick, low cruise RPM
thinned tips, good cruise RPM
Nat suggests in Cozy NL
Nat in Cozy NL: best prop yet
from Johnson data from Bates program 75% angle 29.56?
would turn 2900 rpm but had severe loss of finish

opt. for 2800R

Note 158 KTAS

op 56 lbs