UNIVERSAL CYLINDRICAL GRINDER

MODELS

OD618H, OD820H
Variable speed table, manual wheelhead infeed

OD618S, OD820S
Variable speed table, full CNC wheelhead infeed

MODEL OD618S
showing single axis CNC control for wheelhead infeed with portable MPG

SHARP
PRECISION MACHINE TOOLS
The Sharp OD618, OD820 universal cylindrical grinders are available in two versions. The H version has manual wheelhead infeed system, while the S version has CNC single axis wheelhead infeed system. Both versions have high precision wheelhead spindle (Total Indicator Reading within 0.000050") mounted on two matched pair of ABEC7 grade preloaded angular contact bearings; both the table feed rate and the headstock spindle speed can be adjusted by the turn of a knob. The workhead and the table can swivel to perform taper grinding. The wheelhead can swivel to perform edge grinding. All models are equipped with SC lever type collet closure for quick and secured gripping of workpiece; automatic lubrication system and coolant system.

**MODEL OD618H**
showing manual wheelhead infeed

For Internal Diameter grinding operation, the machine can be installed with a swing-down type ID Attachment (optional) for grinding internal bores.

The automatic lubrication system ensures all sliding surfaces are well lubricated through various oil grooves. The extra wide V way and flat way are hardened and ground with the matching surfaces carefully hand scraped along the entire length of the travel to ensure better accuracy of table movement.
The S series grinders are equipped with CNC single axis infeed system that moves the wheelhead via precision ball screw driven by servo motor. Direct input of data onto the touch screen controls precise movements such as rapid approach, rough feed, fine feed, retract and spark out. The portable MPG (Manual Pulse Generator) allows easy control of manual infeed operation.

**Versatile Operations**

- Horizontal grinding with 2-centers support
- Horizontal grinding with 3-jaw chuck
- Taper grinding with 2-centers support
- Taper grinding with 3-jaw chuck
- Internal grinding
- Plunge grinding
- Shoulder grinding

The wheelhead swivels for plunge-in and fine-finish grinding on shoulder portion of workpiece.
FEATURES:
- Total indicator reading of spindle within 50 millionths of an inch
- Spindle of wheelhead mounted on 2 matched pairs of preloaded high precision angular contact bearings (bearing ID exceeds 2.15")
- Work table is driven by variable speed inverter motor, table feed rate can be adjusted by simply turning a knob
- Workhead can swivel 45 degrees each way for taper grinding
- Workhead is equipped with 5C lever type collet closure for quick and precise holding of workpiece
- Table can swivel for taper grinding
- Spindle of wheelhead has variable speed drive
- Wheelhead can swivel for edge grinding
- Auto tube system lubricates all sliding ways when machine is on
- H model has manual wheelhead infeed
- S model has CNC single axis wheelhead infeed system driven by servo motor and precision ballscrew using touch screen conversational program

STANDARD ACCESSORIES:
- 5C lever type collet closure
- Auto tube system
- Coolant system
- Grinding wheel with flange
  (12"x1"x3" for OD618, 14"x2"x5" for OD 820)
- Wheel extractor
- Carbide tip center
- Balancing arbor with stand
- Wheel dresser
- Tool box with tools

OPTIONAL ACCESSORIES:
- Internal diameter grinding attachment
  3 attachments included (shaft with wheel)
  shaft dimensions (diameter x length)
  0.31" x 1.38", 0.39" x 1.57", 0.47" x 1.77"
  wheel dimensions (diameter x length)
  0.75" x 0.75", 1" x 1", 1.25" x 1.25"
- 3 jaw chuck (4") with back plate
- 4 jaw chuck (4") with back plate
- 5C collets
- 5C back plate
- Spare wheel flanges
- Steady rest

MODEL | OD618H | OD618S | OD820H | OD820S
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Capacity | Swing over table | 6" | 8" | 6" | 8"
 | Distance between centers | 18" | 20" | 110 lbs. | 170 lbs.
 | Max grinding diameter | 6" | 8" | 6" | 8"

Wheelhead
- Infeed range | 4.2" | 6.3"
- Auto infeed range (S models only) | 0.00005"-9.99" | 0.00005"-9.99"
- Manual feed, graduation (dia) | 0.0002" | 0.0002"
- Manual feed, revolution (dia) | 0.1" | 0.1"
- Swivel angle | +8, -12, deg. | +7, -13, deg.

Grinding Wheel
- OD x width x ID | 12" x 1" x 3" | 14" x 2" x 5"
- Wheel speed | 1960 rpm | 1960 rpm

Internal Grinding Attachment (opt.)
- Grinding bore range | 0.6"-2.75" | 0.6"-2.75"
- Max. grinding length | 2.75" | 2.75"
- Spindle speed | 14,000 rpm | 14,000 rpm
- ID wheel motor | 1/2 HP | 1/2 HP

Workhead
- Spindle speed (variable speed) | 0.520 rpm | 0.520 rpm
- Swivel towards and away from operator | 45 deg. | 45 deg.
- Taper of center | 5C | 5C

Table
- Auto feed (variable speed) | 0.21 ipm | 0.21 ipm
- Manual feed (per revolution) | 3/8" | 3/8"
- Swivel towards and away from operator | 8 deg. | 7 deg.

Tailstock
- Spindle stroke | 1" | 1"
- Center taper | MT #2 | MT #2

Motors
- Wheel drive | 2 HP | 3 HP
- Workhead drive | 1/4 HP | 1/4 HP
- Hydraulic pump drive | 1/4 HP | 1/4 HP

Measurements
- Width x depth | 81" x 48" x 52" | 88" x 51" x 78"
- Approx. wt. (lbs.) | 2,300 lbs. | 3,500 lbs.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.