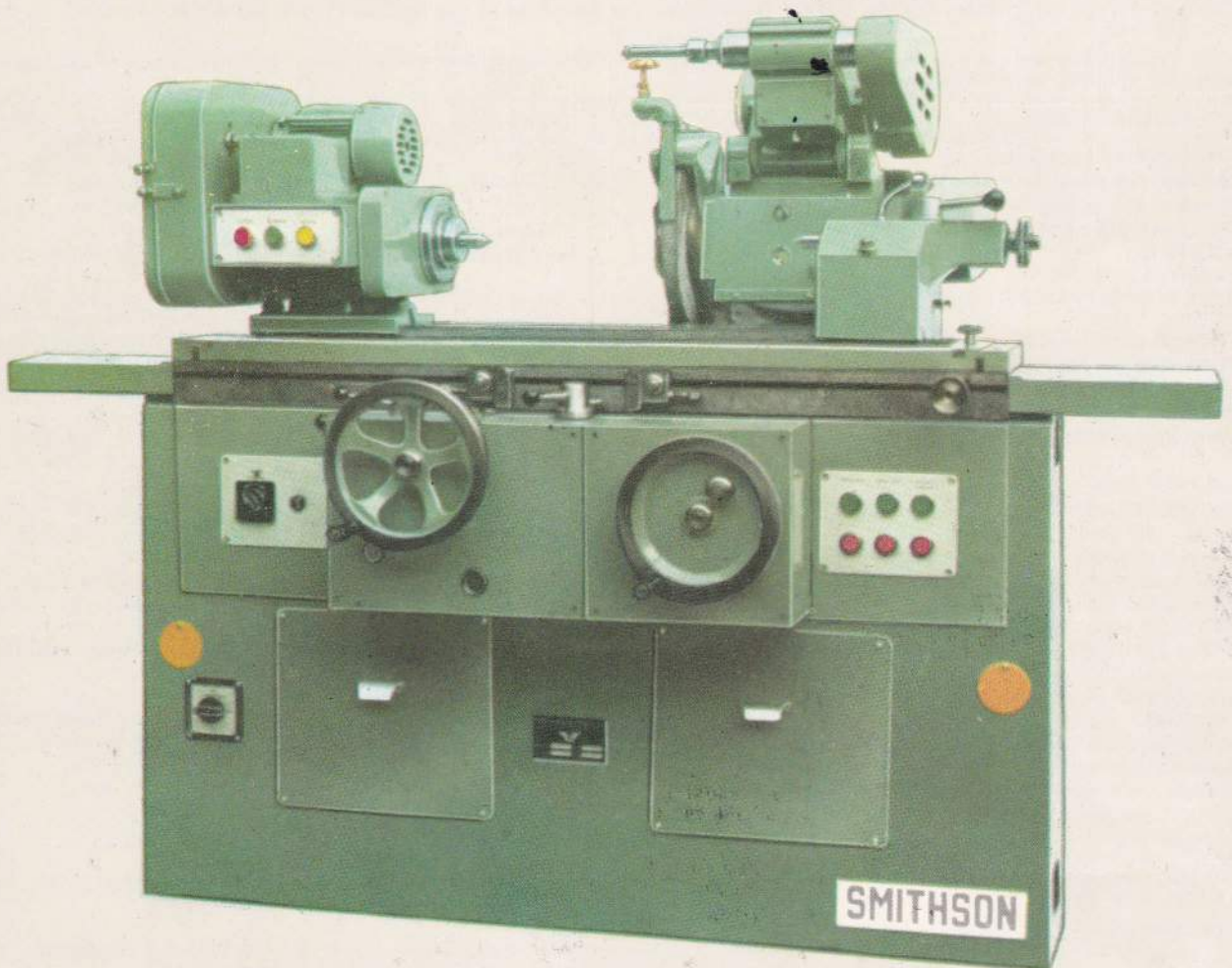


# Smithson

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universal  
cylindrical  
grinding  
machines



**SMU MODELS**





# Smithson Universal Cylindrical Grinding Machines SMU-MODELS. CONFORMING TO ISI TEST LIMITS

## CONSTRUCTION

**BASE :** That is a high grade alloy cast iron body designed to make easy movement of table slide, by providing V-way and a flat track duly hand scraped to fine tolerances to achieve highest accuracy.

**TABLE :** It is composed of two parts. The lower is called slide and upper, the table. The slide floats on Vee and Flat ways of bed provided for, which ensure very smooth longitudinal table movement. The upper table can be swivelled for external and internal angular/taper grinding of jobs, with a fine adjustment screw and nut on the right side of the table.

**WORKHEAD & TAILSTOCK :** Both are detachable and adjustable when required. Workhead alloy steel spindle has been made for revolving as well as stationary centres. The spindle is fitted with taper roller or angular contact ball bearings. (Bronze bush bearings can be provided on special request and at extra cost). Workhead can be swivelled upto 90° towards grinding wheel and 30° toward operator for taper and conical grinding. The tailstock which runs in a honed bore is spring loaded for quick release. Morse tapers are arranged for dead centres, fitting in workhead and tailstock spindle noses. The drive to workhead is given by an electric motor through V-belts.

**WHEELHEAD :** Designed to ensure max. rigidity and smooth operation. The spindle is fitted with taper roller or angular contact ball bearings. The grinding wheel is fitted on a taper nose mounted in a wheel—flange, arranged to balance for vibration free operation. The drive is given by an electric motor through V-belts. The complete unit can be swivelled on either side upto 60° Fine feed to wheel can be provided with micrometric knob if specially ordered.

**INTERNAL GRINDING ATTACHMENT :** (As an optional equipment at extra cost).

The said attachment driven with independent motor fitted on, through a plan endless belt giving the vibration free highest efficiency. That is suitable for grinding cylindrical and taper holes.

**COOLANT :** An independent cooling system is provided. The complete unit is located at the rear of the machine, for easy cleaning etc.

**ELECTRICS :** The machine is fully installed with electric motors, switchgears and wiring, normally arranged to suit the supply of 400/440 Volts, 3 phase A.C. 50 Cycles.

SPECIFICATIONS	SMU-500	SMU-600	SMU-800	SMU-1000
Maximum Grinding Length	500 mm	600 mm	800 mm	1000 mm
Maximum Height of Centres	130 mm	130 mm	150 mm	150 mm
Maximum Swing over bed	260 mm	260 mm	300 mm	300 mm
Maximum grinding diameter	100 mm	100 mm	100 mm	100 mm
Table feed	Mechanical	Mechanical	Mechanical	Mechanical
Number of table feeds	4	4	4	4
Range of table Feeds per minute	150 mm, 280 mm 450 mm & 700 mm	150 mm, 280 mm 450 mm, & 700 mm	120 mm, 245 mm 385 mm & 645 mm	120 mm, 245 mm 385 mm & 645 mm
Maximum table swivel	8° + 3° = 11°	8° + 3° = 11°	6° + 3° = 9°	6° + 3° = 9°
Electrical motor for table drive	.37 Kw	.37 Kw	.75 Kw	.75 Kw
Workhead swivel on either side	90°/30°	90°/30°	90°/30°	90°/30°
Workspindle speeds	4	4	4	4
Workspindle speeds range	75, 145, 210 & 300 RPM	75, 145, 210 & 300 RPM	75, 145, 210 & 300RPM	75, 145, 210 & 300 RPM
Workhead motor	0.37 Kw	0.37 Kw	0.75 Kw	0.75 Kw
Taper in workspindle	No. 3 Morse	No. 3 Morse	No., 3 Morse	No. 3 Morse
Taper in tailspindle	No. 3 Morse	No. 3 Morse	No. 3 Morse	No. 3 Morse
To and fro swivel of wheelhead	60°	60°	60°	60°
Transverse movement of wheelhead max.	125 mm	125 mm	125 mm	125 mm
Size of grinding wheel	354 x 25 x 127 mm	354 x 25 x 127 mm	407 x 25 x 203 mm	407 x 25 x 203 mm
Min. dia of worn out wheel	160 mm	160 mm	225 mm	225 mm
RPM of grinding wheel	1750/2000	1750/2000	1500/1750/2000	1500/1750/2000
Wheelhead motor	2.2 Kw	2.2 Kw	3.7 Kw	3.7 Kw
Max. Internal grinding depth	150 mm	150 mm	150 mm	150 mm
Min. & Max. dia of internal grinding wheel	12 to 40 mm	12 to 40 mm	12 to 40 mm	12 to 40 mm
Max. & Min. dia of hole for grinding	50 to 18 mm	50 to 18 mm	50 to 18 mm	50 to 18 mm
Motor for internal attachment	.75 Kw	.75 Kw	.75 Kw	.75 Kw
Coolant pump motor	0.07 Kw	0.07 Kw	0.07 Kw	0.07 Kw
Approximate gross weight with packing	2000 Kg.	2150 Kg.	2350 Kg.	2550 Kg.

### Standard Equipment :-

Coolant pump fitted on tank, One. Dressing tool holder (without tool), One. Grinding wheel fitted on, One. Grease gun, One. Oil Can, One. Dead Centres, Two. Key Spanners, One set. Set Spanners, One set. Wheel flange fitted on, One.

### Optional equipment (At extra Cost) :

Internal grinding attachment (to be ordered with the machine), Independent 4 Jaw Chuck 6", 3 Point steady rest, 2 Point steady rest, Radius Truing device, Balancing stand, Balancing Mandrel & Spare wheel flange.

RIGHTS RESERVED FOR CHANGES TOWARDS IMPROVEMENTS IN DESIGN AND CONSTRUCTION.

### MANUFACTURERS :

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