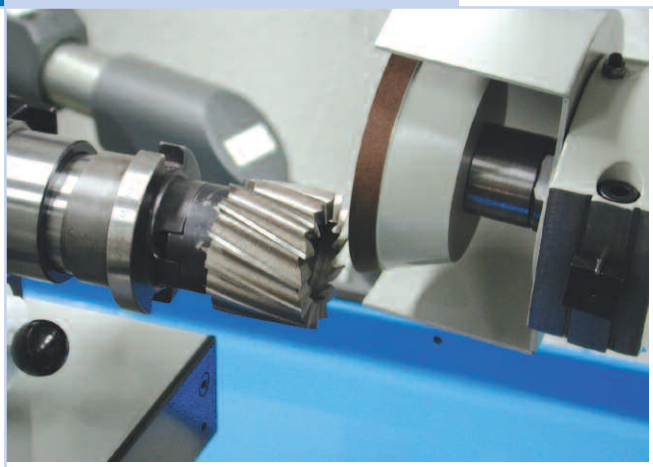
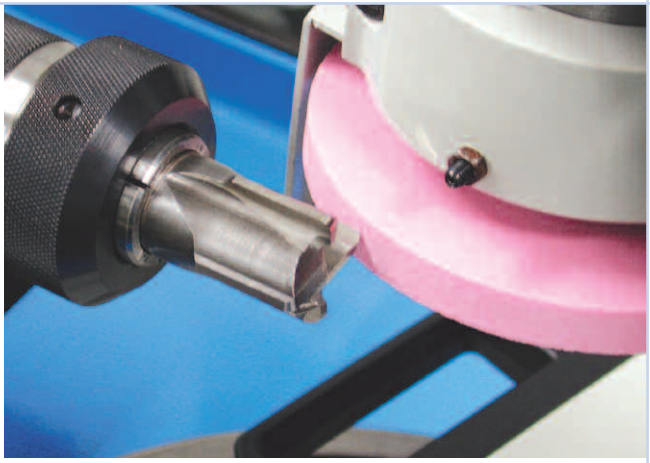
WS 54
Tool and Cutter Grinding Machine

Productivity realised at tool cutting edge



Grinding of face cutting



Grinding of radii

Conception

The outstanding characteristic of the WS 54 is the universal workhead. It replaces the otherwise necessary clamping table. It is therefore possible to grind, relieve grind and index

- cylindrical and tapered components
- straight and spiral fluted

without additional equipment.

A positioning movement, independent of a pre-set helix angle, is possible by tangential relation of the work spindle. The since bar generates the helical rotating movement by connecting longitudinal and rotary movements.

The functions, which are integrated in the workhead, reduce the setting up time considerably.

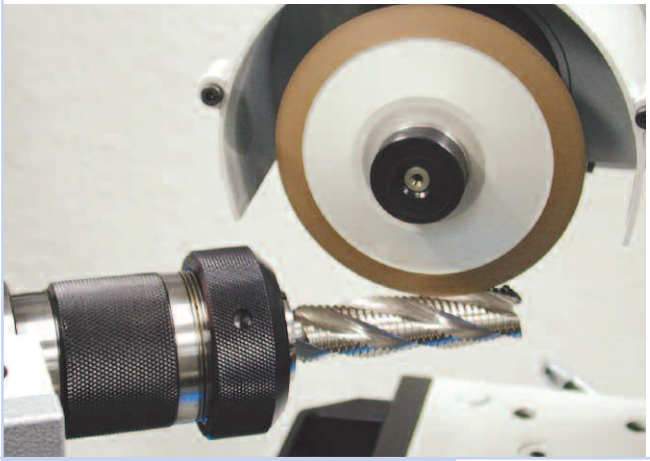
The WS 54 is ideally suited for economical re-grinding and production of step-, milling- and chamfering tools as well as turning- and special tools.

Short setting up times

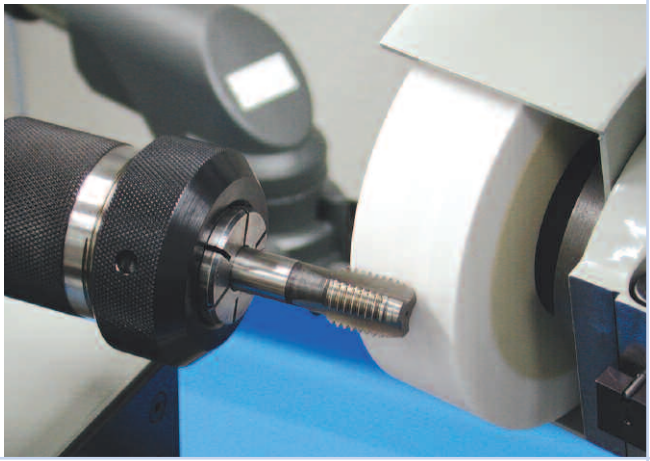
Short setting up times are of especially great importance when grinding single cutting tools or small batches.

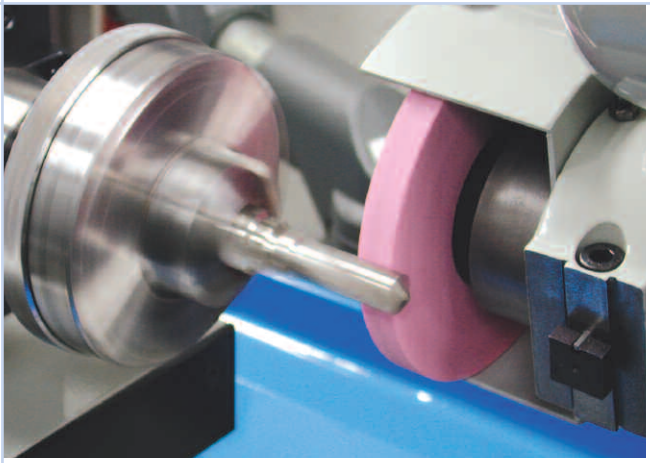
The tool and Cutter Grinding Machine WS 54 with numerous positioning and working length and manifold accessories fully complies with this condition in respect of small to medium size tools.

Grinding of spiral flute

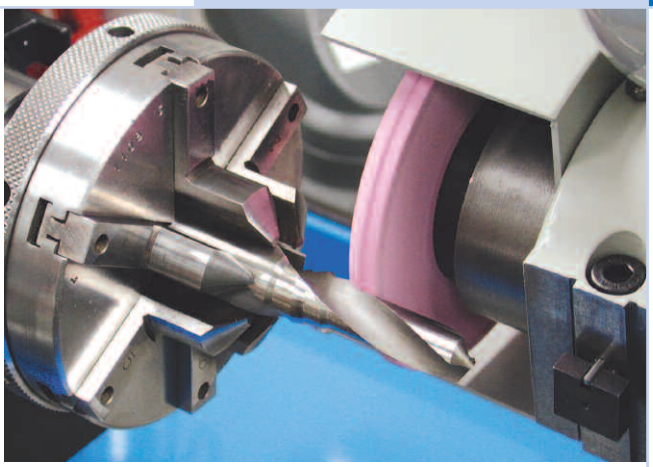


Grinding of leading edge of tap

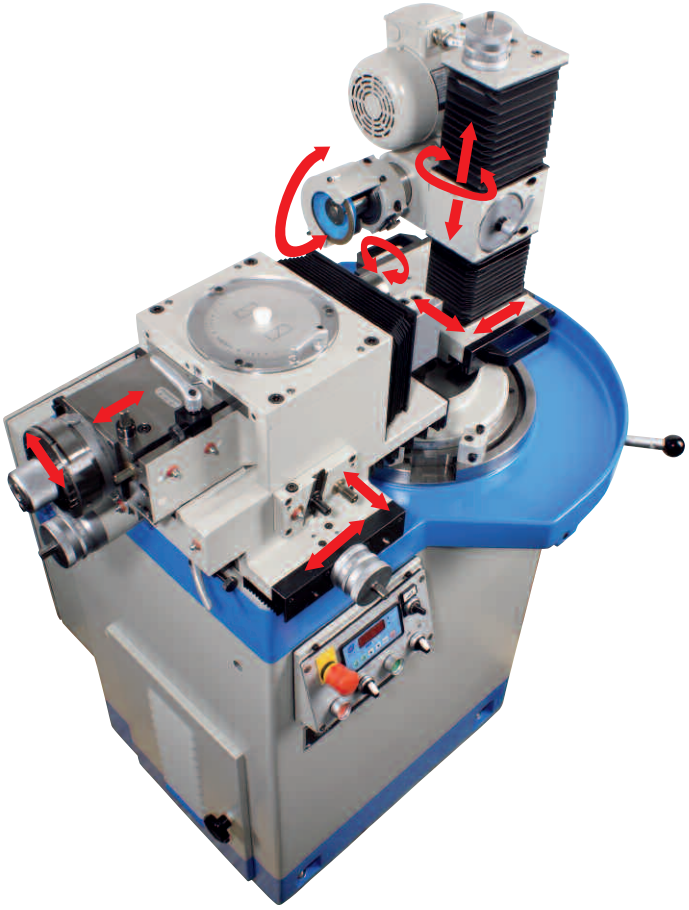




Cylindrical grinding



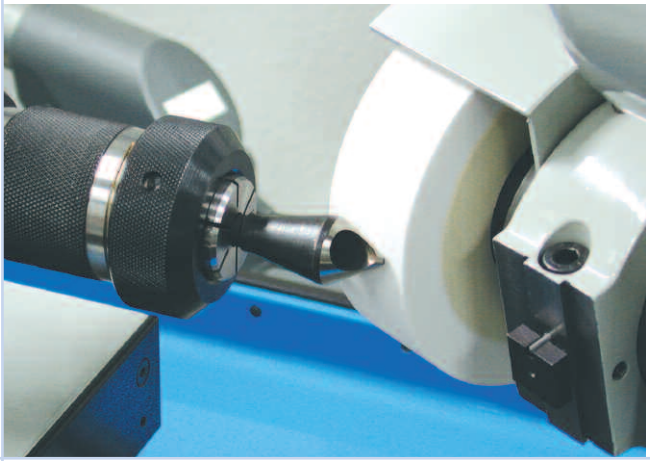
Axial relief grinding of step



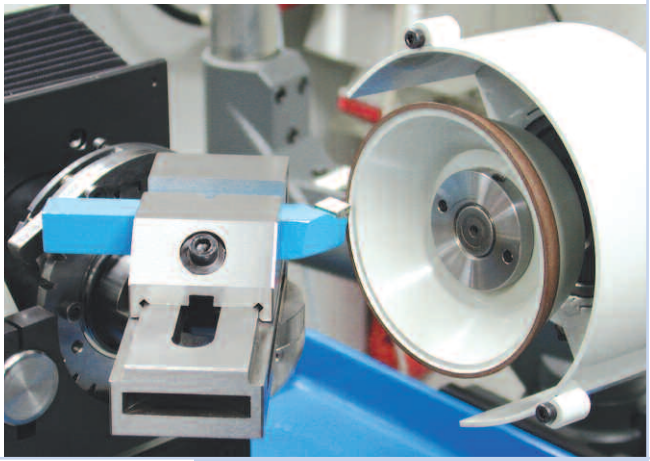
Advantages for workshop operation

- **better true running accuracy,** as main grinding operations are carried out in one clamping, e.g.
  – cylindrical-, helix- and relief grinding
  – radii grinding
- **stepless setting** of helix angle from 0 - ∞ left- and right hand
- **stepless tangential adjustment,** independent of helix angle
- **fast change over** from circumference grinding to face grinding

Grinding of counter sinking cutters

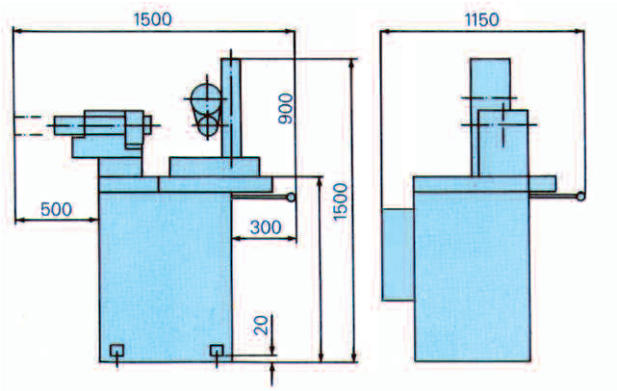


Turning tool clamped in machine vice



Technical Data: Tool and Cutter Grinder WS 54 - accessories comprising

Work piece and work mounting dimensions	Maximum work piece diameter	mm	150
	Maximum swing when using support	mm	180
	Maximum weight	kg	5
	Maximum length between centres	mm	280
	Work spindle taper	MT	5
	Reduction sleeve, external MT 5, internal	MT	4, 3, 2, 1, 0
	Reduction sleeve, external MT 5, internal	SK	30, 40
	Milling cutter chuck MT 5 with 26 mm diameter through bore, clamping diameter	mm	3 - 26
	Milling cutter chuck MT 3 with 10 mm diameter through bore, clamping diameter	mm	1 - 10
	Angular head, adapter taper	MT	3
	Reduction sleeve, external MT 3, internal	MT	2, 1, 0
	Clamping diameter	mm	1 - 18
	Six-jaw chuck with through bore 22 mm Clamping range	mm	3 - 32
	Dividing head and indexing equipment for straight fluted tools	division	2 - 50
Range of work	Spiral and relief grinding, lead infinitely variable from	mm	0 - ∞
	Maximum length ground	mm	110
	Coarse longitudinal adjustment (additional)	mm	180
	Cross adjustment	mm	130
	Angular head swivel for taper tools	degree	± 7,5
	Angle head rotation, horizontal and vertical	degree	± 90
	Rotation of work spindle	degree	360°
Grinding wheel spindle and grinding wheels	Grinding wheel speed with Inverter	rev./min	4.000 - 10.000
	by changing of belt	rev./min	4.500/5.600/7.100
	by changing of pulley	rev./min	10.600/16.000
	Grinding wheel diameter	max. mm	125
	Smallest abrasive pencil	min. mm	1
	Quick change clamping for wheel adapter and arbor for grinding wheels with bores	mm	10/13/20/32
Drive motors	Power output of grinding motor / option Inverter	kW	0,75/2,2
	Power output of coolant pump	kW	0,045
Dimensions of machine	Overall height of machine	mm	1.500
	Base plate of machine	approx. mm	550 x 670
	Floor space required	approx. mm	3.200 x 2.200
	Net weight (machine with basic equipment)	approx. kg	500
	Connected electrical value	kW	1,3/2,8



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Subject to changes · SB 03.08