

65.75 X 30

|                   |
|-------------------|
| <b>Engine RPM</b> |
| 2900              |

| Station | Diameter | Pitch | Profile | Circumference | Thickness | Tangent | Angle | Chord Length | Prop Speed<br>MPH |
|---------|----------|-------|---------|---------------|-----------|---------|-------|--------------|-------------------|
| A       | 24       | 30    | 3.72    | 75.40         | 1.48      | 0.3979  | 21.70 |              | 207               |
| B       | 36       | 30    | 4.77    | 113.10        | 1.27      | 0.2653  | 14.86 | 4.93         | 310               |
| C       | 48       | 30    | 5       | 150.80        | 0.99      | 0.1989  | 11.25 | 5.10         | 414               |
| D       | 60       | 30    | 4.32    | 188.50        | 0.69      | 0.1592  | 9.04  | 4.37         | 517               |
| E       | 66       | 30    | 2.6     | 207.35        | 0.38      | 0.1447  | 8.23  | 2.63         | 569               |

#### Notes

1. The ( desired ) **pitch** of the propeller is the same at all stations ( uniform gemetric pitch )
2. **Circumference** is Diameter X 3.1416
3. **Profile** is the distance measured between the leading edge and trailing edge of the prop at each station.  
The profile is provided by and derived from the plan profile drawing.
4. The **Thickness** is the distance between the leading edge and the trailing edge that is drawn on the side of the prop after it is cut from the blank. This distance is equal to : **Profile** divided by **Circumference** times **Pitch**.
5. The **Tangent** is used to calculate the angle of the chord line at each station. **Tan** = **Pitch** / **Circumference**.
6. The **Angle** corresponds to the tangent at each station. This is calculated by the spreadsheet utilizing the ATAN function. ( Degrees(ATAN) ) You can also use trigometric tables to determine the angle.
7. **Chord** Length is the hypotenuse of the angle created by the Blade Depth and Blade Width. ( Profile , thickness, chord.)
8. This spreadsheet will calculate the prop speed at each station. Simply insert an appropriate value for RPM.