

Formulas for Segmented Turning

Closed Ring Segment Formula $((R^2 \cdot 3.14)/S) \cdot 1.024$

R – radius

S – number of segments per ring

1.024 - fudge factor

Example= 4" radius ring, 18 segments per ring $((4^2 \cdot 3.14)/18) \cdot 1.024 = 1.429"$

Open Segment ring formula = 70% of the closed segment length

$((R^2 \cdot 3.14)/S) \cdot 1.024 \cdot .7$

Angle of cut = $(360 \text{ degrees} / N\# \text{ of seg.}) / 2 = \text{cut angle}$

Open segment cut shown is 70% and 66%

Segments	Closed cut angle	70% of cut angle	66% of cut angle
6	30		
8	22.5		
10	18	12.6	11.9
12	15	10.5	9.9
15	12	8.4	7.9
14	12.86	9.0	8.5
16	11.25	7.9	7.4
18	10	7.0	6.6
20	9	6.3	5.9
24	7.5	5.3	5.0
26	6.92	4.8	4.6
28	6.43	4.5	4.2