

## CYLINDRICAL GRINDING (Cutting Parameters)

Type of grinding	Surface speed of job (m/min.)	Intermittent feed mm/double stroke	Plunge feed mm/rev.	Table traverse as a fraction of wheel width per revolution of job
Traverse:				
Rough	20–30	0.015–0.06	–	0.6–0.7
Finish	15–30	0.002–0.01	–	0.2–0.3
Plunge:				
Rough	30–50	–	0.005–0.06	–
Finish	20–40	–	0.001–0.004	–

## Recommended Grinding Allowance

Diameter of job (mm)	Length of job (mm)							
	Upto 30	Upto 100	100-400	400-800	800-1200	1200-1600	1600-2000	More than 2000
	Grinding allowance on Diameter (mm)							
3–10	0.20	0.25	0.30	–	–	–	–	–
11–20	0.25	0.30	0.35	–	–	–	–	–
21–30	0.30	0.35	0.40	0.45	–	–	–	–
31–50	–	0.40	0.50	0.55	0.60	–	–	–
51–100	–	0.45	0.55	0.60	0.70	0.75	0.85	0.90
101–200	–	0.50	0.60	0.70	0.75	0.80	0.90	0.95

Note: These values are for hardened steel jobs with minimum distortion in heat treatment. Values should be reduced slightly for unhardened jobs.

## CENTRELESS GRINDING (Cutting Parameters in Throughfeed Grinding)

Job (mm)	Grinding allowance on dia. (mm)	Job height above centre line (mm)	Stock removal on dia. per pass (mm)	Control wheel angle	Surface speed of control wheel (mm/min.)
Under 10	0.15–0.20	1–3	0.05	3.5°	150
11–20	0.20–0.30	4–6	0.05	3.0°	120
21–30	0.30–0.40	6–8	0.10	3.0°	70
31–50	0.35–0.45	8–10	0.15	2.5°	55
			0.10	2.5°	45
			0.20	2.5°	25
51–75	0.45–0.55	10–15	0.20	2.0°	20
			0.30	2.0°	15
76–100	0.50–0.60	15–20	0.20	1.5°	20
			0.40	1.0°	15

## INTERNAL GRINDING

### (Cutting Parameters in Traverse Grinding)

Type of grinding	Surface speed of job (m/min.)	Intermittent feed mm/double stroke	Table traverse as % of wheel width per revolution of job	Grinding wheel diameter
Rough	20-60	0.005-0.02	0.6-0.7	75% of hole diameter
Finish	20-60	0.0025-0.005	0.2-0.3	

### Recommended Grinding Allowance

Diameter of hole (mm)	Hole Length (mm)				
	Upto 25	25-50	50-100	100-150	150-200
	Grinding allowance on Diameter (mm)				
Upto 10	0.08	0.10	–	–	–
Upto 20	0.12	0.14	0.16	–	–
Upto 30	0.15	0.17	0.20	0.23	–
Upto 50	0.20	0.22	0.25	0.30	0.35
Upto 80	0.25	0.25	0.30	0.35	0.40
Upto 120	0.30	0.30	0.35	0.40	0.45

## SURFACE GRINDING

### (Cutting Parameters for Reciprocating Table Grinders)

Type of grinding	Table speed m/min	Depth-of-cut mm/stroke	Cross-feed as a fraction of wheel width per stroke of job
Straight wheel:			
Rough	10-30	0.015-0.060	0.5-0.7
Finish	5-20	0.005-0.015	0.2-0.3
Cup Wheel:			
Rough	1-4	0.015-0.050	–
Finish	2-3	0.005-0.010	–