

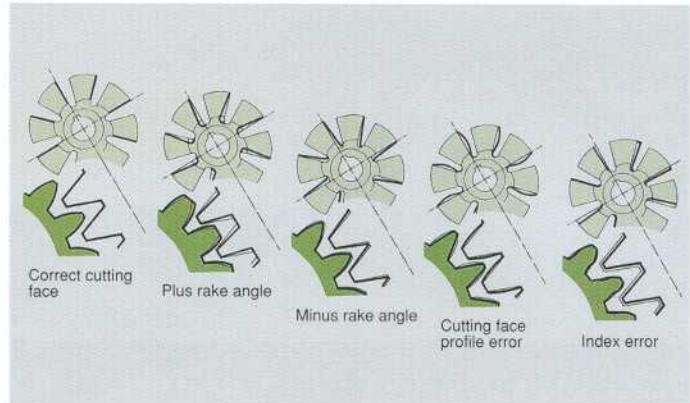
SHR-25
Hob Resharpening Machine

SHR-25

Both conventional dressable wheels and electroplated wheels can be used

The SHR-25 hob sharpener has been so designed to sharpen not only straight gash hobs but also spiral gash hobs with various kind of grinding wheel.

- Creep feed grinding of HSS straight gash hobs using CBN electroplated wheels.
- Creep feed grinding of carbide straight gash hobs using electroplated diamond wheels.
- Grinding straight and spiral gash hobs with conventional dressable ceramic wheels.
- Grinding of index plates and similar parts.



Errors of hobs and the effect of the hobbed gears



Characteristic features

■ Normal HSS hobs, skiving hobs, carbide hobs and spiral gash hobs can be ground using CBN, diamond and conventional dressable ceramic wheels.

■ Grey cast-iron heavily ribbed machine bed for vibration free operation even at deep cutting, creep feed grinding with electroplated wheels.

■ Grinding stroke by work table for better accuracy and surface finish than stroke by grinding head.

■ Direct spindle with maximum 6,000rpm can use small diameter wheels.

■ Machine slides finished by hand scraping. Roller guides or other sliding materials are not used.

■ Dressing unit mounted on the index head avoids heat deformation by spindle revolution or coolant oil.

■ Dressing function both for grinding face and outside diameter of wheels.

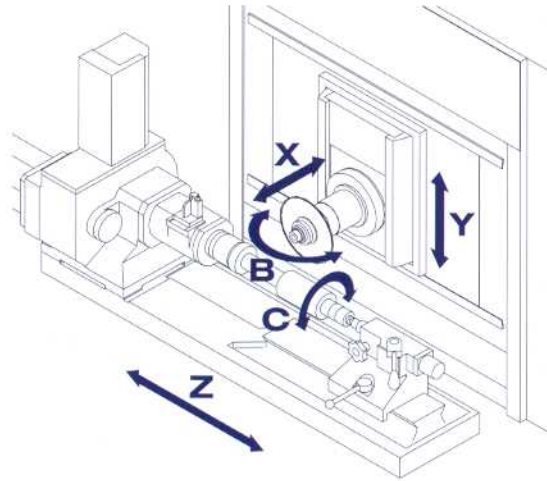
■ Software for straight and spiral gash hob grinding equipped as standard.

■ For grinding hobs with small lead, software for crown dressing is available to obtain better accuracy. Taper angle of wheels also can be changed freely.

■ Wide and large working area for comfortable setup.

■ Coolant device with magnet chip conveyor is standard equipment.

■ Improvement of work environment by fully closed machine cover and oil mist collector.



■ Fanuc FS18Mi-MB controller 10.4" color LCD and mobile MDI unit.

X: Grinding spindle vertical
Y: Grinding spindle axial
Z: Work table trverse
C: Index and infeed
B: Grinding head swivel (option)

■ Absolute encorder for all drives

■ Manual data input program which not require NC knowledge

■ Function to memorize and call-up data of hobs, wheels and grinding conditions. Approx. 200 hobs can be memorized.

■ Program both for single index and multi index grinding.

■ Automatic calculation of grinding position for hobs with rake angle.

■ RS232C input/output interface

■ Macro executer function

■ CNC built-in PLC

OPTIONS

■ Paper filter separator

■ Coolant oil level sensor

■ Hydraulic clamping tailstock with hydraulic unit

■ NC controled spindle head swivel axis

■ Automatic front access door

■ Automatic meshing device for the grinding wheel and hob (gap eliminator)

■ Software for crown dressing with laptop computer.

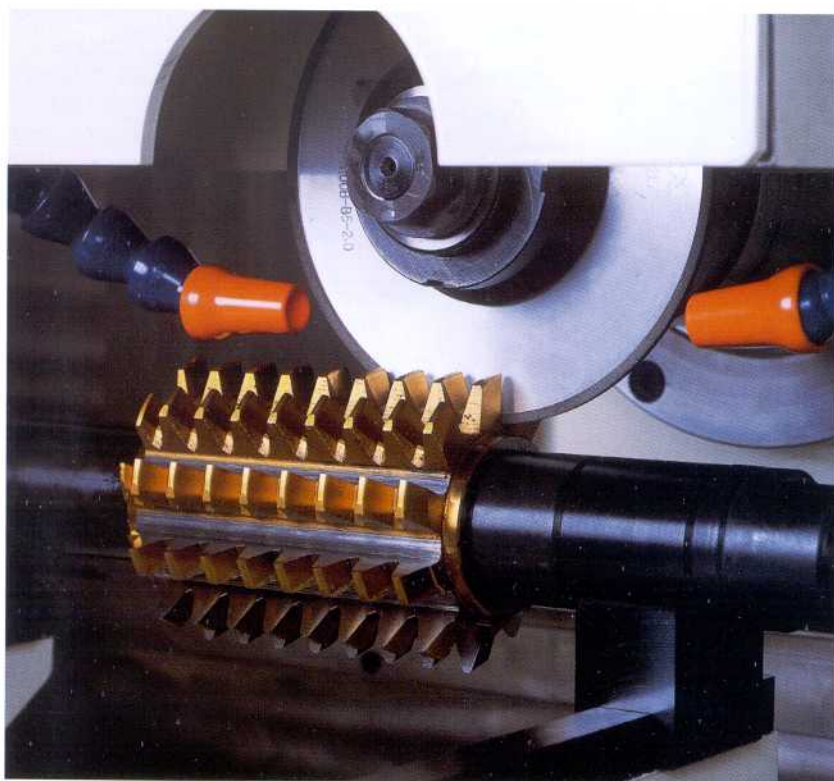
■ Software for square cycle

■ Ladder editor

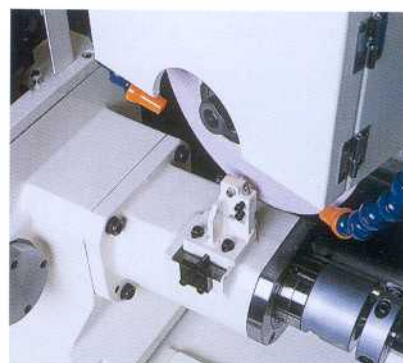
■ Air conditioning in electric cabinet

■ Dressing unit for CBN tool

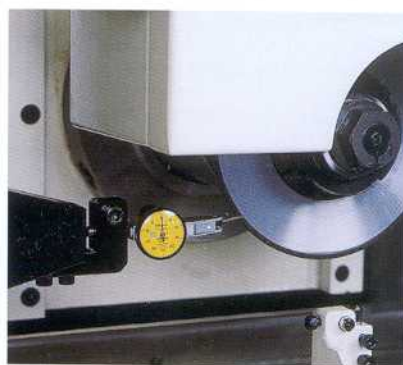
■ Spindle maximum speed 8000rpm arrangement



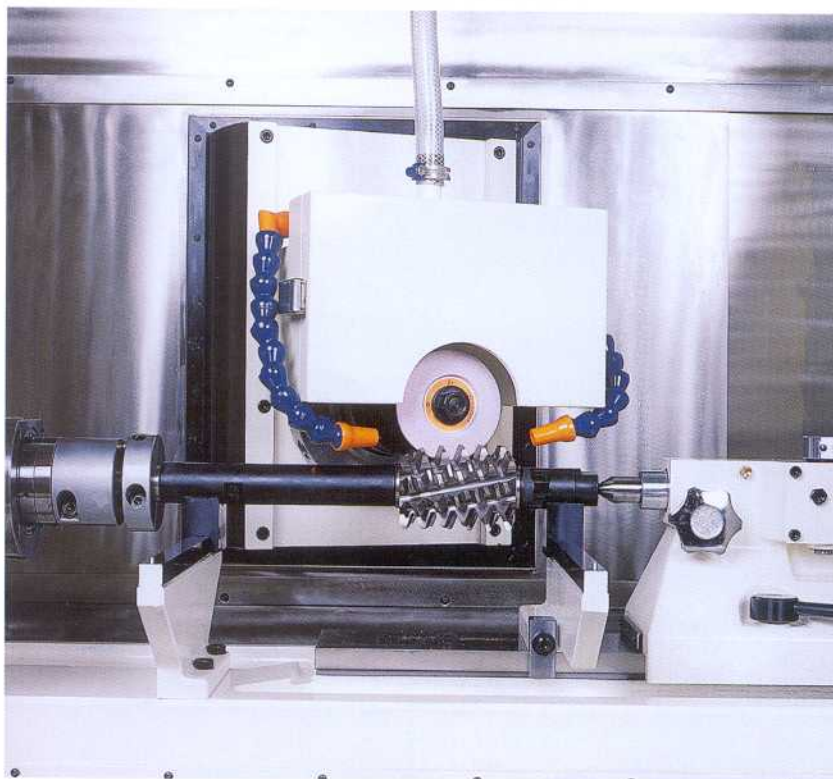
Grinding of straight gash hob with CBN wheel



Dresser



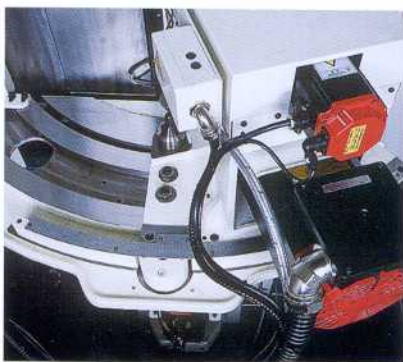
CBN and diamond wheel setting gauge



Grinding of spiral gash hob with dressable ceramic wheel



Oil mist collector and chip conveyor



Wheel head swivel

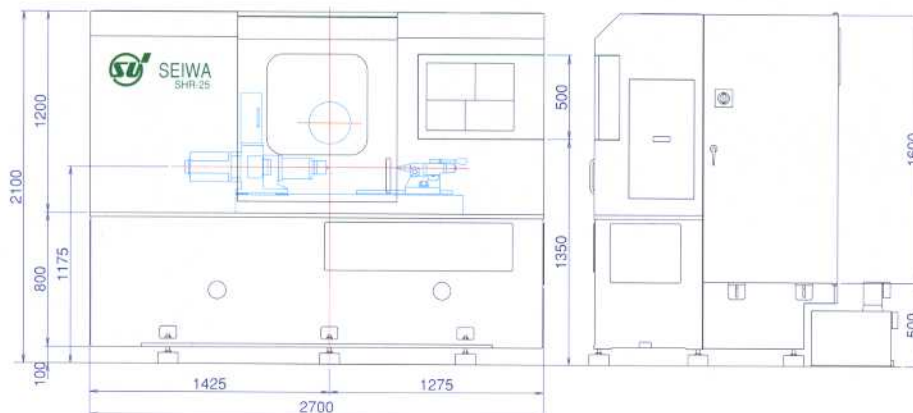
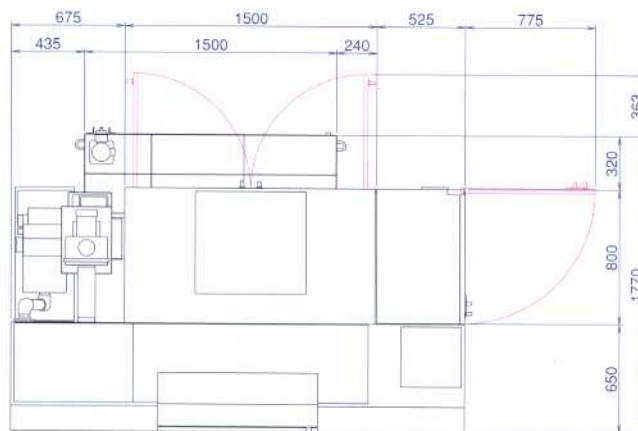
Technical data

Maximum hob diameter to be ground	250 mm	9.8 inch
Maximum hob length to be ground	270 mm	10.6 inch
Maximum hob pitch to be ground	m16	1.5 DP
Minimum hob lead, under the best conditions	150 mm	5.9 inch

Technical review is required in advance if hobs with less than 2600mm (102") lead are to be ground

Work table stroke lenrth	640 mm	25.1 inch
Vertical travel of grinding spindle	230 mm	9.0 inch
Axial travel of grinding spindle	125 mm	4.9 inch
Maximum work table stroke speed	8000 mm/min	314.9 inch/min
Distance between work centers	470 mm	18.5 inch
Grinding spindle speed range	1000/6000 rpm	1000/6000 rpm
Outside diameter of grinding spindle	60-250 mm	2.3-9.8 inch
Space requirement	2700x1770x2100 mm	107x70x83 inch
Weight of machine	4500 kg	9900 lbs
Total power required	18.5 KVA	18.5 KVA

Technical data is subject to change



System technology from one source

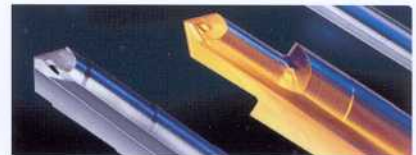


Cylindrical gear hobbing
Shaping
Profile grinding
Continuous generating grinding
Honing/shave grinding
Shaving cutter grinding
Hob grinding
Universal tool grinding
Carbide tool grinding
Chamfering and deburring



HSS and carbide hobs
Shaper cutters
Milling cutters
Rack and saw cutters
Shaving cutters
CBN profile grinding wheels
Master gears
Chamfering and deburring tools

Regrinding of gear cutting tools
Coating of gear cutting tools
Replating of grinding wheels
Grinding of compressor rotors, gears of special design, worms and cams



Single and double flute gundrills
Solid carbide gundrills
Two-fluted milled style deep hole drills

Solid carbide drills and reamers
Pressure coolant drills and reamers
"PCD" drills and reamers
Integrated holder "PCD" tooling



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