



PRECISION UNIVERSAL CYLINDRICAL GRINDING MACHINE UCG 250 X 400

MACHINE BED

High rigidity and stability through box structure asymmetrically ribbed design.

TABLE

Table slide moves on precision hand scraped 'V' & flat guideways with continuous lubrication.

WORK HEAD

The machine has a rigid universal work head. It has an alloy steel spindle running in special hydrodynamic bearings. Very easy to convert live to dead center or dead to live centers. Spindle clearance can be adjusted for different speeds.

WHEEL HEAD

The spindle runs on high precision multiple hydrodynamic bearings which give very high rigidity and excellent surface finish. The spindle is made of Alloy Steel, specially heat treated to achieve very high dimensional stability, accuracy and long life.

TAIL STOCK

The Quill is carried in high precision special graded spher bearings, in which radial play can be adjusted within microns. Dresser block is also mounted on the tail stock body only.

INTERNAL CLEARING HEAD

Mounted separately side of wheel head on infed slide thus providing rigid support to the spindle giving better surface finish in grinding. Internal Grinding operations can be done without removing external wheel.

INFEED SYSTEM

The infeed system moves on pre-loaded linear guideways. This guarantees high repetitive accuracy and stable alloy free low movement of the slide. Infeed through hardened & precision ground cam.

FOR AUTOMATIC MODELS

Grinding allowance and the required variable coarse and fine feed rates can be pre-selected. Spark out timer 0-60 seconds. PLC & Interfacing with any automatic in-process gauges (optional).

AUTOMATIC GRINDING CYCLE

Single lever operates the grinding cycle automatically as follows: * Rapid Approach- Coarse feed, low feed, spark out, rapid retraction of the wheel head. * The Infeed Hand wheel to the starting position. * Starts and stops work head and coolant motors automatically.

LUBRICATION

The infeed slide and internal slide is grease packed for life and the table slide is provided with automatic continuous lubrication.

HYDRAULIC/ ELECTRICAL CABINET COOLANT UNIT

These units are housed out side the machine as separate units to provide easy maintenance. This description is only to UCG 250 X 400.

Machines are offered in three versions:

a) UCG Universal b) ECG Internal c) ICG Internal

Some automatic 'S' model is available in all above three versions i.e., Infeed is manual but rapid stroke & table travel remains hydraulic.

Note: All specifications and designs are subject to alterations without prior notice.

	UNITS	UCG 310X400	UCG 240/310X500	UCG 240/310X600	UCG 240/310X1000	UCG 400X1500	
CAPACITIES							
Centre height	mm	130	130/175*	130/175*	130/175*	300	
Distance between centres	mm	530	600	700	1100	1400	
Maximum grinding length	mm	400	500	800	100	1500	
LONGITUDINAL SLIDE							
Table speed	m/min	0.1-5	0.1-5	0.1-5	0.1-5	1400	
Maximum travel	mm	400	150	850	1050	1500	
Min. automatic travel	mm	2	2	2	2	3	
Max. Swivel table	Degree	0-30	0-17	0-13	0-13	0-8	
WORK HEAD							
Spindle speed	RPM/30steps	90-1000	34-630	54-630	34-630	40-500	
Spindle nose taper	HT	4	3	3	5	4	
Power	KW	0.14/0.32	0.28/0.54	0.28/0.54	0.28/0.54	0.28/0.54	
Swivel range	Degree	0-90	0-90	0-90	0-90	0-90	
WHEEL HEAD							
Grinding wheel size	mm	300x40x127	400x50x127	400x50x127	400x50x127	(600x80x304.8)	
Max. width	mm	40	43/50*	43/50*	43/50*	100*	
Max. diameter	mm	300	400/500*	400/500*	400/500*	600*	
Peripheral speed	m/sec	30	35/45	30/45	35/45	30/45	
Power	KW	2.2	3.7/5	3.7/5	3.7/5	7.5/10	
Spindle speed	RPM	1575/2200/2450	1500/1740/2020/2350	1500/1740/2020/2350	1500/1740/2020/2350	900/1200/1450	
Initial positioning	mm	280	300	200	300	300	
Swivel range	degree	0-15-30	± 45	± 45	± 45	± 45	
INFEED SYSTEM							
Rapid approach	mm	40	50	50	50	60	
Infeed with hand wheel	mm	20	20	20	20	20	
Max. increment on dia	mm	0.001	0.001	0.001	0.001	0.001	
Max. plunge depth in auto	mm	1.7	1.7	1.7	1.7	1.7	
Infeed rate on dia coarse	mm/min	0.015-1.5	0.015-4	0.015-4	0.015-4	0.015-4	
Infeed rate on dia fine	mm/min	0.015-1.5	0.015-3	0.015-3	0.015-3	0.015-3	
Spark out max	Sec	60	60	60	60	60	
TAIL STOCK							
Quill travel	mm	20	40	40	40	40	
Taper	mm	2/34*	4	4	4	4	
INTERNAL GRINDING HEAD							
Spindle housing max.	mm	80	80	80	80	100	
Standard spindle	mm	40x250	40x250	40x250	40x250	80x250	
Spindle	RPM	18000	18000	18000	18000	15000	
Power	KW	1.5	1.3	1.5	1.5	2.0	
DRESSING UNIT							
Tail stock mounted	I	I	I	I	I	I	
Table mounted	I	I	I	I	I	I	
GUARANTEED ACCURACY**							
Roundness on live spindle	mm	0.002	0.002	0.002	0.002	0.002	
Standard	mm	0.001	0.001	0.001	0.001	0.001	
Special	mm	0.002	0.002	0.002	0.002	0.002	
Cylindricity	mm	0.002	0.002	0.002	0.002	0.002	
GENERAL							
Total power requirement	KW	4.5	6.5/8.5	6.5/8.5	6.5/8.5	6.5/8.5	
Total weight of machine	Kg	1400	2400	3000	3800	4800	



Microtek Grinding Machines Pvt. Ltd.

(Total Grinding Technology Solutions)

SB-57, 2nd Cross, 1st Stage, Peenya Industrial Area, Peenya, Bangalore- 560 058

Ph: 080 28393371 / 72 Fax: 080 41177847 | E-mail: microtektd@yahoo.com

Website: www.microtekmachines.com