

Depositing on Cylindrical Part

1. Set chuck rotation to $\omega = 600 \text{ rpm} = 10 \text{ rps}$.
2. Determine velocity of robot: $V = \frac{\omega D}{4\pi}$.

Use ω in rps and D in mm (Remember that diameter is mm/rev).

3. Start robot at 1 in. below rotating cylinder, increment 3 mm, and go 1 in. above rotating cylinder to complete each pass.
4. Repeat for n passes to develop coating thickness required.

Example

For a 1 in = 25.4 mm diameter rod rotating at 600 rpm, the robot speed is

$$V = \frac{(10 \text{ rev/s})(25.4 \text{ mm/rev})}{4\pi} \approx 20 \text{ mm/s}.$$