# Speed Table for Atlas-Craftsman 12" Lathe, version 1

## By R. G. Sparber

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| diameter (inches) | | | | | |
|---|---|---|---|---|---|
| steel | AL | | | | |
| | | SFM | | | backgear |
| 80 | 100 | ← | speed | pulley/belt | in/out |
| 0.1 | 0.2 | | 2072 | B4 | out |
| 0.2 | 0.3 | | 1270 | B3 | out |
| 0.4 | 0.5 | | 805 | B2 | out |
| 0.4 | 0.6 | | 685 | A4 | out |
| 0.6 | 0.8 | | 500 | B1 | out |
| 0.7 | 0.9 | | 418 | A3 | out |
| 0.9 | 1.1 | | 345 | B4 | in |
| 1.1 | 1.4 | | 266 | A2 | out |
| 1.4 | 1.8 | | 211 | B3 | in |
| 1.9 | 2.3 | | 164 | A1 | out |
| 2.3 | 2.9 | | 134 | B2 | in |
| 3.7 | 4.6 | | 83 | B1 | in |
| 2.7 | 3.4 | | 112 | A4 | in |
| 4.4 | 5.5 | | 70 | A3 | in |
| 6.8 | 8.5 | | 45 | A2 | in |
| 10.9 | 13.6 | | 28 | A1 | in |

This table translates the diameter to be turned for steel and aluminum into the nominal pulley/belt and backgear setting. I printed it out and glued it to a piece of flexible magnetic sheet. It sticks to the door that permits access to my A/B pulley.

This table is based on the equation

$$diameter = \frac{12 \; x \; SFM}{\pi \; x \; RPM}$$

For diameter in inches and SFM is surface feet per minute.

The table was taken from a simple spreadsheet that lets me change the SFM if so desired. I've never had a need.

I welcome your comments and questions.

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