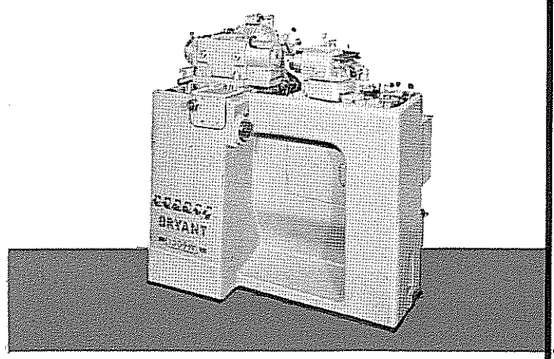
no. 1309-W



description

total chuck swing 9″
maximum traverse stroke 6″
maximum grinding stroke 3½″

A semi-automatic machine to finish two bores and a taper at one chucking where straightness and concentricity are imperative. Each bore is ground separately and size is controlled by a calibrated dial. The taper is traverse ground to assure a clean seat free from concentric grinding marks as produced by a plunge cut. Accurate angular control is assured by an auxiliary preloaded ball slide.

Two Hi-Frequency wheelheads are used.

features

All the features needed to accurately grind two diameters and a taper are incorporated in this one machine. Preloaded ball bearing slides assure straightness of hole; accuracy of taper seat by traverse grinding; Hi-Frequency electric wheelheads give speeds required for small holes (100,000 R.P.M.); concentricity is assured by grinding all surfaces at one chucking. Independent feed for each diameter and independent traverse for each operation gives simple control to close limits. The basic construction of this machine is similar to the no. 1109 and no. 1209. The ground steel slide bars under the workhead carry the workhead from one grinding wheel to the other. Detailed information on the wheelheads is given on page 8.

specifications

Total Swing	9″
Grinding Stroke	0 to 3½″
Maximum Traverse Stroke	6″
R.P.M. of Work Spindle	400 to 2400 R.P.M.
Cross slide travel	5¼″
Work drive motor	¾ H.P.
Auxiliary slide will traverse grind included angles	50° to 90°
Approximate net weight of machine	4300 lbs.
Floor space with coolant tank	67″ x 52″
Coolant tank capacity	40 gal.

no. 1316

description

total chuck swing 16″, 20″
maximum traverse stroke 20″
maximum grinding stroke 8″

The Bryant No. 1316, 1316-J and 1316 R Hydraulic Internal Grinders differ from the No. 1116 in that they have two wheelheads. This speeds up production and provides greater accuracy of relation on pieces whose face and bore, face and O.D. or bore and O.D. must be held in close relationship. The two wheelheads are carried on a common longitudinal slide. The workhead is mounted on a hydraulic cross slide coming toward the operator for ease of loading and gaging work and for indexing from one wheelhead to the other. The 1316 and 1316-J have a single feed screw which controls the feed for the internal wheelhead. The internal wheelhead is mounted at the front on the 1316 and at the rear on the 1316-J. The 1316-R has two independent feed screws providing separate control for each wheelhead when grinding bore and O.D. or multiple diameters. Bryant hi-frequency wheelheads are available.

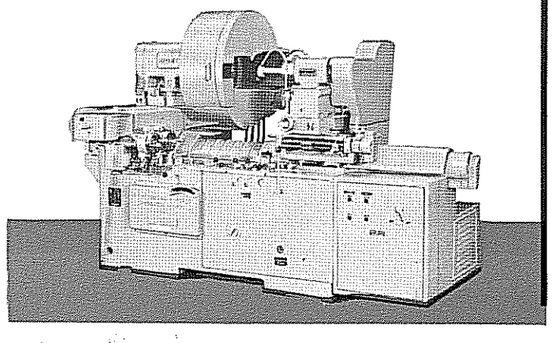
features

Grinding strokes for each wheelhead may be quickly set by positive locking reversing dogs. The work spindle is mounted on super-precision ball bearings and is driven by a variable speed reversible hydraulic motor. The workhead may be swiveled to permit grinding tapers up to 90° included angle. The workhead is mounted on a table supported by preloaded ball bearing ways for cross movement. Diameter control for the bore and O.D. grinding spindles is provided by separate feed screws on the No. 1316-R, while on the 1316 the work is positioned crosswise in reference to the facing wheel by four adjustable stops. The facing wheel is controlled by an axial micrometer depth feed. Where considerable difference in work speed is required the workhead motor automatically changes speed as it moves from one wheel to the other.

specifications

Total Swing	16″, 20″
Grinding Stroke	⅜″ to 8″
Maximum Traverse Stroke	20″
Workhead adjustable to	45°
Permits grinding included angle to	90°
R.P.M. of Work Spindle	100 to 800 R.P.M.
Cross slide travel	9¾″
Wheel drive motor (belt driven wheel spindles)	7½ H.P.
Work drive motor	3 H.P.
Approximate net weight of machine	6550 lbs.
Floor space with coolant tank	90″ x 76″
Coolant tank capacity	60 gal.

no. 1330



description

total chuck swing 30″, 36″
maximum traverse stroke 20″
maximum grinding stroke 12″

A semi-automatic production machine for finishing I.D. and O.D., I.D. and face, or multiple I.D.'s at a single chucking. The machine is designed to help the operator make maximum production on heavy pieces. The machine will maintain relationship of two or more finished surfaces to close tolerances. Controls are convenient and the hydraulic power gives infinite selection of traverse, workhead, and stock removal speeds. Interlocks are provided to simplify operation. While the standard machines have a single feed screw, the standard variations 1330-R and 1336-R are equipped with two feed screws providing independent control of size for each wheelhead.

features

The workhead is powered by a variable speed positive displacement hydraulic motor. The cross slide which is under the workhead is equipped with anti-friction bearings. The wheelslide which carries both grinding wheels is mounted on a hardened and ground steel cylindrical slide. The workhead indexes from one grinding wheel to the other. Reversing dogs for each grinding wheel are automatically changed as the workhead moves from one wheel to the other. Where there is considerable difference between I.D. and O.D., the work spindle speed changes automatically as the workhead moves from one wheel to the other.

specifications

Total Swing	30″, 36″
Grinding Stroke	⅜″ to12″
Maximum Traverse Stroke	20″
Workhead adjustable to	15°
Permits grinding included angle to	30°
R.P.M. of Work Spindle	40 to 575 R.P.M.
Cross slide travel	16″
Wheel drive motor (belt driven whee spindles)	10 H.P.
Work drive motor	5 H.P.
Approximate net weight of machine	13,000 lbs.
Floor space with coolant tank	108″ x 105″
Coolant tank capacity	90 gal.