

AUTOMATIC SURFACE GRINDERS

SH920 / SH1224 / SH1632 / SH1640

AHB

TOOLING & MACHINERY, INC.

COMPLETE METALWORKING SOLUTIONS

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SHARP
PRECISION MACHINE TOOLS

SHARP GRINDERS - DEFINITELY

FEATURES

OVERALL MACHINE ACCURACY

Complies with: DIN 8632 (Germany)
JIS B6213-1979 (Japan)

SPINDLE

The high precision spindle is supported by multiple anti-friction bearings adjusted radially and axially for maximum accuracy. They are permanently sealed with high quality grease for easy maintenance. Runout of spindle taper nose is under 0.0001" T.I.R. The motor assembly that drives the spindle is dynamically balanced to reduce vibration.

SLIDEWAYS

The machine is constructed with two longitudinal V ways and two cross V ways to ensure perfect alignment between working surfaces. The ways are meticulously hand scraped to achieve maximum accuracy in sliding motion. They are TURCITE coated to reduce friction and increase wear resistance.

ANNEALED CASTINGS

Castings of the machine are "twice annealed" to eliminate any deformation that may build up after machining. They are first annealed at the foundry to relieve internal stress, and then a second time annealed after manufacturing process to relieve any residual stress.

EXTRA LONG BED WAYS

The length of the bed ways is more than twice the length of the working surface. This design ensures no overhang of table during grinding, it also prevents any slight distortion or deflection of the ways.

UNIQUE DIRECTIONAL VALVE

The mechanical valve that controls the reciprocating motion of the table is designed to allow minimum vibration when the table reaches one end and reverses back.

HYDRAULIC SYSTEM

The hydraulic system is a free standing unit separated from the grinder. This arrangement prevents any heat or vibration generated from the unit from affecting the performance of the machine. It is equipped with a cartridge type paper filter that keeps the hydraulic oil clean in order to avoid excess wear on the table ways and protect the valves and hydraulic cylinders.

AUTOMATIC LUBRICATION SYSTEM

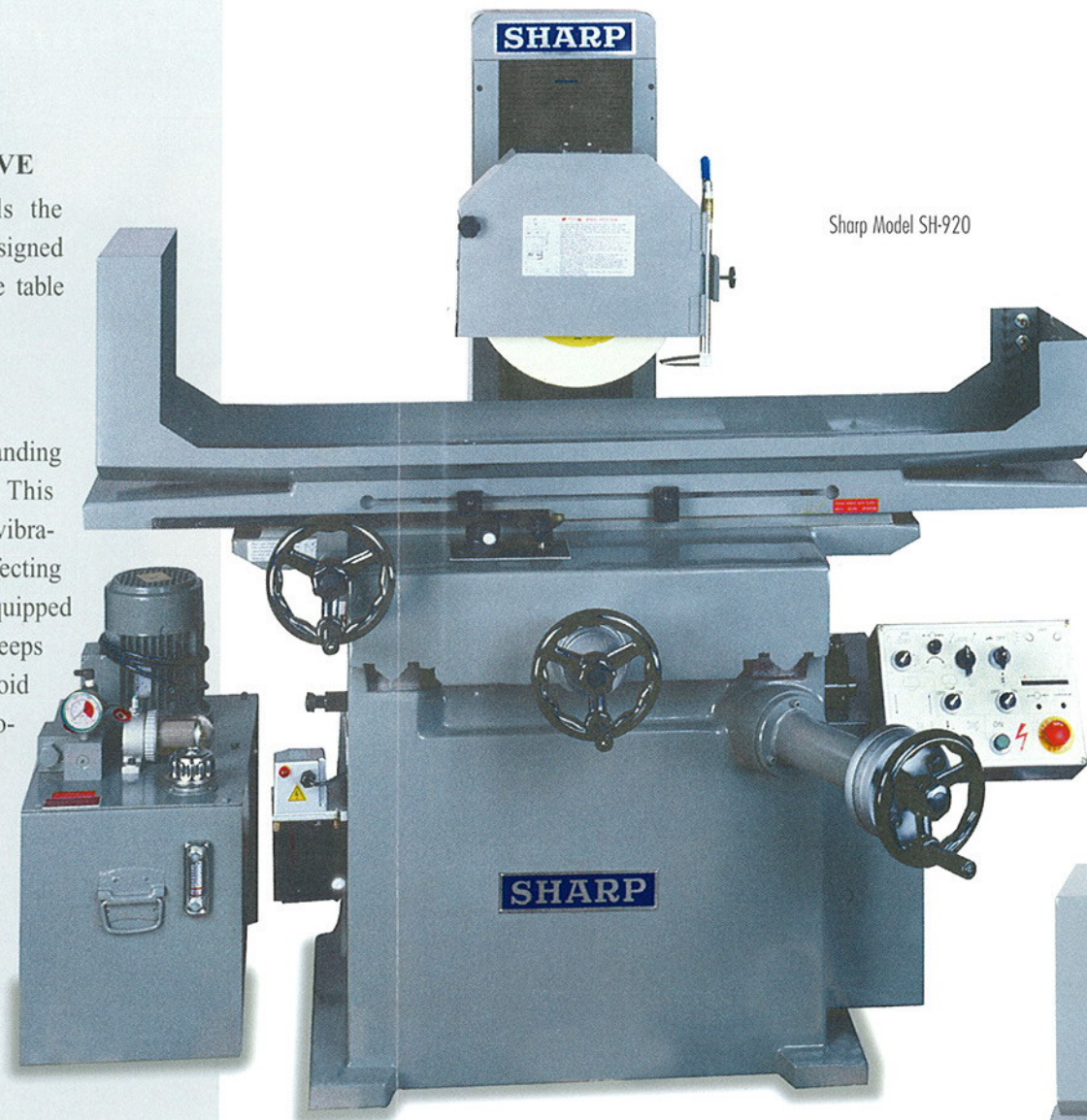
The lubrication system is operated with the hydraulic system to ensure proper lubrication whenever the hydraulic system is turned on.

SAFETY DEVICES

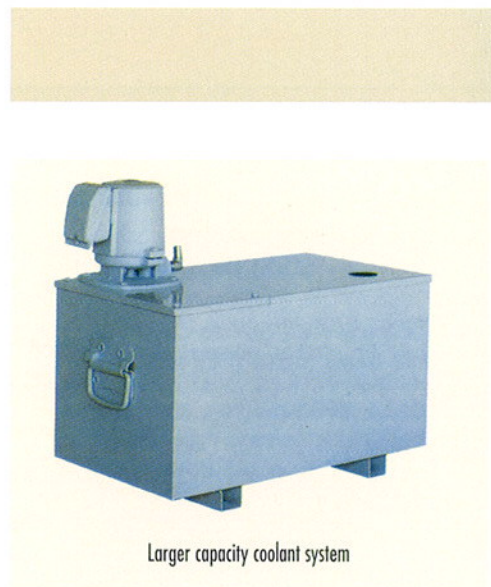
Over travel protection of table is designed in hydraulic cylinder movement.

Over travel protection of cross feed is done by two limit switches.

Rapid down feed can only be achieved by engaging two push buttons simultaneously to prevent accidental spindle downward movement.



Sharp Model SH-920



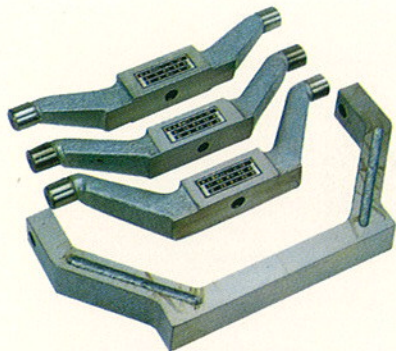
Larger capacity coolant system



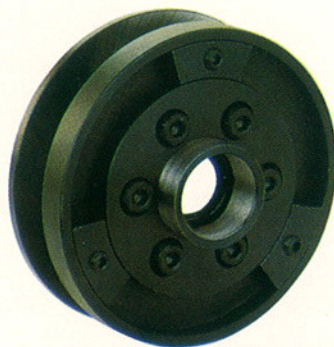
Sharp Model SH-1224 with optional Programmable Spindle Downfeed System

Y A C U T A B O V E

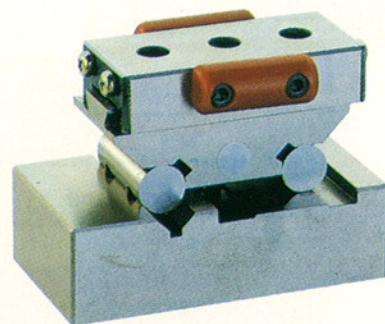
OPTIONAL ACCESSORIES



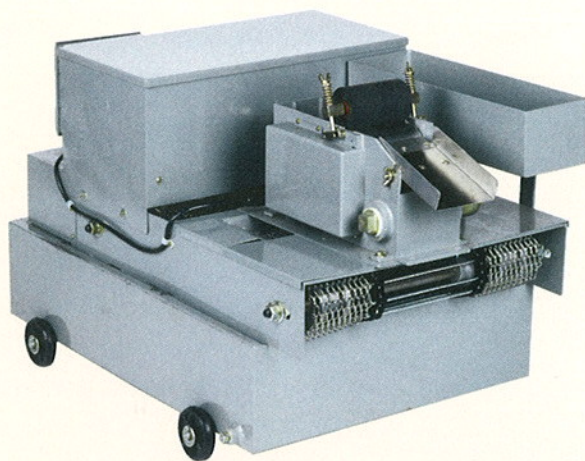
Radius-forming attachment



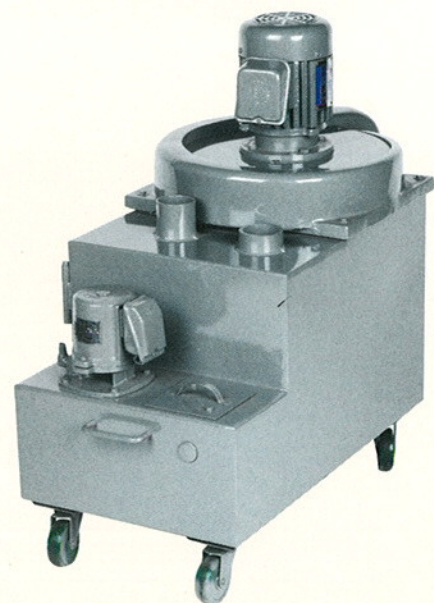
Extra wheel adaptor (flange)



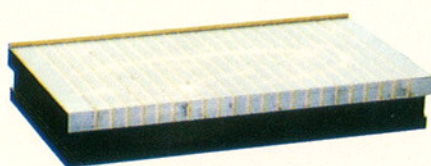
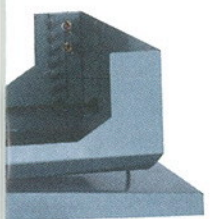
Angle-forming attachment



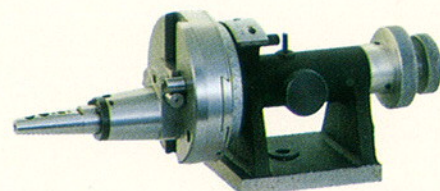
Automatic paper filter with magnetic separator



Dust-collector with coolant system



Electro/permanent magnetic chuck

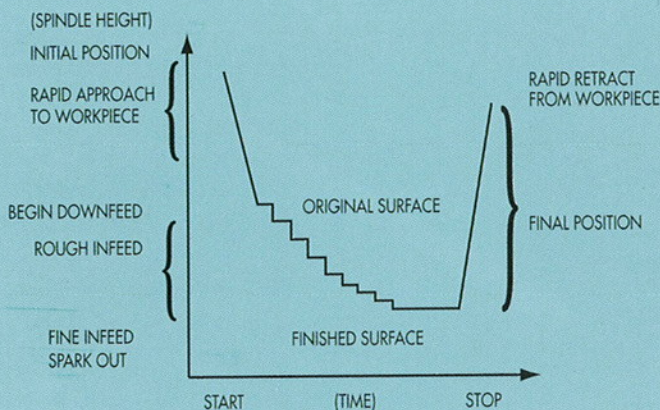
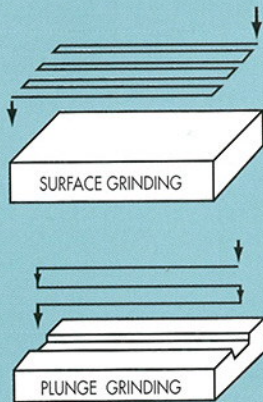
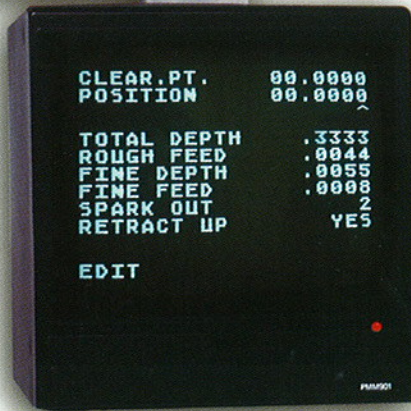


Radius and angle dresser

PROGRAMMABLE SPINDLE DOWNFEED

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he Programmable Spindle Downfeed System is an NC-type computer specifically designed for the surface grinder. It takes over the boring and time-consuming job of slowly feeding the grinding wheel into the workpiece. The vertical axis is motorized and coordinated with the movement of the other axis to provide slot and surface grinding modes. The operator is free to do other work or take a break, saving a huge amount of time and effort.



CONTROLLER FEATURES:

- Simple fill-in-the-blank format, absolutely no programming.
- Total feed depth up to .9999" per setup.
- Up to 0.099" per each feed increment during rough grinding.
- Up to .0009" of final stock can be reserved for fine grinding.
- Up to 9 spark-out passes for very smooth finish.
- Automatic rapid approach to workpiece at start of cycle to eliminate air grinding.
- Automatic rapid retract at end of cycle to allow convenient workpiece removal.
- Selectable automatic grinder power shut-off at end of cycle.
- Current vertical position is constantly shown on the display.
- Effortless spindle vertical run and jog with multiple rates, all controlled from the keyboard.
- Accurate, precise, and repeatable; stops on a dime.

FEATURES/SPECIFICATIONS

STANDARD EQUIPMENT:

- Coolant System
- Wheel Balancing Stand
- Wheel Balancing Arbor
- Wheel Adaptor (Flange)
- Grinding Wheel
- Auto Lube System
- Tool Kit
- Wired 220V or 440V

OPTIONAL ACCESSORIES:

- Rapid Traverse of Wheel Head
- Electro-Magnetic Chuck & Control
- Parallel Dressing Attachment Manual
- Dust Collector with Coolant System
- Parallel Dresser (Semi-Automatic)
- Programmable Spindle Downfeed
- Radius & Angle Dresser
- Coolant System (100 liter tank) with Paper Filter & Magnetic Separator

Model	SH-920	SH-1224	SH-1632	SH-1640
Table travel (cross X longitudinal)	11" x 26"	14" x 27.6"	17.6" x 36"	17.6" x 44"
Spindle center to table surface	19.3"	19.3"	23.6"	23.6"
Table working surface	9" x 19.7"	11.6" x 23.6"	15.8" x 32"	15.8" x 40"
Longitudinal hydraulic table feed	6.6-82 FPM	6.6-82 FPM	6.6-82 FPM	6.6-82 FPM
Intermittent cross feed (in. feed)	0.004-0.4 IPM	0.004-0.4 IPM	0.004-0.4 IPM	0.004-0.4 IPM
Continuous cross feed	.39 IPM	.39 IPM	.39 IPM	.39 IPM
number of graduations on dial	200	200	200	200
feed per graduation	0.0005"	0.0005"	0.0005"	0.0005"
feed per revolution	0.1"	0.1"	0.1"	0.1"
Vertical travel				
number of graduations on dial	500	500	500	500
feed per graduation	0.0001"	0.0001"	0.0001"	0.0001"
feed per revolution	0.05"	0.05"	0.05"	0.05"
rapid downfeed (optional)	18.9 IPM	18.9 IPM	18.9 IPM	18.9 IPM
Wheel size (OD x Width x ID)	14" x 1" x 5"	14" x 1" x 5"	14" x 1-1/2" x 5"	14" x 2" x 5"
Spindle motor	3 HP	3 HP	5 HP	5 HP
Coolant system motor	1/8 HP	1/8 HP	1/8 HP	1/8 HP
Approximate weight	3,800 lbs.	4,700 lbs.	7,300 lbs.	7,600 lbs.
Packing crate dimensions (W x D x H)	7' x 5' x 6'	7-1/2' x 5' x 6'	8' x 6' x 7'	8' x 6' x 7'

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



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